



Forschungsgruppe
Konsum und Verhalten



Sandra Diehl, Ralf Terlutter (eds)

International Advertising and Communication

Current Insights and Empirical Findings



GABLER EDITION WISSENSCHAFT

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Die Forschungsgruppe „Konsum und Verhalten“, die von Professor Dr. Werner Kroeber-Riel begründet wurde, veröffentlicht ausgewählte Ergebnisse ihrer Arbeiten seit 1997 in dieser Reihe. Im Mittelpunkt steht das Entscheidungsverhalten von Abnehmern materieller und immaterieller Güter bzw. Dienstleistungen.

Ziel dieser Schriftenreihe ist es, Entwicklungen in Theorie und Praxis aufzuzeigen und im internationalen Wettbewerb zur Diskussion zu stellen. Das Marketing wird damit zu einer Schnittstelle interdisziplinärer Forschung.

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Preface

Worldwide, international communication, and in particular international advertising have become critical areas in communication research. The growing globalisation of markets requires firms to take an increasingly international orientation in developing communication policies. The goal of this book is to contribute to more systematic research in this field.

Renowned communication researchers from around the globe have contributed to the making of this book. The contributors hail from countries throughout Europe, as well as from the U.S., Asia and Australia. This international mix of authors offers the reader a comprehensive overview of current thinking and cutting-edge research in the area of international advertising and communication. The text includes cross-cultural investigations, as well as studies representing the respective countries of the researchers. Several of the contributions are expanded papers from the 4th ICORIA (International Conference on Research in Advertising; www.icoria.org), which took place at Saarland University in Saarbruecken in 2005.

The book addresses a number of important areas of communication research: advertising and communication effects; advertising and information processing; communication and branding; emotional, social and individual aspects of communication; communication and new media; international advertising and, finally, perspectives on the future of international advertising. Despite the great variety of issues covered, all papers are united in their desire to move international communication research forward.

We wish to thank all the authors for their willingness to contribute to this endeavour. We would also like to thank our colleague, Jennifer Karos, who handled the formatting of the book. It is our hope that readers find the text both enjoyable and stimulating. If the material presented in this book generates constructive debates and subsequent investigations, then we have accomplished our goal.

Saarbruecken, March 2006

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Part I

Advertising and Communication Effects

Barbara Mueller

The role of product involvement in advertising message perception and believability

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Abstract

This investigation examines the variable *product involvement* and its relationship to the degree to which consumers *perceive* and *believe* advertiser's claims. The study tests the hypothesis that consumers are more likely to believe the claims made on behalf of high involvement products – particularly for health-related goods and services. A survey revealed that while advertiser's claims were clearly perceived by the vast majority of respondents, a large percentage also amplified the advertiser's claims – always to the advertiser's benefit. Respondent's were significantly less likely to believe advertiser's claims for low involvement products (such as shampoo), but were significantly more likely to believe claims made on behalf of a high involvement products, and in particular, claims for health-related products.

1 Purpose of the study

If an advertiser is to persuade a given consumer about the benefits of his or her product via an advertisement, that consumer – as a processor of information – must pass through a series of stages before the message can have its intended effect. If the advertiser is skillful in selecting the appropriate media to reach their target audience, then the consumer must 1) pay attention to the message and comprehend it, 2) believe the message, and finally 3) retain the message until it is needed for a purchase decision. Unfortunately, problems can and do occur at any and all of these stages, completely negating the intended effect of the advertising message. This paper focuses on the first two stages – the extent to which consumers perceive and believe advertising messages. The study examines the variable of product involvement and its relationship to message perception and believability.

In attempting to persuade the consumer, advertisers may employ both objective claims and puffed statements. Because advertising law in the United States presumes consumers expect exaggerated and inflated claims in advertising and therefore know puffed statements are not to be believed as literal facts, puffery is considered completely legal. Advertisers have supported this stance as it offers them poetic license in promoting products. Yet a small number of studies have suggested that a significant percentage of consumers do, in fact, believe puffed claims. This may indicate that consumers do not clearly distinguish between puffed and non-puffed claims, and instead simply rely on what advertisers tell them about their products and services. Further, it appears that consumers often expand upon what they perceive advertisers to be telling them. Rather than discounting this amplified content, consumers tend to believe it, as

well. This investigation explores the extent to which consumers perceive and believe advertiser's claims for a variety of product categories.

2 Literature on the topic

The Federal Trade Commission (FTC) is the regulatory body charged with protecting consumers from unfair or deceptive acts and practices in the United States. Advertising law traditionally has made a distinction between objective product claims and puffery. The FTC defines objective claims as involving performance, efficacy, sales, or other tangible attributes. Such claims are usually phrased in terms of fact rather than opinion and are capable of measurement (www.adlaw.com/re/newsletters/archive/arc_3_96c.html). The FTC requires that advertisers have adequate substantiation of objective claims prior to dissemination of the advertisement to the media. Clearly, consumers would be less likely to rely on claims for products and services if they knew the advertiser did not have a reasonable basis for believing them to be true. The requirement of substantiation applies both to explicit or express claims and to implied claims. In the FTC Policy Statement Regarding Advertising Substantiation, it is noted that "absent an express or implied reference to a certain level of support, and absent other evidence indicating what consumer expectations would be, the Commission assumes that consumers expect a reasonable basis for claims," (<http://ftc.gov/bcp/guides/ad3subst.htm>). The Commission's determination of what constitutes a reasonable basis depends on a number of factors relevant to the benefits and costs of substantiating a particular product claim. "These factors include: the type of claim, the product, the consequences of a false claim, the benefits of a truthful claim, the cost of developing substantiation for the claim, and the amount of substantiation experts in the field believe is reasonable." Further, "although firms are unlikely to possess substantiation for implied claims, they do not believe the ad makes, they should generally be aware of reasonable interpretation and will be expected to have prior substantiation for such claims," (<http://ftc.gov/bcp/guides/ad3subst.htm>). The FTC is particularly vigilant in the area of health-related products and services (such as over-the-counter medications, prescription drugs, cosmetic surgery, etc.) where substantiation must be based on acceptable and normal scientific standards and evaluated in an objective manner by qualified persons. Advertisers must be prepared to prove, with objective and generally accepted evidence, including scientific studies, that their claims are true (Russell and Lane, 2002). Indeed, if the advertiser cannot show that he had proof to support the claim prior to dissemination via the media, the ad is considered deceptive (and therefore illegal) even if the claim is true and the product performs as advertised.

In contrast to objective claims, puffery consists of statements which are not capable of measurement or which consumers would not take seriously. Puffery is defined as “advertising or other sales presentations, which praise the item to be sold with subjective opinions, superlatives, or exaggerations, vaguely and generally, stating no specific facts,” (Wells, Burnett and Moriarty, 2000). Puffery has been viewed as a form of “poetic license” or allowable exaggeration. This has suited advertisers just fine. Indeed, supporters of puffery claim that advertising would lack creativity and become dull and boring without puffery. They also argue that no reasonable person would believe puffed claims or be influenced by them (which begs the question, why, then, do they employ puffed claims?).

While some puffs are quite obvious (“The ultimate driving machine,” for BMW, and “Coke – It’s the real thing,”). Others cannot be so easily classified. For example, sellers may claim that a diamond is flawless (Carter Hawley Hale Stores, Inc. v. Conley 1979), or that a brand of hair coloring can be shampooed out easily (John A. Brown Co. v. Shelton 1963). In such cases, it is extremely difficult to determine whether the claims are to be considered statements of “fact” or “mere puffery.” What is – and is not – puffing is decided on a case-by-case basis. In the past, FTC members were viewed as qualified to determine, on the basis of their own judgments and impressions, the probable impact of the ad on a consumer (Advertising Age, 1972). Recently, the FTC recognized the need to “know” and not “guess” at how consumers would perceive the contents of a commercial message. As a result, the FTC has increasingly relied on expert witnesses and, more importantly, consumer data gathering to make more objective decisions. The FTC increasingly looks to the consumer’s perception of the claim when deciding whether an ad is deceptive (Preston, 1987). The FTC Policy Statement on Deception notes that evidence of deception or likely deception may consist of consumer testimony, copy tests, surveys, or any other reliable evidence of consumer interpretation (<http://www.ftc.gov/bcp/policystmt/ad-decept.htm>). Furthermore, the FTC was informed by the U.S. Court of Appeals that “Reliance on extrinsic evidence should be the rule rather than the exception (Kraft v. FTC, 1992). Because advertising law’s goal is to protect consumers from deception, inquiry should always begin and end with what *consumers* believe the ad said.

While the FTC has taken the position that consumers expect exaggeration or inflated claims in advertising and that puffery is recognizable by consumers and will not lead to deception, since it is not believed, a number of studies have shown that consumers do *not* distinguish between a verifiable fact-based claims and puffery and are just as likely to believe both types of claims. Rotfeld and Rotzoll (1980) found that half of the subjects who perceived puffed claims

believed them. Bruskin (1981) revealed that 69.5 percent of consumers believed puffed statements to be either partly or completely true. Critics of puffery argue that puffery destroys advertising credibility – because consumers apparently do believe the puffed claims made by advertisers. They suggest that puffery is truly “soft core” deception that should be considered illegal by the courts (Preston, 1996).

Above and beyond believing puffed statements, apparently, consumers also tend to expand upon what they perceive advertisers to be telling them. “People amplify, rather than discount, advertising content and believe the amplified content. The process involves the tendency of consumers to see claims as conveying more content than they literally claim, doing so in a way that benefits the advertiser by conferring additional values upon the product,”(Rotfield and Preston, 1981). The idea of an expansion of content is opposite that of the popularly held notion that consumers typically discount advertising. Preston and Scharbach (1971) suggest that while the discounting may occur consciously, expanding occurs unconsciously.

3 Theoretical background

In deciding whether an advertiser has engaged in mere puffery or is making a specific claim, *context* is critical. Context includes not only what has been stated verbally in the commercial message, and what has been shown visually, but also the nature and sophistication of the ad’s *intended audience*. An ad directed at a target audience that is sufficiently perceptive to recognize hyperbole is more likely to be considered harmless puffery than one aimed at a group of people who are less able to discern it. In other words, whether an ad’s message is deceptive depends on what the ad said to them, not to somebody else or everybody. One respected commentator has noted “It is obvious that an ad should be tested by the reactions of the particular class to which it was designated to appeal,”(Bergerson, 1995).

A recent suit provides an excellent case study (Vickie Sager and Elizabeth Weichsel, *On Behalf of Themselves and All Others Similarly Situated, and On Behalf of the General Public vs. Inamed Corp.*). In this case, puffery was used as a shield to avoid accountability for claims about the defendant’s product. Briefly, Inamed Corp. produces McGhan Breast Implants, which it advertises directly to its target audience of females between 19 – 34, via mass media advertisements. Inamed’s multi-million dollar advertising campaign suggests that their revolutionary tear-drop shaped implant is far superior to traditional round implants because they result in a “more natural” and “anatomical” appearance. The advertisements contain claims of superiority, comparisons with competi-

tor's implants, diagrams depicting product differences and promises of outcomes to be expected. However, Inamed has admitted that it has absolutely no scientific studies to support these claims of superiority. Inamed has argued that because each of their statements is mere puffery, and not believed by or relied upon by consumers – substantiation is not required.

Further, the diagram included in the McGhan advertisements appears to be deceptive. In comparing round implants to the “more anatomically correct” implants, McGhan initially depicted the round implant on a flat horizontal surface and then transposed the image vertically in order to give the false impression that they do not slope downward when a patient with such implants is standing upright – resulting in an unnatural appearance. To a layperson considering implants, this comparison appears quite compelling, and likely to lead to the selection of McGhan implants at the higher price point. However, research conducted has found that “because round and teardrop-shaped saline-filled implants do have similar teardrop shapes with patients upright, there is no basis for the claim that one provides a better or more natural looking breast than the other (Hamas, 1999; Hamas, 2000). It is highly unlikely that any consumer would have willingly paid up to \$500 more for anatomically correct teardrop-shaped McGhan implants if she believed the less expensive round implants would achieve virtually the same results. It is the investigator's opinion that the claims made are more than simple puffery and are, in fact, quite believable – and thus, if not substantiated, are by definition deceptive. However, the question of interest is whether members of the target audience believe the claims. As such, this advertisement presents a real opportunity to determine how young women perceive McGhan ads – as believable product claims or mere puffery.

It has become a truism to observe that the impact of an advertisement is determined by the complex interactions involving the message that is communicated on the brand's behalf, the target audience, and the *type of product* advertised, (Bowen and Chafee, 1974). The concept of *product involvement* has been addressed in the advertising literature from a variety of perspectives (Zaichowsky, 1986) – but no research has been conducted to date relating this variable to message perception and believability. Product involvement ranges on a continuum from low to high. Low involvement goods tend to be package goods of a relatively low price, which are purchased frequently by the consumer. Here consumers require minimal product information. High-involvement goods are those which generally tend to be higher in price, purchased relatively infrequently and which require extensive information searching by the consumer - for example, automobiles (Mueller, 1992). Health-related products and services (such as pharmaceuticals or plastic surgery) can be considered particularly highly involving specifically because they deal with the consumer's well-being.

The investigator proposes that consumers are far more likely to believe claims for health-related products, in some instances, falsely assuming that the FTC or some other regulatory body has surely checked the truthfulness of such claims.

The focus of this investigation is to establish the degree to which consumers perceive claims being made by advertisers for a variety of product categories (reflecting various levels of product involvement), and the likelihood that they believe these claims. This investigation seeks to test four hypotheses. Hypothesis 1: Respondents not only perceive advertiser's claims, they also **amplify** claims made for a variety of products. Hypothesis 2: Respondent's are **least** likely to **believe** claims for **low involvement products**. Hypothesis 3: Respondents are statistically more likely to **believe** the claims for **high involvement** products than for low involvement products. Hypothesis 4: Of the product categories, the target audience is **most** likely to **believe** the claims for **high involvement health-related products**.

4 Methodology

4.1 Unit of analysis

Full-page print ads from magazines targeting females 18-34. Three ads were selected to represent different levels of product involvement. A Pert Plus shampoo ad was selected to represent **a low involvement product**. Visually, the ad portrays a grocery store shelf stocked with various brands of shampoo and conditioner, along with Pert Plus. The shelves holding the competing brands appear to be sagging under their weight, but not the shelf holding the bottles of Pert Plus. The copy reads: "Tired of your hair being weighed down? For no build-up and lighter and livelier hair than the best-selling separate shampoo and conditioner system, try Pert Plus. Pert Plus. Beat the system." The benefit being claimed is that this brand is less likely to cause build-up than the best-selling separate shampoo and conditioner. However, the promise of "livelier" hair falls into the realm of puffery.

An automobile (the Dodge Stratus) was selected to represent **a high involvement product**. Visually, the ad depicts a street sign (Hollywood Blvd and Vine Street) and a Dodge Stratus coupe and sedan. The headline reads: "More Stars than a Hollywood Street." The body copy reads: "Dodge Stratus Sedan and the idea of safety get along famously. It's a car designed to help keep you out of harm's way, and to help protect you when an accident is unavoidable. Steering is precise and predictable. Its available ABS Plus is designed to keep the car under control. Plus, its responsive performance provides the power

needed to help you maneuver out of trouble. And when a worst-case scenario does rear its ugly head, the Dodge Stratus Sedan and its passive safety systems spring into action. From Next Generation multistage front airbags, to seat belt pretensioners, to available supplemental side-curtain airbags, it's the kind of place you'll want to put yourself and the people you care about. And now, on top of all that, Stratus Sedan offers you the government's highest safety rating: a five-star frontal crash test rating for both driver and front passenger. The all-new Dodge Stratus Sedan. Built like a safe. A very streamlined safe." In this ad, various safety features of the Stratus are highlighted, but once again, the claim "built like a safe" falls into the realm of puffery.

The previously mentioned McGhan Breast Implant represents a **high involvement health-related product**. Visually, this ad portrays a young woman admiring her figure in a mirror. A diagram compares the competitor's typical round implant with McGhan Medical's Anatomical (tear drop shaped) implant, and also shows a simulation of the more natural shape achieved via the anatomical implant. The headline reads: "Finally. Breast implants that reflect a *Natural* shape." The subhead reads: "Introducing the revolutionary anatomically shaped implants, only from McGhan Medical." The copy reads: "You've heard many unflattering references to traditional round breast implants – *She's obviously had plastic surgery*, or *Her breasts look so artificial*. But at McGhan Medical, we know your desire for breast enhancement is to look *fuller*. Not rounder – and certainly not *fake*. So we designed our anatomical implant to be more like a woman's breast, with a gentle slope and a more voluptuous, natural shape. Consult a qualified surgeon to learn more about your breast enhancement choices. Finally, you've got a *natural* choice." Here the advertisement contains claims of superiority, comparisons with competitor's implants (though not mentioned by name), diagrams depicting product differences, and promises of outcomes to be expected. However, as noted previously, Inamed has admitted it has absolutely no scientific studies to support these claims, and has argued that because each of these statements is mere puffery, they are not believed or relied upon by consumers – thus substantiation is not required.

4.2 Subjects

The three messages selected for inclusion in this investigation broadly target women – all ads appeared in popular publications targeting females 18- 35. In order to test the above hypotheses, a convenience sample of over 400 female students, ages 18 and older, attending a major West Coast university was used.

4.3 *Instrument development*

Focus groups composed of female students were conducted to explore the types of messages being received from the selected advertisements. Participants were asked to view the three ads and provide comments on what, if any messages were perceived. These responses were compared with the actual content in the ads, thereby distinguishing between claims specifically made by the advertiser and amplified messages. Results of these sessions were used in the development of a survey instrument. A questionnaire was developed consisting of two sections for each ad. The first section sought information about whether the respondent perceived claims in the commercial messages, and whether they amplified any claims. The survey instrument instructed the subjects as follows: "The statements below represent something that may or may not have been stated in the ads. None of the statements are exact quotes from the ads, but some of them are accurate re-statements of the ads' content and some are not. If you think the statement is an accurate re-statement or paraphrase of what the advertiser stated or implied, either via words or visuals, answer 'yes.' If you think the statement is not an accurate re-statement or paraphrase of what the advertiser stated or implied, answer 'no.'" These instructions were followed by a series of eight questions. The second section consisted of a series of six questions, which, asked whether the respondent believed the claims, both stated and amplified. Female students in introductory communications courses were asked to examine the three advertisements (in rotating order) and respond to the survey instrument. After reviewing the ads, subjects were told that regardless of whether they would purchase the specific product or even consider the product category, to answer the questionnaire as it simply sought to determine what claims they perceived and whether those claims were believed. Subjects were then asked to respond to the two sets of questions for each ad.

5 **Results**

A total of 439 female students completed the questionnaire. Quantitative results for the three ads can be found in Appendixes A, B and C. Note that with the first set of questions, an affirmative response indicated that the respondent agreed that the content was reflected in the ads. With the second set of questions, respondents could Strongly Agree (STA), Somewhat Agree (SOA), Somewhat Disagree (SOD), or Strongly Disagree (STD) that they *believed* the statement.

5.1 *Pert plus shampoo advertisement*

Respondents clearly perceived the advertiser's message. Over 90 percent noted that they perceived the claim that traditional shampoos weighed hair down, while 94 percent stated that they perceived the claim that Pert Plus did not weigh hair down. Amplified claims were also perceived. Note that the Pert Plus advertisement did not state that it was the *only* product that didn't weigh hair down – simply that it resulted in less build-up than the “best selling separate shampoo and conditioner.” Interestingly, over 50 percent of the respondents agreed that the advertisement conveyed that *only* Pert Plus wouldn't weigh down their hair. Further, while there were no claims of significant technical advances, over 30 percent of respondents agreed that Pert Plus was a significant technological advancement over traditional shampoos. Over 90 percent of respondents perceived the puff that using Pert Plus results in lighter, livelier hair. In terms of believability, 37 percent believed that traditional shampoos would indeed weigh their hair down, and over 40 percent strongly or somewhat believed that Pert Plus was an improvement over traditional shampoos. However, amplified claims perceived were not necessarily believed. A mere 12 percent believed that Pert Plus is the only shampoo that won't weight your hair down. However, regarding puffed statements, nearly 50 percent of respondents either strongly agreed or somewhat agreed that Pert Plus would result in “lighter, livelier hair.”

5.2 *Dodge stratus automobile advertisement*

The advertiser's main message of safety was clearly perceived. Nearly 98 percent of respondents indicated that the ad conveyed that the auto had received a 5-star rating, and over 88 percent agreed that the ad suggested that the Stratus was safer than typical autos. Once again, amplified messages were perceived. Though the ad did not indicate that this was the *only* auto which had received the coveted 5-star rating, nearly 30 percent of respondents came away from the advertisement having perceived this message (and 21 percent indicated they strongly agreed or somewhat agreed that they also believed this message). Over two-thirds of respondents either strongly agreed or somewhat agreed that that believed the Dodge Stratus was an improvement over other brands of autos. Further, 62 percent either strongly agreed or somewhat agreed that they believed the Dodge Stratus was safer than other brands of autos.

5.3 *McGhan breast implant advertisement*

Nearly 98 percent of respondents perceived the message that traditional implants resulted in a round, artificial look after implantation. Over 98 percent perceived that McGhan implants resulted in a more natural look than traditional

implants. More amplified claims were perceived in this advertisement than in the other two. Although no claim of uniqueness was made in the ad, over 61 percent of respondent's perceived that *only* McGhan offered the anatomically-shaped implant. Over 80 percent perceived that the ad suggested that this product was a significant technical advancement. Most worrisome, 38 percent perceived that the ad implied that scientific studies existed that proved that McGhan's implants resulted in a more natural look than traditional implants, while no such information was specifically conveyed. In terms of believability of the message, over 83 percent either strongly agreed or somewhat agreed that they believed McGhan's implants were an improvement over traditional, round implants. Over 40 percent believed the amplified claim that only McGhan offers these anatomically-shaped implants, and more than 40 percent also believed the amplified claim that scientific studies actually exist which prove that the product results in a more natural look. The questionable diagram was persuasive for the vast majority of respondents. Over 90 percent either strongly agreed or somewhat agreed that they believed the diagram comparing round implants with anatomically-shaped implants suggested that the McGhan implants would result in a more natural look.

Hypothesis 1 stated that respondents would not only perceive advertiser's specified claims, but would also perceive amplified claims. As predicted, survey participants perceived amplified claims for each of the three products analyzed. For Pert Plus shampoo, over half of the respondents amplified that only this brand of shampoo wouldn't weigh hair down and over 30 percent indicated that the product represented a significant technical advance. Nearly 30 percent of respondents amplified the benefit that the Dodge Stratus was the only brand that had received the 5-star safety rating. The greatest number of amplified messages were perceived in the McGhan Breast Implant ad. Here, over 60 percent of respondents perceived the amplified claim that only McGhan offers anatomically shaped implants. Over 80 percent perceived the amplified claim that the McGhan implant represents a technical advance, and nearly 40 percent perceived the amplified claim that scientific studies exist which prove the efficacy of the product.

All believability questions were recoded so that a high score indicated belief in the message perceived (4 = strongly agree, 3 = somewhat agree, 2 = somewhat disagree, and 1 = strongly disagree). For results, see Appendix D. A one-way analysis of variance revealed that the Pert Plus ad scored significantly lower than the other two messages in terms of believability of claims made ($p < .05$). This provides support for Hypothesis 2, which indicated that respondents were least likely to believe claims for low involvement products. The Dodge Stratus ad ranked between the Pert Plus and McGhan Implant ads, lend-

ing support for Hypothesis 3. The McGhan Implant ad scored significantly higher in terms of believability of the marketer's claims than the other two products ($p < 0.05$). This supports Hypothesis 4, which proposed that respondents would be most likely to believe claims made for high involvement health-related products.

6 Practical and theoretical implications

Believability scores revealed that consumers are significantly less likely to believe advertiser's claims for low involvement products, such as shampoo, but are significantly more likely to believe claims made on behalf of high involvement health-related products. These findings are of particular concern if marketers of health-related products attempt to utilize puffed messages in their advertisements, as consumers apparently do not distinguish between what advertisers *intend* as puffery and actual product claims. Recall that while Inamed argued that each of their statements were mere puffery, and thus not believed by, or relied upon by consumers, this investigation revealed that over 80 percent of respondent's believed that Inamed's McGhan implants were an improvement over traditional round implants. The study also revealed that it is highly likely that consumers will expand on (or amplify) the claims that advertisers of all products (but in particular, health-related products) make. In each and every case, the amplification was to the advertiser's benefit. In the case of the McGhan advertisement, over 40 percent of respondents believed the amplified claim that only McGhan offers these anatomically-shaped implants, and nearly the same number also believed the amplified claim that scientific studies actually exist which prove that the product results in a more natural look. The reader may find it of interest that Inamed ultimately settled this case out of court.

As more consumer research regarding perception and believability of advertising claims is conducted, and as such research is increasingly used by regulatory bodies and the courts, there is an increased likelihood that the legal system will reconsider its definition of puffery and tighten the restrictions on what many critics have called "soft core" deception. Clearly, the results of this investigation suggest that consumers believe advertisers – especially advertisers of health-related products. This suggests that advertisers of such goods be held to a higher standard in terms of advertising content. Were advertisers to substantiate all claims in such ads, the end result would be more honest and truthful communications. Consumers, and ultimately advertisers as well, would benefit.

Clearly, there are limitations to this investigation. First, conclusions based on the presentation of a single ad (Pert Plus Shampoo) were generalized to an entire class of products (low involvement goods). Replication of this study with

a larger set of brands to reflect each class of products is needed before placing full confidence in such conclusions. A second limitation of this investigation is that it was based on a convenience sample of female college students. Future investigations should examine a more demographically diverse group. A third limitation is that only one medium (magazine advertisements) was examined. It may well be likely that other media are believed to a greater or lesser extent. Further, it must be acknowledged that the experimental setting was rather artificial. Consumers evaluating advertiser's claims in the privacy of their own homes may be more or less accepting than students examining ads in a university classroom. Finally, the study was limited to an American sample. It may prove quite instructive to explore the levels of perception and believability of advertising claims by consumers in various markets around the globe.

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Appendix A

Table 1: Results for *Pert Plus shampoo*

<i>Questions regarding content perceived</i>	<i>Yes</i>	<i>No</i>		
Traditional shampoos weigh down your hair	90.4% (397)	9.3% (41)		
Traditional shampoos result in build-up on your hair	83.4% (366)	16.4 (72)		
Pert Plus does not weigh down your hair	94.3% (414)	5.0% (22)		
Using Pert Plus results in lighter, livelier hair	92.3% (405)	7.1% (31)		
Only Pert Plus shampoo won't weigh down your hair	50.8% (223)	49.2% (216)		
Pert Plus is a significant technological advancement over traditional shampoos	32.1% (141)	67.9% (294)		
There is no difference in terms of the end result between using Pert Plus and traditional shampoos	10.7% (47)	89.1% (391)		
Scientific studies prove that Pert Plus results in lighter, livelier hair than the use of traditional shampoos	16.6% (73)	82.7% (363)		
<i>Questions regarding content believed</i>				
	<i>STA</i>	<i>SOA</i>	<i>SOD</i>	<i>STD</i>
I believe traditional shampoos are more likely to result in weighed down hair than Pert Plus	4.6 (20)	33.3 (146)	35.8 (157)	25.7 (113)
I believe Pert Plus is an improvement over traditional shampoos	4.6 (20)	36.0 (158)	37.1 (163)	21.4 (94)
I believe using Pert Plus will result in lighter, livelier hair	6.6 (29)	43.3 (190)	32.8 (144)	16.6 (73)
I believe only the use of Pert Plus results in lighter, livelier hair	1.1 (5)	10.9 (48)	31.7 (139)	56.3 (247)

I believe the visual portrayed in the Pert Plus ad suggests that the use of Pert Plus will result in lighter, livelier hair	28.7 (126)	34.9 (153)	14.4 (63)	21.9 (96)
I believe that scientific studies prove that Pert Plus results in lighter, livelier hair than traditional shampoos	1.4 (6)	11.6 (51)	29.6 (130)	56.9 (250)

Note: STA = Strongly Agree, SOA = Somewhat Agree, SOD = Somewhat Disagree, STD = Strongly Disagree

Appendix B

Table 2: Results for *Dodge Stratus*

<i>Questions regarding content perceived</i>	<i>Yes</i>	<i>No</i>
Typical auto brands are relatively safe	39.6% (174)	59.7% (262)
Typical auto brands meet minimum safety standards	57.9% (254)	41.5% (182)
The Dodge Stratus Sedan has a 5-star rating	97.7% (429)	2.1% (9)
The Dodge Stratus Sedan is a safer auto than the typical auto	88.2% (387)	11.4% (50)
Only the Dodge Stratus offers a 5-star rating	29.2% (128)	70.4% (309)
The Dodge Stratus is a significant technological advancement over other brands of autos	67.9% (298)	31.9% (140)
There is no difference in terms of safety between the Dodge Stratus and any other brand of auto	9.6% (42)	89.5% (393)
Scientific studies prove that the Dodge Stratus is a safer car than other brands of autos	58.3% (256)	41.2% (181)

<i>Questions regarding content believed</i>	<i>STA</i>	<i>SOA</i>	<i>SOD</i>	<i>STD</i>
I believe that other brands of autos are not as safe as an auto with a 5-star rating	18.0 (79)	45.1 (198)	23.9 (105)	12.5 (55)
I believe that the Dodge Stratus is an improvement over other brands of autos	10.7 (47)	56.3 (247)	25.7 (113)	6.2 (27)
I believe that the Dodge Stratus is safer than other brands of autos	9.8 (43)	52.2 (229)	29.6 (130)	7.1 (31)
I believe only the Dodge Stratus offers a 5-star rating	8.7 (38)	13.0 (57)	30.5 (134)	47.6 (209)
I believe there is no difference between the Dodge Stratus and other brands of autos	3.4 (15)	22.6 (99)	51.7 (227)	21.6 (95)
I believe that scientific studies prove that the Stratus is safer than other brands of autos	9.8 (43)	45.6 (200)	28.0 (123)	15.5 (68)

Note: STA = Strongly Agree, SOA = Somewhat Agree, SOD = Somewhat Disagree, STD = Strongly Disagree

Appendix C

Table 3: Results for *McGhan breast implant*

<i>Questions regarding content perceived</i>	<i>Yes</i>	<i>No</i>
Traditional breast implants are round in shape	94.5% (415)	5.0% (22)
Traditional implants result in a round, artificial look after implantation	97.7% (429)	2.1% (9)
McGhan implants are anatomical and natural in shape	97.7% (429)	1.6% (7)
McGhan anatomical implants result in a more natural look than traditional implants	98.6% (423)	.9% (4)
Only McGhan offers the anatomically-shaped implant	61.7% (271)	37.6% (165)

Mcghan's anatomically-shaped implants are a significant technological advancement over traditional implants	81.5% (358)	18.2% (165)		
Scientific studies exist proving that McGhan anatomically-shaped implants result in a more natural look than traditional implants	38.0% (107)	61.7% (271)		
Questions regarding content believed				
	STA	SOA	SOD	STD
I believe traditional round implants result in a rounder, more artificial look than McGhan anatomically-shaped implants	30.1 (132)	53.5 (235)	10.5 (46)	5.0 (22)
I believe McGhan anatomically-shaped implants are an improvement over traditional round implants	25.3 (111)	58.3 (256)	11.8 (52)	3.6 (16)
I believe women with McGhan anatomically-shaped implants look more natural than women with traditional implants	18.5 (81)	58.1 (255)	14.6 (64)	4.8 (21)
I believe only McGhan offers the anatomically-shaped implant	10.3 (45)	30.5 (134)	37.4 (164)	21.0 (92)
I believe scientific studies exist proving that McGhan's anatomically shaped implants result in a more natural post operative appearance	7.1 (31)	34.6 (152)	34.9 (153)	21.9 (96)
I believe there is no difference in the end result between traditional round implants and the anatomically- shaped implant	1.4 (6)	17.3 (76)	54.0 (237)	25.5 (112)
I believe the diagram in the McGhan ad comparing round implants with anatomically-shaped implants suggests the anatomically-shaped implants will result in a more natural look	48.5 (213)	43.1 (189)	6.2 (27)	1.8 (8)

Note: STA = Strongly Agree, SOA = Somewhat Agree, SOD = Somewhat Disagree, STD = Strongly Disagree

Appendix D*Table 4: Message believability scores (4 - 1 Range)*

	<i>Mean Score</i>	<i>Standard Deviation</i>
Pert Plus Shampoo	2.100*	.586
Dodge Stratus Auto	2.551	.527
McGhan Breast Implant	2.874*	.493

Modified LSD (Bonferroni) test with significance level .05.

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Interview based STAS and the effect of print advertising

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Abstract

Short Term Advertising Strength is normally based on electronic single source data. In the present article, however it is estimated based upon personal interview data. The share of purchases among people exposed to advertising is divided with the share of purchases among people reported not to be exposed. These estimates are upward biased relative to electronic single source based estimates. The results suggest strong print media effects as compared with STAS measures for TV. The data also suggest that whereas for TV high campaign recall tends to come together with low STAS scores and vice versa, the same is not the case with print campaigns. Here campaigns high in both recall and STAS are found.

1 Introduction

1.1 The problem

Short-term advertising strengths (STAS) measures were introduced by John Philip Jones in Jones (1995). Since then the concept and its measurement have been one of the hottest, debated issues in the area of Marketing and Advertising Research (Ehrenberg and Scriven 1997, McDonald 1995, Broadbent et al. 1997, Hansen 1998, Spitler 1998, Roberts 1997, 2001 and Hansen et al. 2002). This debate has been related to media planning (recency versus effective frequency), the role of long-term effects, interaction between advertising and promotion, etc.

1.2 The STAS concept

Basically, STAS is computed from single source data as it is illustrated in table 1. Here, information covering purchases on a particular day, and for the same respondents, their exposure to (television) advertising within the week preceding the purchase are shown.

Table 1: STAS computation

	<i>Bought yesterday</i>	<i>Did not buy yesterday</i>	<i>Total</i>
Have seen TV-commercial for Coca-Cola within the last week	208	406	614
Have not seen TV-commercial for Coca-Cola within the last week	361	1,289	1,650
Total	569	1,695	2,264

In its original version, STAS is computed as the ratio between purchases among advertising exposed consumers divided by the ratio of purchases among non-exposed consumers. This figure is multiplied by 100 giving a score where figures larger than 100 suggest a positive effect of varying magnitude. In the example in table 1 STAS becomes

$$\frac{(208 / 614) \times 100}{361 / 1650} = 155$$

Until recently, data have practically always come from electronic single source collection systems. For the feasibility of the analysis, the critical figure is the number of respondents who have both purchased and been exposed. Unless a reasonable number of such instances can be identified, the STAS computation is associated with a large statistical uncertainty.

In addition to John Philip Jones' original US data (Jones, 1995), similar findings have been presented for the UK and Germany. Typical distributions of STAS scores are depicted in table 2. On the whole, the UK figures as well as the German figures are slightly lower than the American figures, however, the overall distribution of findings is confirmed. In reality such data are only available for few very fast moving consumer goods in major markets with heavy TV advertising such as UK, US, France and Germany.

Table 2: STAS scores from the US, UK and Germany (Jones 1998)

	<i>USA</i>	<i>UK</i>	<i>Germany</i>
Fifth	200	159	141
Fourth	130	117	107
Third	107	108	104
Second	100	100	99
Bottom	81	83	88

In other areas concern has been with the establishing of single source data using other means of data collection than electronic single source panels. Here, two alternative approaches will be discussed. First, the use of traditional diary-based panels is possible. Secondly, the use of data collected in ad-hoc interviews with large representative samples is possible.

In both cases, two questions arise.

1. How can data be collected so that a sufficient number of ‘critical responses’ are obtained?
2. What limitations apply to the data collected in these ways in terms of validity and comparability with other findings?

1.2.1 Consumer panel based STAS

The traditional panel approach is not a new one. Actually, the first STAS-like computations were carried out by Colin McDonald in 1969 based upon such data. A similar analysis based on the UK adfact data from 1995-1999 is reported by Hansen et al. (2002). Later, similar approaches have been attempted in Norway, and on a smaller scale in Denmark. The purpose of this has partly been to make STAS data available in markets where electronic single source data are not likely to be introduced, and partly to allow for the inclusion of effects of print media - media which in both of these countries have a larger share than television advertising. On the whole, these experiments have suffered from a very low number of observations in the ‘critical cell’, that is, few observations of respondents who have both ‘seen’ and ‘bought’. This has been a result of the relatively small ad-hoc panels used (500 – 1000 respondents during 2 – 3 months). Still however, the McDonald data (1969), the Hansen et al. data (2002) and the findings from Norway (Helgesen 1998) suggest that the STAS measures are similar to those based on electronic single source data, yet with a tendency for the scores to be slightly higher and some of them with STAS print scores reported also.

1.2.2 Interview based STAS

Faced with these problems, it has been attempted to develop a procedure based upon personal interviews. This was first done on a continuous CAPI data collection system on which a traditional print and television ad recall measurement was administered. In 1998-99 various experiments were made by adding 'recent purchase' questions to such surveys. Based upon this, experiences have been obtained with the computation of STAS-like scores.

Different data bases have been collected, testing the effects of asking about purchases in more extended periods than one day, about store visits versus brand purchases and exploring the effects of different media. To ask about ad-exposure and recall of recent purchases, gives data that must be interpreted as reflecting attitudes as well as actual behaviour. Thus, the scores have been labelled 'Attitudinal Short Term Advertising Strength' (ASTAS).

The first attempt to establish attitudinal STAS scores was done by adding a simple purchase question: 'Have you bought brand X yesterday?' to a standard ad recall survey where people for a pre-coded list of brands were asked whether they had seen television commercials or print advertising recently. Results from this first attempt are shown in table 3.

These scores tend to be higher than what has been reported based on electronic single source data. There are several reasons for this.

The first attempt to establish attitudinal STAS scores was done by adding a simple purchase question: 'Have you bought brand X yesterday?' to a standard ad recall survey where people for a pre-coded list of brands were asked whether they had seen television commercials or print advertising recently. These scores reflect higher recall of purchases that have actually taken place.

Secondly, by asking for exposure lately you are likely to include more exposure than what occurred the last week, which is measured with single source based STAS computations.

Table 3: 1st Danish ASTAS measures, TV + print

	ASTAS
Libresse	372
Karat	322
Bilka	293
Omo	270
Nestea	245
Liptonice	234
Stimorol	231
Hydro	228
Sprite	225
Coca Cola	208
Ariel	195
Always	189
Netto	131
Gevalia	46

Thirdly, there is a bias relating to the respondent. Those respondents claiming to have seen advertising for a particular brand and bought the same brand are likely to be consumers who see more advertising and buy more brands than the average consumer.

Fourthly, just as people who have seen a particular advertising are more likely to buy the brand, people who have bought the brand may be more likely to see advertising for the brand, or to claim that they have done so.

All this has implications. Whereas, as discussed with regular STAS measures (Jones, 1995), a score larger than 100 is expected to reflect positive effects of advertising, “100” is not necessarily corresponding to the neutral value for the ASTAS scores. If it was, it would imply that the scores were nominally scaled. This may be the case with traditional STAS scores, but it can certainly not be expected to be the case with attitudinal STAS scores. Still, however, higher scores suggest more effective advertising, and smaller scores are interpreted as indications of advertising working less efficiently.

1.2.3 The size of the critical cell

With attitudinal STAS measures, there are several ways in which the size of “the critical cell” can be improved. Obviously, it can be done by increasing the number of interviews but thereby normally also costs and the length of the data collection period increase.

The same can be accomplished by extending the length of the “time window” in which purchase questions are asked. Asking for purchases within the last three days, rather than for the last day may make good sense for many fast moving consumer goods. Actually, this was done in a second experiment with a much larger sample.

By comparing the number of purchase responses, relative to the number of interviews in the two samples, it was found that there was a small tendency to understate purchases when asked about three days. Still, the ASTAS scores were very similar to those from the first study.

1.2.4 ASTAS for print

In the second study separate questions about exposure to TV and to print were asked. Thereby it became possible to compute ASTAS scores for print advertising and TV separately. Here it was found that for 14 out of the 23 brands print ASTAS was lower than the TV ASTAS. On the average print ASTAS was 186 against a TV ASTAS of 172.

When comparing unadjusted ASTAS scores for print with similar scores for television, an interesting picture emerges. Like in the Norwegian and in the Danish panel cases, print scores higher than television. ASTAS scores for print have not been made available internationally. It is not possible to conclude whether this is a general, or a special Nordic phenomenon, or whether it has an effect on the ASTAS measurement procedures (however, findings from Starch show a similar tendency) (Jones, unpublished 1999). One may speculate, that with fast moving consumer goods, as they have been studied in ASTAS surveys, the impact of special offers in daily newspapers and of free sheets, combined with deals in stores, may account for this effect. It is noteworthy, thus, that the adjustment introduced in connection with television scores gives a larger downwards adjustment for print, than for television, suggesting that print viewers on the whole may be more active shoppers of advertised brands.

2 The 2004 study

2.1 Data collection

To explore these relative differences in ASTAS scores for print and television it was decided to carry out a new data collection where in addition to spending on television spending on different kinds of print prior to the data collection was established. Data collection took place with a TNS/Gallup Internet panel representing the Danish population aged 15-59 years. Also, spending data were provided by TNS/Gallup. Data included 34 fast moving consumer brands in ten different categories. A total of 4000 interviews were conducted and respondents were asked:

“Did you see television for brand X within the last week?” (rotated)

“Did you see brand X advertised in print within the last week?” (rotated)

Interviews were structured so that in half of the cases print was asked before television.

Following these questions 15 minutes interviewing took place about emotional responses to the same brands. Findings from this data collection are not reported here.

Eventually, people were asked: “Did you buy brand X within the last three days?” (again rotated).

The overall findings are provided in appendix 1 where ASTAS scores are given for each brand. First for those brands with the highest print ASTAS scores, secondly for those brands with the highest television ASTAS scores. These data make a number of different analyses of the advertising effect possible.

Before reporting the findings, it should be emphasised, however that ASTAS scores reported based upon respondents’ own answers include two kinds of biases already discussed in connection with the earlier studies.

People may over or under claim purchasing behaviour when reporting about the last three days, and people may erroneously report television viewing or reading within the last week.

As found in the earlier studies these two effects result in a bias giving higher STAS scores than similar scores computed based upon single source data. As

also reported earlier these biases do not distort the structure of the ASTAS measure and there are no reasons to believe that the biases should differ depending upon whether print or television viewing has been reported or depending upon the magnitude of the actual spending (spending is computed as the total amount in the half year prior to the data collection).

2.2 *ASTAS and ad spending*

An overall impression of the findings is given in table 4. Here it appears that for brands with the highest print ASTAS scores print average spending per brand is also much larger than television spending. For brand with highest television ASTAS scores we find higher television spending per brand than print spending, but the difference is much smaller than in the case of the brands with highest print scores. One might speculate that somehow television campaigns survive longer in the memory of the consumer than do print campaigns.

Table 4: *Average ASTAS and spending*

	<i>Average ASTAS</i>			<i>Average spending (mill. DKK)</i>		
	<i>Print</i>	<i>TV</i>	<i>Diff.</i>	<i>Print</i>	<i>TV</i>	<i>Diff.</i>
With print advantage	197	121	77	2,773	1,300	1,473
With TV advantage	157	260	-103	2,066	2,644	-0,578
Averages	174	200		2,369	2,068	

Another impression of the effect of the two media appears in table 5. Here ASTAS scores are computed for those respondents reporting having seen print only, for those reporting having seen television only and for those reporting having seen both. The TV only scores are slightly higher than the print only scores, but the scores of combined exposure are much larger than either of the two. To give an impression of the relative advantage television seems to have, the following computations have been carried out. ASTAS scores for television and print are computed for those brands where no television spending has been observed in the preceding half year. Still for those brands an ASTAS score for TV of 147 is computed. The relatively high ASTAS score for television computed in cases where actually no television campaigns have been run within the

preceding six months suggests the danger involved in relying upon campaign effect measures too heavily depending upon consumers' own recall of advertising.

Table 5: ASTAS for "print only", "TV only" and exposure to both

	ASTAS
Seen print only	173
Seen TV only	200
Seen both	337

Since practically all brands have spent at least some money on print advertising (particularly in retailers' free sheets) a similar computation for print effects has to be approached slightly differently. Results are shown in table 6. Here brands are divided into those where total print spending has been less than half a million DKK and those where total print spending has been larger. The findings suggest a relatively stronger print ASTAS effect following larger print spending. The effects on the TV scores show a much larger effect of TV when print spending is moderate but even with high print spending significant TV ASTAS scores prevail. An effect partly due to higher TV spending when also print spending is higher.

Table 6: ASTAS for Print and TV when print spending is high and low

	Print ASTAS	TV ASTAS	Difference
Print spending < 0.5 mill. DKK	201	329	- 128
Print spending > 0.5 mill. DKK	166	162	4

From table 4 it appears that average print spending exceeds television spending with approximately 10%. Also it should be noted that the bulk of the print spending takes place in the form of brand advertising in retailers' free sheets. Only few of the products included are running strong print campaigns in daily newspapers and/or magazines. To illustrate what happens when such a media strategy is used, we can look at the only brand for which such a campaign strategy has been applied and for which a sufficient number of purchases and

exposures have been reported: Faxe Kondi (a soft drink). This is shown in table 7.

For this brand we see an ASTAS effect ascribed to television even no television campaigning has occurred in the preceding six months.

Table 7: A case of print only campaigning

	Number of observations	ASTAS				Spending (mill. DKK)		
		Total	Print only	TV only	Print and TV	Print	Free sheets	TV
Faxe Kondi	961	224	244	201	290	3.1	0.8	0

In the case of Faxe Kondi, the product has in the past been using television to a significant extent which may account for the relatively high ASTAS scores for those (few) claiming “only exposed to television”.

Free sheets are about the most important single media in the Danish advertising world. Particularly for fast moving consumer goods many brands spend more money here than on all other advertising combined. Therefore, it seems worthwhile to explore the effect of more or less heavy use of free sheets in their own right. This is done in table 8. Here it is seen that brands with heavy free sheet spending have much lower TV ASTAS even though they still are significant TV spenders.

Table 8: TV and Print ASTAS for brand with heavy free sheet spending

	TV ASTAS	Print ASTAS	TV Spending
Free sheets > 2 mill. DKK	149	166	2,629
Free sheets < 2 mill. DKK	234	179	1,694

2.3 Awareness effects

When data are collected, as it is the case here, they automatically allow for computation of recall campaign scores. The raw data are shown in appendix II. Obviously, campaign awareness relate to campaign spending but it is remarkable that quite important awareness is reported even in cases when no campaign has been broadcasted within the preceding six months. There seems to be a build-in advantage for TV when it comes to campaign awareness measures relying upon campaign recall. This is also evident when we look at awareness campaign for print and television as done in table 9. Here, television awareness is almost twice as high as print awareness in spite of the fact that spending on print exceeds the average spending on television for the brands studied. Average awareness and average spending as shown in table 9:

Table 9: Recall and spending for TV and Print

	<i>Awareness (% recalling)</i>	<i>Spending (mill. DKK)</i>
Print	8,62	2369
TV	15,19	2068

This raises the question whether the ASTAS scores reported simply reflect differences in awareness levels or whether they go beyond that and reflect real effects closer related with actual sales results than the awareness itself. That this is so becomes evident in fig. 1 a, b, where awareness and ASTAS scores for the different brands are illustrated. It appears that for TV brands with high awareness and high ASTAS scores simply do not exist whereas for print campaigns all combinations exist. TV campaigns either give high awareness or high ASTAS. Thus, ASTAS scores reveal another side of the total campaign effect than the awareness score in its own right, an observation suggesting that the widespread use primarily of campaign recall as an evaluation of campaign effects may be a dangerously misleading procedure.

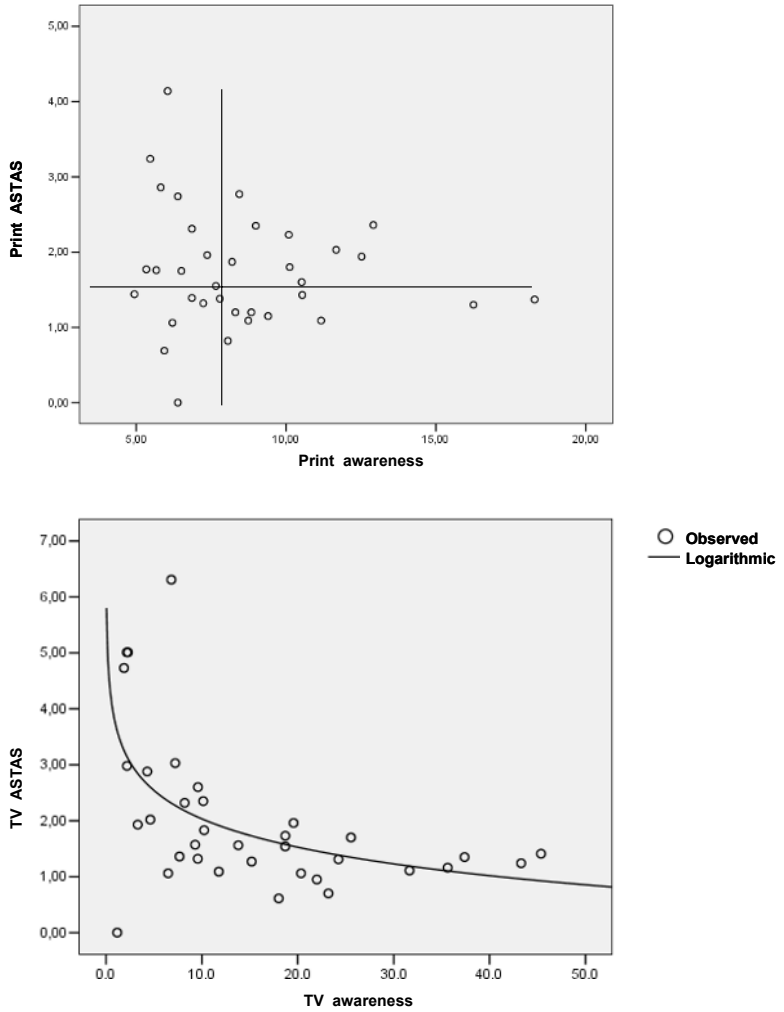


Figure 1 a,b: ASTAS and awareness for print and for TV

3 Conclusions

If we summarise the observations made here, we can emphasise four conclusions.

1. Print give ASTAS effects when print pressure is sufficiently high
2. Old television campaigns hurt print ASTAS
3. Campaign awareness alone favour television spending
4. ASTAS and awareness are different communication effect measures

As an overall impression of the analysis one may suggest that the widespread use of day-after recall and other recall measures that have dominated advertising effectiveness research in the last half of the twentieth century may as an effect have given the advertising world a misled perception of the relative strength of television advertising as compared to print advertising. A phenomenon that has been accountable for the very different developments in spending on the two media and in the development of the two media on the whole.

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Appendix 1

ASTAS

<i>Advertiser</i>	<i>Print</i>	<i>TV</i>	<i>Diff</i>
Rød Aalborg	3,24	0,95	2,29
Sorbis	1,77	0,00	1,77
Garnier Fructis	1,94	0,70	1,24
Dove	2,36	1,27	1,09
Sanex	2,03	1,09	0,94
Matas	1,37	0,61	0,76
Gevalia	1,80	1,06	0,74
Karat	1,87	1,32	0,55
Ota	1,55	1,06	0,49
BKI kaffe	2,77	2,32	0,45
Rynkeby	1,76	1,31	0,45
Bakkedal	2,35	2,02	0,33
Faxe Kondi	2,23	1,96	0,27
Merrild	1,43	1,36	0,07
Kærgården	1,15	1,11	0,04
Avg.	1,97	1,21	0,77

ASTAS

<i>Advertiser</i>	<i>Print</i>	<i>TV</i>	<i>Diff.</i>
Kohlberg's	1,20	1,24	-0,04
Coca Cola	1,30	1,35	-0,05
Schulstad	1,09	1,16	-0,07
Kims	1,32	1,41	-0,09
Fun	1,44	1,54	-0,10
Lurpak	1,75	1,93	-0,18
Hatting	1,60	1,83	-0,23
Toms	1,38	1,70	-0,32
Haribo	1,20	1,57	-0,37
Kelloggs	1,09	1,73	-0,64
BonBon	1,96	2,60	-0,64
Malaco	2,31	3,03	-0,72
Head & shoulders	0,82	1,56	-0,74
Gammel Dansk	4,14	5,01	-0,87
Estrella	1,39	2,35	-0,96
Stimorol	1,06	2,88	-1,82
After Eight	2,86	5,01	-2,15
Engholm	0,69	2,98	-2,29
Bacardi	2,74	6,31	-3,57
Martini	0,00	4,73	-4,73
Avg.	1,57	2,60	-1,03

Appendix 2

<i>Advertiser</i>	<i>ASTAS</i>		<i>Recall</i>	
	<i>Print</i>	<i>TV</i>	<i>Print</i>	<i>TV</i>
Kims	1,32	1,41	7,24	45,37
Kohlberg's	1,20	1,24	8,31	43,29
Coca Cola	1,30	1,35	16,25	37,39
Schulstad	1,09	1,16	8,74	35,63
Kærgården	1,15	1,11	9,4	31,65
Toms	1,38	1,70	7,79	25,55
Rynkeby	1,76	1,31	5,67	24,24
Garnier Fructis	1,94	0,70	12,52	23,19
Rød Aalborg	3,24	0,95	5,47	21,99
Gevalia	1,80	1,06	10,12	20,34
Faxe Kondi	2,23	1,96	10,09	19,56
Kelloggs	1,09	1,73	11,17	18,70
Fun	1,44	1,54	4,94	18,69
Matas	1,37	0,61	18,29	18,01
Dove	2,36	1,27	12,91	15,19
Head & shoulders	0,82	1,56	8,06	13,80
Sanex	2,03	1,09	11,67	11,76
Hatting	1,60	1,83	10,52	10,23
Estrella	1,39	2,35	6,86	10,14
BonBon	1,96	2,60	7,37	9,59
Karat	1,87	1,32	8,20	9,57
Haribo	1,20	1,57	8,84	9,30
BKI kaffe	2,77	2,32	8,44	8,21
Merrild	1,43	1,36	10,54	7,67
Malaco	2,31	3,03	6,86	7,22
Bacardi	2,74	6,31	6,39	6,81
Ota	1,55	1,06	7,66	6,48
Bakkedal	2,35	2,02	8,99	4,62
Stimorol	1,06	2,88	6,21	4,30
Lurpak	1,75	1,93	6,51	3,31
Gammel Dansk	4,14	5,01	6,05	2,30
Engholm	0,69	2,98	5,94	2,19

After Eight	2,86	5,01	5,82	2,17
Martini	0,00	4,73	6,39	1,88
Sorbets	1,77	0,00	5,34	1,17
Avg.	1,74	2,00	8,62	15,19

Edith Smit, Peter Neijens, and Marijntje Stuurman

It's all about catching the reader's attention

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Abstract

The aim of our study is to show how readers pay attention to ads embedded in national newspapers. A total of 26,556 respondents were surveyed about their reading behavior, their recognition of ads published in the previous day's newspaper, and their appreciation of these ads. Several measures were used to evaluate attention at the different levels of ad processing. The 290 advertisements included in the study were then content analyzed and related to the readers' responses. Results showed that media position (i.e., prominent position in the newspaper), ad layout (bigger size) and ad content (more colors) had a stronger influence in the first attention phases (where pre-attention and focal attention are drawn) than in subsequent phases. On the other hand, reader characteristics (reading intensity, ad liking, and involvement) had a stronger influence in subsequent attention phases, where comprehension of the message and elaboration take place.

1 Introduction

Advertising volume, calculated for all media, has quadrupled in the past ten years (Olsthoorn, 2003). Obviously media users need to deal selectively with this huge amount of information. If they were constantly aware of this overwhelming quantity of stimuli, they would be permanently and completely confused. The first mechanism people use to reduce overload is avoidance. A lot of people switch off the television set or leave the room, throw the advertising brochures into the dustbin unseen, and do not even open the daily newspaper. The second mechanism people use is sensory selection. People do not see or hear everything that is going on around them. The final selection is made by the brain, which filters sensory perceptions. People only pay conscious attention to a small part of what the eyes see and the ears hear. Advertising needs to overcome a great many hurdles if it is to be perceived and processed consciously (DuPlessis, 2001; Franzen, 1994).

The aim of our study is to show how readers pay attention to the ads embedded in national newspapers. More specifically, we questioned to what extent medium, ad, and reader characteristics explain attention to newspaper ads. We first describe ad processing in terms of four levels of attention: pre-attention, focal attention, comprehension, and elaboration. We then discuss media, ad, and reader variables that have been found to influence ad attention in previous studies. In the third section of this article, we present the results of our study in which we test our hypotheses that particular medium, ad, and reader characteristics influence attention. We also test the hypothesis that medium and ad characteristics are more important for the first attention phases, and that reader characteristics are more important for the latter phases.

2 Previous research

2.1 Attention

An often-quoted description of attention is William James' from 1890: "Everyone knows what attention is. It is the taking possession by the mind in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought (...). It implies withdrawal from some things in order to effectively deal with others." Attention is currently described in terms of concentration, awareness, mental energy, or assignment of our analytical capacities to a limited number of stimuli from our environment (e.g., Styles, 1997; Mandler, 1982; Van Raaij, 1991). Although various definitions of attention are used (Styles, 1997), they all view attention as a process of selection. Attention is the process which interrupts the subconscious processing of the flow of stimuli from the environment. The pupil dilates, the lens focuses, orientation-response occurs (Franzen, 1994, p.30). Attention means that the receiver has a contact with the stimulus. Certain stimuli are allowed into consciousness, and the brain becomes actively involved with them.

Greenwald and Leavitt (1984; see also Finn, 1988; Craik & Lockhart, 1972) suggested four levels of audience involvement (i.e., attention paid to advertising): pre-attention, focal attention, comprehension, and elaboration. A reader exposed to an ad notices it at the pre-attention level and decides to terminate processing or to continue at a deeper level. In this pre-attention phase, we continuously scan our environment in a subconscious and automatic way. This is the filter for all incoming information. Only a small selection of stimuli enters the next phase, where attention is just enough to determine what the ad is about. This orientation phase takes no more than a second, and the reader wonders if the ad is worth paying attention to (Franzen, 1994). At the third level – comprehension – the reader analyses the ad to assign meaning. The ad leaves some traces in memory, but with no connection to existing knowledge structures. This takes place in the fourth phase, the elaboration level. At this level, the consumer's full capacity is used to respond cognitively to the ad, generating personal connections and imagery. It is assumed that these four levels require increasing processing capacity, and have a hierarchical structure: if processing at one level fails to evoke the next highest level, the processing of the ad is terminated, although a divergent processing model in which the reader moves directly from focal attention to elaboration is also possible (Finn, 1988).

Different groups of variables are responsible for activating attention, and these can be person-specific as well as stimulus-specific (Franzen, 1994). The various factors may influence attention differently at the four levels. Greenwald and Leavitt (1984), among others, suggest that ad characteristics are more influential in the first two phases, where stimuli are used to attract the reader's atten-

tion. They also imply that the influence of personal characteristics becomes stronger in the third and fourth phases, after attention has been drawn (see Figure 1). In other words, in the first attention phases, it is possible that ads attract attention, while in the later phases readers actively pay attention to ads. In this respect, Pieters and Wedel (2004; Wedel & Pieters, 2000) make a distinction between *attractors of attention* and *retainers of attention*. Attractors of information include liking the ad and other appeals. Retainers of information include reader factors like product involvement and experience with the advertised product and brand.

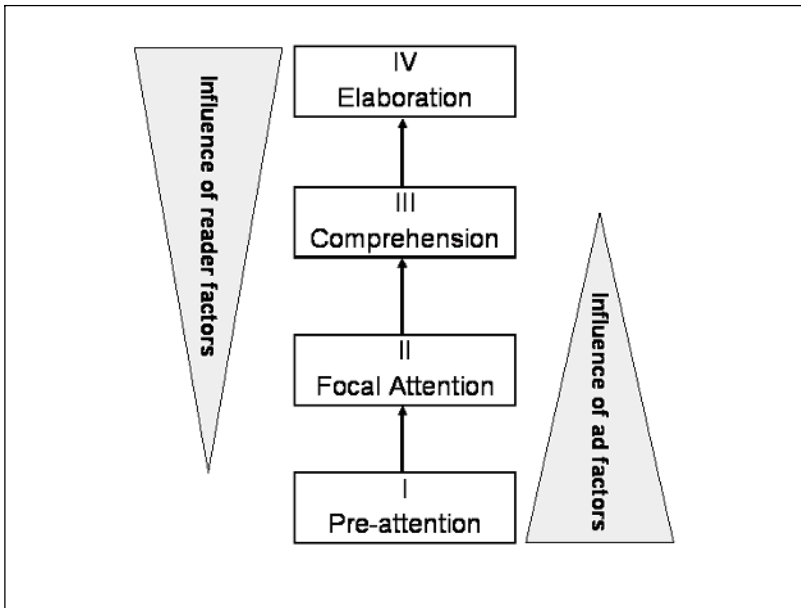


Figure 1: The differential influence of reader and ad factors

2.2 Effects of medium-related characteristics

Previous research has shown that ad position, such as the placement of the ad on the front page, on editorial pages and on right pages, results in higher exposure and more attention to the ad (Finn, 1988, p.172). Size of the newspaper (i.e., number of pages) negatively influences exposure and attention (Speck & Elliott, 1997). Ads in the first section of the newspaper are noticed more often (Cebuco, 1985; Bronner & Verzijden, 1990). It also appears that adver-

tisements in specialized sections receive less attention from the readers (Speck & Elliott, 1997). Ads in the news section were found to be better noticed (TMP, 1996), though Sissors and Bumba (1992) claim that special sections and sports sections score better in terms of number of readers noticing the ads.

2.3 *Effects of ad characteristics*

It has been shown that layout factors such as ad size, the use of colors in the ad, and the insertion of a picture enhance attention to newspaper ads (Finn, 1988). Size was found to be one of the most important factors for increasing ad visibility: the bigger, the better (Schönbach, 2002; Neijens & Smit, 2003). Some studies showed that this was not the case for small ads (smaller than 100 square cm) (Franzen, 1994). Color was found to be the second most important factor for making the ad conspicuous, resulting in more attention (Gill, 2000; Mayer & Illmann, 2000; Schönbach, 2002; Walker & Cardillo, 1998).

Within a second, a reader has analyzed what the ad is about. Kroeber-Riel (in Franzen, 1994) concluded that on average readers spend 2 seconds on an ad (based on videotaped eye contacts). 50-75% of this time (1 to 1.5 seconds) is spent analyzing the visual stimuli. 90% of the readers fix on the dominant visual elements first before going on to the elements in the text. Research on content factors such as number of words, nouns, verbs, adjectives, amount of copy and readability did not show significant effects (Finn, 1988, p. 172).

Another content characteristic is the strategy applied in the advertisement. Our classification of ad strategies is based on Hall and Maclay (1991), who distinguished four advertising frameworks, and Franzen (1999), who added three others (see also Van den Putte, 2002; Van der Lee & Smit, 2001). Each framework or strategy has its own goal and means to reach that goal. More than one strategy can be used in any particular ad. The seven strategies are: sales response, persuasion, emotion, symbolism, relationship, awareness, and likeability (see Appendix for a detailed description of these strategies). Research has shown that two of these strategies, namely sales response and awareness, are most often used in print ads to attract the consumers' attention (Neijens & Smit, 2003; Steevels & Van den Putte, 2004).

2.4 *Effects of reader characteristics*

For an overview of reader characteristics we distinguish four categories of variables: demographics, media use, ad liking, and brand or product experience.

First, demographics. In general, women pay more attention to advertisements, or notice them more than men do. Some authors explain this by the traditional housewife-role. Burns and Foxman (1989) found that women were more positive about advertising than men, especially about advertising as a source of

information. Older people also apparently saw more advertisements in various media, and used them as an information source more often (Bauer & Greyser, 1968; Burns & Foxman, 1989). Ten years later, Speck and Elliott (1997) found the opposite: older readers paid less attention to ads. According to Bauer and Greyser (1968), people with higher incomes saw more advertisements. But in a study on attention to advertising, Smit (1999) found different results for different media. Younger people paid more attention to radio and television ads, but did not differ from older people in attention to print advertising. Age appeared to be indirectly (negatively) related to the recognition of magazine ads, with older people perceiving advertisements as less entertaining, less informative and more irritating (Smit, 1999; Smit & Neijens, 2000).

A second category of relevant reader characteristics is the way readers use the medium. Schönbach (2002) conducted a meta-analysis on studies relating media factors to ad processing (including attention). Important factors for print were subscribers versus buyers of newspapers, primary versus secondary readers, intensity of reading, multiple exposure, situation of reading, reading length, and the time of the day. In Bronner and Verzijden's study (1990), reading intensity was the most important factor for seeing the page as well as the ad (correlations of .39 and .32).

A third important category of factors concerning attention to advertisements is whether people like advertising or not. It appears that positive beliefs about advertising are positively related to attention paid to advertising (Smit, 1999; Smit & Neijens, 2000; Speck & Elliott, 1997). Advertising perception has also been found to positively affect attention to print ads, such as the positive influence of a general good evaluation (Celci & Olson, 1988), prior affect (Goodstein, 1993), a belief in the entertainment and information function of (print) advertising and lack of irritation (e.g., Bauer & Greyser, 1968; Olney, Holbrook & Batra, 1991; Smit & Neijens, 2000). Nördfalt (2005) showed that an instantly liked ad can attract attention, hence increasing the chance of later recognition. Bronner and Verzijden (1990) found that respondents who believed print ads contain useful information paid more attention to the ads.

The final category influencing reader response to advertisements includes previous experience with the advertised brand or product, measured as interest, prior buying behavior or planned buying behavior. Bogart and Tolley (1988) found that recognition scores (for half page newspaper ads in the US) differed for different product groups, and for men and women. For instance, ads for restaurants had an average recognition score of 54% (women) and 40% (men), while ads for sports goods scored 16% (women) and 34% (men). Bogart and Tolley also noted that 'reading' (i.e., 4 fixations or more) was closely connected with the intention to purchase the advertised product within a year and whether the advertised brand was part of the respondent's 'selection repertoire' (see also Franzen, 1994).

3 Hypotheses

Based on previous research, we expect that attention to the ad increases when:

- (1a) the ad is prominently placed in the newspaper;
- (1b) the ad has a conspicuous layout in terms of size, pictures and color;
- (1c) the awareness strategy and/or the sales response strategy is used in the ad.

We expect the influence of position, layout and content of the ad to be stronger in the first attention phases, where pre-attention and focal attention of the reader are drawn, than in subsequent phases (Hypothesis 1d).

We also expect that attention to the ad increases:

- (2a) with certain demographics;
- (2b) when the newspaper is more intensively used;
- (2c) when the ad is more liked;
- (2d) when the reader is more involved with the advertised product or brand.

We expect the influence of reader characteristics to be stronger in the later phases of attention, where comprehension of the message and elaboration take place (Hypothesis 2e).

4 Method

4.1 *Fieldwork*

The advertisements in our study were taken from the database of the Advertising Response Research (ARR)¹. The ARR is a standardized research instrument commissioned by the Dutch marketing association for newspaper publishers, Cebuco. The ARR is based on the recognition method and uses computer assisted self-interviewing: electronic questionnaires are sent to respondents, completed offline, and the answers are returned via Internet.

In our study we included data collected between 2002 and 2004. A total of 26,556 respondents were surveyed about their reading behavior, their recognition of (the content of) particular ads, and their appreciation of these ads. 63% of these respondents were male, and the average age was 45 (SD = 13). The respondents' scores were aggregated for each advertisement. In total 290 ads published in four national Dutch newspapers were surveyed in this period. Between 70 and 405 respondents were interviewed for each advertisement.

¹ In Dutch: *Reclame Reactie Onderzoek* (RRO©).

Both subscribers and occasional buyers of the newspapers were interviewed. The prerequisite for participation in this study was that the respondent had read or seen the particular issue (i.e., the previous day's newspaper). The respondent was asked to get the previous day's paper in order to measure advertising reactions in a natural context.

4.2 *Measurement of attention to newspaper ads*

The levels of audience attention described in Section 2.1 are related to the concepts of Starch (1966). According to Finn (1988), Starch's noted scores are valuable indicators of 'focal attention' (also referred to as 'attention received'), because the enduring effect of focal attention is the formation of a visual image of the ad. Therefore, the visual recognition of an ad is indicative of processing at the focal attention level (second level). Finn also found that Starch's associated and signature scores were suitable indicators of 'comprehension' (third level), because the enduring effects of comprehension are propositional traces (for example, a link to a sponsor), which assign meaning to an ad. The enduring effect of elaboration (fourth level) is an integration of ad meaning with prior knowledge. So Starch's 'read scores' are indicative of elaborate processing. The first pre-attention level, however, cannot be measured by memory measures. Eye tracking and observation are more suitable for measuring the pre-attention stage, but are not applicable in large-scale survey research. Opening a page, however, without knowing what will be on that page, can be seen as an indication of a first selection. We will therefore label this first phase 'exposure'. A translation of the phrases used in the ARR is presented in Table 1.

In general, recognition is considered a reasonable measure for ad attention (Sutherland & Sylvester, 2000). It is the first test of an ad's effectiveness and an indication whether an ad has reached its audience (Krugman, 1986; Rossiter & Percy, 1997; Nördfalt, 2005). Although recognition has been criticized for overestimating the number of advertisements seen (over claim), especially for disliked material (Gibson, 1983; Krugman, 1977), and for not declining significantly over time intervals (which should be the case for a memory measure) (Beerli & Santana, 1999; Finn, 1988), it is defended because it fits the way advertisements are stored in memory (Hansen, 1995). Most contemporary ads have strong visual elements, and enter the mind via the eyes. It can be expected, therefore, that ads are stored visually. Showing ads to respondents, to measure recognition, corresponds with this visual storage (DuPlessis, 1994; Smit, 1999).

Table 1: Attention in ARR terms

<i>Attention phase</i>	<i>ARR variables</i>
Exposure	Percentage of the readers that opened the page. “Did you yourself open this page? We do not mean that you read or saw this page, only that you opened this page.” (Answer: yes / no).
Focal attention	Percentage of the readers that noticed the ad (after opening the page). “Did you notice this ad on page X, no matter how briefly?” (Answer: yes/no), labeled Advertising Contact Score (ACS).
Comprehension	Percentage of the readers that were aware of the advertised product or brand (if ad was noticed). “Were you aware of the fact that this ad concerns X (product/brand)?” (Answer: yes/no), labeled Product Identification (PI) and Brand Identification (BI).
Elaboration	Percentage of the readers that read the ad (if ad was noticed). “Did you then read (some part of) this ad?” (Answer: yes/no), labeled Advertising Read Score or ARS.

ARR = Advertising Response Research

4.3 Measurement of medium and ad characteristics

The coding system used in this study was developed and tested in earlier research on newspaper ads, magazine ads, and television commercials (Neijens & Smit, 2003; Steevels & Van den Putte, 2004; Van der Lee & Smit, 2001) and is currently used in a shortened version in the ARR tool. All 290 advertisements were content analyzed by trained coders. 20% of these advertisements were coded a second time by one of the authors. Inter-coder reliability was satisfactory (average percentage of agreement was 89%). The various medium-related and ad-related variables are defined in Tables 2 and 3.

Table 2: Position characteristics (medium)

<i>Variable</i>	<i>Description</i>
Section	Section number: 1 to 8 (recoded to 1, 2, 3 and 4+)
Page	Page number: 1 to 134
Size of newspaper	Size of the newspaper in terms of number of pages (on average 41 pages)
Position in newspaper	Front page (=front page of first section), back page (=back page of final section), front page of section, back page of section, left page, right page, spread (two pages next to each other)
Position on the page	Upper half, lower half, right half, left half, full page, other positions
Context	Articles 'around' the ad (also referred to as 'Umfeld'): news, business, sports, culture, real estate, or science
Page type	A page with mostly editorial articles, editorial with (other) ads, mostly ads, ads plus classified ads, or all three (editorial, other ads and classifieds)
Day of the week	Monday to Sunday

Table 3: Ad content characteristics

<i>Variable</i>	<i>Description</i>
Ad size	Size of the ad in millimeters (height)
Dominance	Whether the ad is page dominant or not
Person	Whether or not a person is included in the ad (as photo or illustration)
Face	Whether or not a face is shown in the ad
Colors	Full color, one color, or black and white
Height logo	In millimeters
Width logo	In millimeters
Place of logo	Whether the logo in the ad is placed upper left, lower left, middle, upper right, or lower right
Fit with newspaper	Whether or not the ad fit the newspaper, according to the reader
Campaign type	Type of campaign the ad is part of: promotion, introduction, theme, tie-in, personnel, or other
Applied strategy	One or more advertising strategies (see Appendix). Coders were trained to identify these strategies.

4.4 *Measurement of reader characteristics*

The four categories of reader characteristics were all included in the questionnaire: demographics (age, sex, education), media use, ad liking, and product or brand experience. Media use variables included: the way the newspaper was acquired (subscription, purchase, other), how often the reader normally buys the newspaper in a week, how long the reader spent reading that specific newspaper (in minutes), how frequently the reader looked in the newspaper, and how intensively the paper was read (almost completely, largely, about half, some pieces, hardly anything, nothing). All questions concerned the previous day's newspaper. Ad liking was measured with 17 statements concerning the way the reader evaluated the ad in terms of informational value and entertainment qualities (5-point agreement scale). Together these statements formed one index scale (Cronbach's alpha of .85). Experience was measured by asking the respondents whether they ever had bought the advertised product or brand before.

5 **Results**

After we present the average scores of the ad attention variables (exposure, focal attention, comprehension, and elaboration), we will discuss the effects of the various medium, ad, and reader characteristics.

5.1 *Attention to newspaper ads*

Table 4 shows the various scores for exposure, focal attention, comprehension, and elaboration. On average, 86% of the readers opened the page on which the advertisement was placed and 74% of those who opened the page claimed to have noticed the advertisement. That means that 64% of all readers noticed an average ad in the newspaper. 81% of those who had noticed the ad correctly identified the advertised product, and 73% identified the brand in the ad, indicating more continued attention (comprehension level). The table shows that 43% of the readers elaborated on the ad (i.e., read the ad). These figures are averages, with some ads scoring better, others worse, shown by the large standard deviations. Below, we will investigate which medium, ad, and reader variables explain the variation.

Table 4: Ad attention

<i>How many readers:</i>	<i>Average</i>	<i>SD*</i>	<i>N resp</i>	<i>N ads</i>
Exposure level:				
Opened the page (0-100)	86	35 [9]	41.005	290
Focal attention level:				
Advertisement Contact Score (0-100)	74	44 [11]	32.251	290
Comprehension level:				
Product Identification (0-100)	81	40 [11]	25.982	290
Brand Identification (0-100)	73	45 [15]	25.982	290
Elaboration level:				
Advertising Read Score (0-100)	43	49 [11]	25.982	290

* Standard deviation analyzed on respondent level (standard deviation on ad level is presented between brackets); N resp = number of respondents; N ads = number of advertisements.

5.2 *Effects of medium-related characteristics (position)*

Tables 5a to 5c show the effects of the ad's position in the newspaper. Table 5a shows that ads in the beginning of the newspaper scored better: section number and page number were negatively related to ad exposure, comprehension and elaboration. As was expected, position in the newspaper did not affect noticing the ad (ACS), because these scores indicate attention for the ad, once the page where the ad was placed had been opened. Table 5a also indicates that advertisements in thinner newspapers score better than ads in thicker newspapers. Readers of thicker newspapers opened fewer pages and, therefore, were exposed to fewer ads.

Table 5a: Effects of medium position characteristics (1)

	<i>Exposure</i> (<i>PO</i>)	<i>Focal attention</i> (<i>ACS</i>)	<i>Comprehension</i> (<i>PI</i>) (<i>BI</i>)		<i>Elaboration</i> (<i>ARS</i>)
Section number	-.63**	-.04	-.19*	-.32**	-.34**
Page number	-.39**	.03	-.05	-.15*	-.15*
Size of newspaper	-.37**	-.12	-.27*	-.18**	-.25**

Figures in this table are Pearson correlations; * $p < .05$, ** $p < .001$; d=dummy variable (1=yes, 0=no); PO=page open; ACS=advertising contact score; PI=product identification; BI=brand identification; ARS=advertising read score; analyzed on ad level.

Position of the ad in the newspaper appeared to influence exposure (page open) and focal attention (ACS). First, results for exposure showed that the front page of the newspaper had the highest reach and that right pages scored a little better than left pages, back pages and front pages. Second, front pages of sections scored lower than the other positions in terms of focal attention. This direct effect, however, was overruled when ad size was taken into account (see Section 5.5). Position in the newspaper did not influence the comprehension and elaboration level (see Table 5b).

Position on the page did affect attention paid to the ads, although the effects are different for different attention levels. Ads on the lower half of the page scored significantly better in terms of exposure than ads on the upper half or on the full page. When focal attention is concerned, ads on the lower half scored significantly less than ads on the left half or on the full page, whereas for elaboration ads on the left half are more elaborated.

We also found that context is important: news was a better context for exposure than other contexts. Real estate and science contexts scored worse compared to most of the context variables. Focal attention was not influenced by context.

Table 5b: Effects of medium position characteristics (2)

	<i>Exposure</i> (<i>PO</i>)	<i>Focal attention</i> (<i>ACS</i>)	<i>Comprehension</i> (<i>PI</i>)	<i>Elaboration</i> (<i>BI</i>)	<i>Elaboration</i> (<i>ARS</i>)
Position in paper:	**	**			
Front page	97 a	69 ab	77	70	47
Back page	84 b	77 a	78	73	41
Front page section	88 abcd	63 b	79	68	36
Back page section	78 bc	76 a	78	68	44
Left page	84 c	74 a	82	72	43
Right page	89 d	73 ab	79	74	44
Spreads (2 pages)	86 bcd	78 a	81	72	44
Position on the page:		**			**
Upper half	84 b	74 ab	79	70	41 b
Lower half	89 a	70 b	78	71	43 b
Right half	87 ab	82 ab	86	72	50 b
Left half	88 ab	84 a	89	83	55 a
Full page	82 b	78 a	82	77	45 b
Context:	**		*	**	**
News	91 a	73	80 ab	73 a	46 a
Business	83 b	72	81 ab	73 a	41 ab
Sports	85 b	77	81 ab	75 a	43 ab
Culture	85 b	78	85 a	77 a	46 ab
Real estate	76 c	72	77 ab	49 b	35 b
Science	79 b	74	69 b	51 b	37 ab

Figures in this table are averages (0-100); analyzed on ad level; d = dummy variable (1=yes, 0=no); differences are tested by Analysis of Variance (* $p < .05$, ** $p < .001$): Position in paper x PO: $F(6,288)=10.10^{**}$; Position in paper x ACS: $F(6,288)=3.66^{**}$; Position on page x PO: $F(4,267)=10.35^{**}$; Position on page x ACS: $F(4,267)=9.00^{**}$; Position on page x ARS: $F(4,267)=4.12^{**}$; Context x PO: $F(5,238)=22.73$, $p < .01$; Context x ACS: $F(5,237)=3.23$, $p < .01$; Context x BI: $F(5,238)=9.96$, $p < .01$; Context x ARS: $F(5, 238) = 3.45$, $p < .01$; a,b,c,d = different subscript indicates a significantly different score based on Bonferoni Post Hoc Tests ($p < .05$).

Table 5c shows that ads on editorial pages scored better in terms of first attention (exposure), but that advertising pages ('only ads' or 'ads and classifieds') scored better in terms of focal attention (ACS). Day of the week made a

difference as well. Saturday was shown to be a less effective day in terms of attention.

Table 5c: Effects of medium position characteristics (3)

	<i>Exposure</i> (PO)	<i>Focal attention</i> (ACS)	<i>Comprehension</i> (PI)	<i>Elaboration</i> (ARS)	
Page type:	**	**			
Only editorial	90 a	70 b	79	73	43
Editorial with ads	88 ac	75 ab	81	73	45
Only ads	83 bc	76 a	80	72	43
Ads plus classifieds	85 c	77 a	83	71	45
plus editorial	79 abc	73 ab	92	78	43
Day of the week:	**	**	**	**	**
Monday	89 ab	81 a	85 ab	79 ab	49 a
Tuesday	88 a	73 ab	81 ab	77 a	46 a
Wednesday	86 ab	73 ab	81 ab	72 ab	43 ab
Thursday	88 a	78 a	85 a	75 a	47 a
Friday	89 a	75 ab	76 b	67 ab	44 ab
Sat+Sun	82 b	71 b	76 b	66 b	38 b

Figures in this table are averages (0-100); Analyzed on ad level; d=dummy variable (1=yes, 0=no); differences are tested by Analysis of Variance (*p<.05, **p<.001): Page type x PO: F(4,288)=10.21**; Page type x ACS: F(4,288)=5.27**; Day of the week x PO: F(5,287)=5.05**; Day of the week x ACS: F(5,287)=5.38**; Day of the week x PI: F(5,286)=5.97**; Day of the week x BI: F(5,287)=5.69**; Day of the week x ARS: F(5,282)=3.11**; a,b,c = different subscript indicates a significantly different score based on Bonferoni Post Hoc Tests (p<.05).

5.3 Effects of ad characteristics (layout and content)

Layout characteristics appeared important for the success of the advertisement. Size (the bigger, the better) and page dominance affected noticing the ad (ACS), and to a lesser extent product and brand identification (see Table 6). The portrayal of a person or a face was not particularly effective, the only exception being the visibility of a face for better brand identification. The placement of the logo only made a significant difference for brand identification (F(4,275)=2.49, p<.05). The use of color influenced focal attention, brand identification, and ad elaboration. Further results showed that size and color were related (colored

advertisements were in general larger, $r=.39$, $p<.01$), which raises the question which factor was more important. Regression analyses showed that size was more important than color for exposure (page open) and focal attention (ACS), whereas color overruled the effect of size for brand identification and elaboration (see Section 5.5).

Table 6: Effects of ad content

	<i>Exposure</i> (PO)	<i>Focal attention</i> (ACS)	<i>Comprehension</i> (PI)	<i>Elaboration</i> (ARS)	
Ad size	n.a.	.34**	.13**	.13**	.10
Page dominant ad (d)	n.a.	.29**	.13*	.12*	.10
Person visible (d)	n.a.	.05	-.05	.08	-.04
Face visible (d)	n.a.	.06	.02	.18**	-.05
Colors in ad	n.a.	.27**	.02	.18**	.16**
Height logo	n.a.	.24**	.16**	.08	.07
Width logo	n.a.	.17**	.10	.10	.11
Fit (d)	n.a.	.33**	.31**	.24**	.29**
Campaign type:					
Promotion (d)	n.a.	.28**	.34**	.26**	.34**
Introduction (d)	n.a.	-.03	.05	.01	-.05
Theme (d)	n.a.	-.16*	-.18**	-.12	-.15*
Personnel (d)	n.a.	-.12	-.19**	-.17**	-.20**
Applied strategy:					
Sales Response (d)	n.a.	.21**	.26**	.11	.21**
Persuasion (d)	n.a.	-.14*	-.03	-.04	-.14*
Awareness (d)	n.a.	.04	-.24**	.01	-.04

Figures in this table are Pearson correlations; * $p<.05$, ** $p<.001$; d=dummy variable (1=yes, 0=no); analyzed on ad level; color: 2=full color, 1=one color, 0=black and white; only campaign types and applied strategies found in more than 5% of the ads are listed; n.a. = not applicable.

While the use of a face in the ad did not affect attention to the ad, it had a positive effect on identifying the advertised brand. Placing the logo on the right side of the ad made a slight difference in the number of respondents who re-

called the advertised brand. 'Fit' is a very strong factor: if an ad was perceived to fit the newspaper, all attention scores were higher.

The type of campaign also made a difference. Promotion campaign ads received significantly more attention at the different levels. The scores for the other campaign types ('introduction', 'theme', and 'personnel') were equal. Advertising strategies were less important, but, as expected, ads using the sales response strategy had better attention scores. Persuasion and awareness campaigns scored worse than average.

5.4 Effects of reader characteristics

Table 7 shows the correlations between demographics, media use, ad liking, and product and brand experience on the one hand and the different attention measures on the other.

Table 7: Effects of reader characteristics

	<i>Exposure</i> (PO)	<i>Focal attention</i> (ACS)	<i>Comprehension</i> (PI)	<i>Elaboration</i> (ARS)
Demographics:				
Age	.15**	.05**	.02**	.03**
Sex = men (d)	.01*	-.01*	-.01	.02*
Education	-.02**	-.07**	-.03**	-.06
Media use:				
Subscription (d)	.06**	-.05**	-.04**	-.04**
Buying frequency	.12**	.14**	.07*	.08**
Reading length	.07**	.06**	.04**	.03**
Reading frequency	.02**	.05**	.04**	.03**
Reading intensity (d)	.28**	.16**	.08**	.06**
Ad liking	n.a.	n.a.	.12**	.21**
Experience:				
With product (d)	.00	.25**	.13	.16**
With brand (d)	.04	.15**	.09	.21**

Figures in this table are Pearson correlations; * $p < .05$, ** $p < .001$; d=dummy variable (1=yes, 0=no); n.a.=not applicable; analyzed on respondent level.

The results indicate that all variables have an impact. Because of the large number of cases, we will only discuss correlations above .15. For demographics, relationships were weak. For media use variables, reading intensity appeared to be very important. Readers who read their newspaper more thoroughly opened more pages, saw more ads and read more ads. A positive perception of the ad resulted in higher scores on the two higher levels of attention: comprehension and elaboration. In other words, respondents who indicated they liked the ad more were more aware of the advertised brand and were more willing to elaborate on the ad. Whether the reader had experience with the advertised product or brand had strong effects on attention in the second phase of attention (focal attention) as well as in later phases (comprehension and elaboration).

5.5 *Overview of effects*

Table 8 shows an overview of all significant, relatively strong relations found ($r > .15$). The upper part of the table shows that the best positions for an ad in terms of attention are in the first pages, on the front page (for first exposure), at the lower half or the left side of the page, in the news section and on pages that are mostly editorial (except for contact with the ad, which is higher on ad pages). Saturday appeared to be the worst day of the week for ad attention.

Attention to the ad was not only affected by position but by several content characteristics as well. The most important triggers were size of the ad (the bigger, the better), colors (the more, the better), perceived fit in the newspaper, promotional ads, and – to a lesser extent - ads with a sales response strategy. Brand identification had two extra triggers, namely the portrayal of a face in the ad and the inclusion of the brand's logo on the right side.

Relations between attention variables and reader characteristics are summarized at the bottom of Table 8. Intensive readers opened more pages, paid more attention to the ads (ACS), and spent more time reading the ad (ARS). In addition, readers with some experience with the advertised product recognized more ads, identified more brands and read more ads. Experience with the advertised brand and a positive evaluation of the ads, led to more continued attention (BI and ARS).

In order to compare all direct effects and thus answering the hypotheses of Section 3, we used stepwise regression analyses. Category variables were included in these regressions as dummy variables. The results are shown in the previous table by an underlined Y(es). As expected, more attention was paid to newspaper ads when these ads were prominently placed. Hypothesis 1a was therefore accepted. Hypothesis 1b was also accepted, because results showed that size and color were effective. The inclusion of a face in the ad only had some effect on attention to the brand. Hypothesis 1c, however, was not con-

firmed. A sales response strategy indeed resulted in more attention, but this effect was overruled by other effects in the regression analysis. Moreover, promotion ads attracted more attention as well as ads that were perceived to fit the newspaper. The fourth hypothesis (Hypothesis 1d) was partially confirmed: position characteristics influenced first attention more than attention in the other phases. This differential effect was less clear for the influence of content characteristics.

Although less strong effects were found for reader characteristics, three out of four hypotheses could be confirmed. Hypothesis 2a, which predicts that certain demographics would influence attention, was the only hypothesis that had to be rejected.

Table 8: Overview of significant relations between characteristics and attention

	<i>Exposure</i> (PO)	<i>Focal attention</i> (ACS)	<i>Comprehension</i> (PI) (BI)		<i>Elaboration</i> (ARS)
<u>% Yes position:</u>	100%	50%	50%	50%	63%
Section number	<u>Y -</u>	N	Y-	<u>Y -</u>	<u>Y -</u>
Page number	Y -	N	N	N	N
Size of newspaper	<u>Y -</u>	N	<u>Y -</u>	Y -	Y -
Position in paper	<u>Y (f + r)</u>	Y (-front section)	N	N	N
Position on the page	<u>Y (lower half)</u>	Y (left)	N	N	Y (left)
Context	<u>Y (news)</u>	N	Y	Y	Y (news)
Page type	Y (edit.)	Y (ad p.)	N	N	N
Day of the week	Y (-Sat.)	<u>Y (-Sat.)</u>	Y (-Sat.)	Y (-Sat.)	<u>Y (-Sat.)</u>
<u>% Yes content:</u>	n.a.	64%	27%	46%	36%
Ad size	n.a.	<u>Y +</u>	N	N	N
Dominance	n.a.	Y +	N	N	N
Person	n.a.	N	N	N	N
Face	n.a.	N	N	<u>Y +</u>	N
Colors	n.a.	<u>Y +</u>	N	<u>Y +</u>	<u>Y +</u>
Height logo	n.a.	Y +	Y +	N	N
Width logo	n.a.	Y +	N	N	N
Place of logo	n.a.	N	N	<u>Y (right)</u>	N
Fit	n.a.	<u>Y +</u>	<u>Y +</u>	<u>Y +</u>	<u>Y +</u>
Promotion campaign	n.a.	<u>Y +</u>	<u>Y +</u>	<u>Y +</u>	<u>Y +</u>
Sales response strat.	n.a.	Y +	Y +	N	Y +
<u>% Yes reader:</u>	10%	20%	0%	27%	46%
Age	N	N	N	N	N
Men	N	N	N	N	N
Education	N	N	N	N	N
Subscription	N	N	N	N	N

Buying frequency	N	N	N	N	Y+
Reading length	N	N	N	N	N
Reading frequency	N	N	N	N	N
Reading intensity	<u>Y+</u>	<u>Y+</u>	N	N	<u>Y+</u>
Ad liking	n.a.	n.a.	N	Y+	Y+
Product experience	N	<u>Y+</u>	N	Y+	<u>Y+</u>
Brand experience	N	N	N	<u>Y+</u>	Y+

Y = Yes = $r > .15$, $p < .001$ or significant difference ($p < .001$) in analysis of variance with Bonferoni post hoc test; Y+ = positive relation; N = No = $p > .01$ or $r \leq .15$; %Yes = Yes / tested relationships * 100; underlined Y means a significant effect ($p < .001$) in stepwise regression analysis (category variables included as dummy); (f + r) = front and right pages; n.a. = not applicable.

6 Discussion

In general, the study confirmed our hypotheses. Ads that were prominently placed (in front of the newspaper), ads with a conspicuous layout (for example, big ads and colored ads), and ads with a sales response advertising strategy received more attention. The study also revealed the effects of reader characteristics: in particular, reading intensity, ad liking, and experience with the advertised product and brand contributed to a higher attention paid to ads. Moreover, analyses showed that media position, ad layout, and ad content had a stronger influence in the first attention phases (exposure and focal attention) than in subsequent phases. On the other hand, reader characteristics had a stronger influence in subsequent phases of attention, where comprehension of the message and elaboration takes place. However, a number of variables did not show the expected effect on ad attention. For example, neither the portrayal of persons nor the awareness advertising strategy enhanced ad attention. And demographic factors did not influence ad attention.

We were able to conduct a large-scale study that included more than 25,000 respondents and almost 300 ads. We could, therefore, study a number of medium, ad, and reader characteristics simultaneously. Still, the number of ads is rather small, given the large number of medium-related and ad-related variables. Data collection continues, however, and the growing number of ads in the ARR database will make more detailed analyses possible in the future. Other shortcomings of our study are the limited 'translations' of two of the four attention phases. Our approach follows that of Finn (1988), but we feel that exposure (pre-attention) and elaboration need further validation. A better measurement of pre-attention can be acquired with eye tracking, but this type of data collection

cannot be integrated in large-scale survey research. For the fourth attention level – elaboration – we used the question whether the reader had read the ad (again in line with Finn, 1988). In this phase, the consumer's full capacity is used to respond cognitively to the ad, generating personal connections and imagery. In our opinion, a more 'elaborated' measure is necessary to adequately measure attention in this phase.

The question can be raised whether all attention levels are important for the value of a newspaper (or any other medium) in the advertising market. If it is believed that generating an audience is the primary value of a medium for advertisers, one could argue that medium vehicles should be judged on their ability to expose ads to an audience and to attract focal attention. From that point of view, only the first two phases of attention are relevant. However, if it is believed that only processing of ads at a deeper level (identification of brands and products, elaboration of the ad) is relevant for advertisers, one should also consider the medium's performance at the other two levels (comprehension and elaboration) when determining its value. This study shows, however, that not only do medium and reader characteristics play a role in these two phases, but that ad characteristics also play a role. And these ad characteristics are beyond the control of the newspaper publisher.

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Appendix 1

Table 9: Summary of the seven advertising strategies

Sales response	This strategy aims to stimulate sales as a direct consequence of exposure to the campaign, emphasizing bargains or special offers. Ads with this strategy are usually rational in nature, with the brand itself playing a minor role.
Persuasion	This strategy tries to convince consumers with ads giving product qualities and communicating product attributes (USPs). The rational and often problem-solving character of this strategy is, for example, found in most ads for household products (e.g., cleaning products).
Emotion	This strategy aims to create a link between brand associations and specific feelings, assuming that such feelings result in loyalty; the strategy is often found in campaigns for products used in a social setting.
Symbolism	The aim of this strategy is to transfer symbolic meanings to the brand. The brand is expected to add values to the user's environment. The strategy especially fits visible products used in social situations such as cigarettes, clothes, perfume, cars and jewelry.
Relationship	This strategy tries to create a relationship between brand and consumer, using emotions to involve the consumer with the brand; it is most often used in advertising for financial services and for personality brands.
Awareness	This strategy aims to create top-of-mind awareness by being different, unexpected, and unique; it is particularly suitable for new products, products that are bought impulsively, and products where there is little differentiation between the different brands.
Likeability	Central to the likeability strategy is appreciation of the ad. In the long run, ad likeability is expected to lead to a positive brand attitude. This strategy fits ads for products with few visible brand differences, where a good feeling about the ad is important to liking the brand.

Source: Franzen (1994), Steevels & Van den Putte (2004, p.76)

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The effect of the integration of different acoustic and visual stimuli depending on target groups involvement

1. The importance of integrated marketing communication
2. Integration of acoustic stimuli in the marketing communication
3. Memory and integrated communication
4. Prior research on the effect of acoustic stimuli
5. Method
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Abstract

Up to date studies on integrated marketing communication have mainly focused on visual and verbal stimuli. However, the interaction of different acoustic and visual stimuli to construct brand knowledge remains unexplored, even though these modalities may mutually support or constraint each other when memory structures are built. The present study demonstrates that the semantic integration of acoustic and visual stimuli is more advantageous for marketing communication than the formal integration of these stimuli, or the use of semantically different visual and acoustic stimuli. In addition, semantic integration has a positive bearing on memory.

1 The importance of integrated marketing communication

Marketing communication constitutes the voice of the brand. Not only does it inform target groups about the brand, but it also influences, and anchors relevant brand knowledge in their memory (Keller 2001, p. 823). Under worse conditions for brand communication, it is getting harder to gain attention: Together with a continuous growth of products and brands goes an inflationary rise of communicative messages (Keller 2001, p. 819f.; Esch et al. 2005, p. 13). These heaps of communication lead to an **information overload** for consumers, as there are limited capabilities to process information. Since consumers can rely on the quality of substitutional products, they have less interest in information and the phenomenon of information overload is stepped up (Esch 2005, p. 27). Especially low-involved consumers prefer non-verbal stimuli, since they are more easily perceived, processed and remembered.

For this reason, each contact with the target group has to be carefully exploited. **Integrated marketing communication** is supposed to standardize and to reinforce the communicative forms responsible for the construction of brand knowledge structures (Kroeber-Riel 1993; Duncan 1995; Keller 1995; Thorson/Moore 1995; Esch 2006, p. 27). In integrated marketing communication, verbal as well as non-verbal elements can be used. These either transfer distinctive image associations (BMW is sportive and dynamic) or form an anchor to enhance brand awareness, for example, by using a particular color code (Orange uses orange dominantly in their communication) or sounds (drumbones used by Intel). The first case is an example of semantic integration, the second of formal integration.

So far the combination of acoustic stimuli with other modalities in order to enhance the effectiveness of communication has been neglected, even though the integration within and between senses has a great potential for multisensual communication of brand associations. The use of different modalities provides the consumer with more opportunities to access the knowledge structure

(Engelkamp 1991). Moreover, the different modalities can mutually support each other, if they carry the same content. If this is not the case, **interferences** can occur. This means that learning processes necessary to construct and to strengthen brand knowledge are affected in a negative way (Postman/Kaplan 1947; Underwood 1957; Postman/Underwood 1973).

The main objective of this study is to analyze the advantages of the integration of acoustic and visual stimuli for the construction of brand knowledge.

2 Integration of acoustic stimuli in the marketing communication

To support the construction of brand awareness and brand image with acoustic stimuli, communication and integration of non-verbal acoustic stimuli have to be suitably designed. Acoustic stimuli can serve as integrative frames.

Integrated marketing communication consists of **integration over time** and **integration between different kinds of communication**. In the first case, positioning contents for the brand need to be conveyed to continually realize learning effects and construct brand knowledge. Especially acoustic stimuli are very useful, as they hardly wear off. This is for example proven by the phenomenon that frequent repetition of a sequence of music leads to a better liking of this piece (Smith/Cuddy 1986, p. 25f.). We often find many different kinds of communication, which could use visual, audiovisual or acoustic media to integrate these kinds between each other. Additionally, a message cannot always be conveyed via the same modality (e.g. print vs. radio spot). To still communicate in an integrated way, it is necessary to translate the message from visual to acoustic modality (Esch 1993, p. 25). The effect of acoustic stimuli working as a key to 'replay' pictorial scenes of a spot stored in consumers minds, is shown in studies (Edell/Keller 1989, p. 160): While hearing an acoustic sequence of music, which is linked to specific visual scenes, consumers see the spot again as a mental image.

Besides the question, on what means of integration could focus, it has to be clarified, how to coordinate communication. Regarding the means of integration, it is possible to find verbal and non-verbal means, with which **formal** as well as **semantic integration** of communication can be accomplished. Primary, formal integration aims at an increase in brand awareness by using classical corporate design-elements (color, form, typography) or symbols (Esch 1992, p. 37; Esch 2006, p. 74f.). These facilitate the access to a brand and enhance brand awareness, but have limited ability to convey the positioning of a brand. On the other hand, semantic integration conveys brand relevant aspects of positioning and supports the construction and deepening of a brand image (Esch 2006, p. 74).

Formal as well as semantic integration can be performed by verbal and non-verbal means. **Linguistic (verbal) means** are e.g. slogans. Primarily, non-verbal stimuli refer to an integration with pictures, e.g. the Marlboro Cowboy, as a symbol of adventure and freedom (Esch 2006, p. 76). But also acoustic-stimuli can be used as non-verbal elements. **Formal integration** with the help of acoustic stimuli can be used as a mnemonical device. For example, every commercial by Audi ends with the acoustic signal of heartbeat and Intel is uniquely linked with their melody of four notes. An example of a semantic acoustic integrative frame is the pivotal melody „Sail Away, Dream Your Dreams“ used by the brand Beck’s (Esch/Roth 2005, p. 217).

Particularly, the integrative effects of acoustic stimuli become even stronger, if their meaning matches those of other verbal and non-verbal stimuli in the communication and if one sticks to these constantly over time. Naturalness can visually be represented by bloomy meadows and acoustically by the sound of humming bees. The coordination of multisensual impressions boosts learning processes, since this leads to an intensification and repetition of one and the same impression (Kroeber-Riel 1996, p. 50f.). Due to the use of several modalities, consumers have more possibilities to activate brand knowledge. Furthermore, different modalities can intensify each other, if they convey similar messages. If this is not the case, interferences can occur. Through these learning processes the construction and deepening of brand knowledge is blocked (Postman/Kaplan 1947; Underwood 1957; Postman/Underwood 1973; Esch 2006). This blockade is founded in the perceptive rivalry between different messages conveyed in different modalities. To explain processes, which go with the integration of modality specific stimuli, insights of knowledge representation provide pivotal models to explain the effects of non-verbal stimuli.

3 Memory and integrated communication

The effectiveness of different modality specific stimuli for communication can be explained with the help of **multimodal models of memory** (Nelson/Brooks 1973; Nelson/Reed 1976; Engelkamp 1991; figure 1):

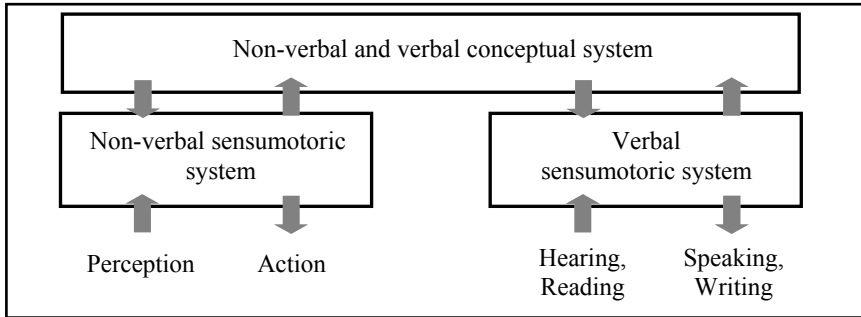


Figure 1: Structure of the multimodal model of memory by Engelkamp (1991, p. 62)

According to this theory, the memory systems can be subdivided in the following way: 1. Distinction between a sensumotoric level and a conceptual level. Different senses and motoric processes are necessary to experience the environment. The experience of the environment leaves traces in the memory and is called **sensumotoric knowledge** (Engelkamp 1991, p. 36, 56). In addition, the human knowledge contains a general **categorical structure** (Engelkamp 1991, p. 61) which allows people to categorize persons and objects. For example, a person identifies a particular bird chirping as what it is (category), but at the same time - on the sensumotoric level - he/she also perceives the physical form of the sound (Engelkamp 1991, p. 17, 22). 2. Distinction between verbal and non-verbal system. Engelkamp distinguishes a sensumotoric and conceptual level of **non-verbal knowledge**¹ from the linguistic sensumotoric (e.g., the sound of a word) and linguistic categorical structure (linguistic categories) of **verbal knowledge** (Engelkamp 1991, p. 63).

Generally speaking, information is processed in the following way: The features of the perceived stimuli are analyzed and the modality specific units of the sensumotoric level are automatically activated. Afterwards the conceptual level is activated. Here, non-verbal and verbal stimuli are distinguished: Non-verbal sensumotoric units form concepts and activate these automatically, whereas verbal sensumotoric units only point toward concepts. Starting from activated concepts, the activation spreads in the conceptual system. Connections in the conceptual system are reinforced, if the activation of two or more concepts overlaps (Engelkamp 1991, p. 113, 469).

If communication makes use of a formally integrated acoustic stimulus in addition to other verbal and visual stimuli, then this stimulus forms a further

¹ Engelkamp based his model on visual, motoric, and linguistic processes. However, he explicitly points out that the model can be transferred to other non-verbal stimuli (Engelkamp 1991, p. 11).

association and a non-verbal stimulus in the consumers' knowledge structures. The simultaneous presentation of the acoustic stimulus without a semantic connection between the sense modalities or to relevant brand associations does not directly affect the image dimension of the brand. Therefore, **hypothesis 1** results: **The formal integration of acoustic and visual stimuli has a more positive influence on the brand image than the presentation of the visual stimuli alone.** The integration of acoustic stimuli adds further distinctive associations and thus enriches the brand image.

When a semantically integrated acoustic stimulus is presented, it refers to the visual modality, and it is semantically connected with relevant brand associations. Acoustic and visual stimuli are perceived and due to different perception features led to different sensumotoric systems. Then they activate their equivalent in the non-verbal conceptual system. Here the activation of concepts spreads. In the case of semantic integration, the activated concepts are similar in meaning so that the concepts, which are connected to a brand, are reinforced (Engelkamp 1991, p. 61, 469). Hence, **hypothesis 2** results: **The semantic integration of acoustic and visual modalities has a more positive influence on the construction of brand knowledge than the isolated presentation of visual stimuli.** The semantic integration of acoustic stimuli gains its effect by adjusting the semantic content to the brand and to the visual modality. Accordingly, the semantic integration of acoustic and visual stimuli to construct brand knowledge (e.g., relevant for positioning) should be superior to formal integration. Thus, **hypothesis 3** results: **The semantic integration of acoustic and visual stimuli has a more positive influence on the construction of brand knowledge than the formal integration of acoustic and visual stimuli.** A **lack of semantic integration** means that acoustic and visual stimuli do not support each other within the conceptual system but interfere and weaken each other. Therefore, **hypothesis 4** results: **The semantic integration of the acoustic and the visual stimulus has a more positive influence on the construction of brand knowledge and the formation of the mental image than the use of stimuli which have a different content.**

A further variable indicating the success of a communicative measure is the **involvement** (Laurent/Kapferer 1985; Zaichkowsky 1985). Consumers who are not particularly involved process information only on a low level (Bower et al. 1969; Craik/Lockhart 1972, p. 676; Petty et al. 1983, p. 135). The lower the involvement, the more the target group should be addressed stronger and consistent. In this way memory structures can be built and reinforced (Esch 2006, p. 122f.). As a result, **hypothesis 5** is assumed for non-verbal acoustic stimuli:

The higher the involvement, the stronger the effect of non-verbal acoustic stimuli. Contrary to the low involvement conditions, high involvement conditions reinforce the effect of non-verbal acoustic stimuli.

4 Prior research on the effect of acoustic stimuli

There are a variety of studies concerning music or language features. However, their use in marketing communication has been neglected up to date so that there are hardly any empirical results. Only a few studies were carried out to analyze the effect music has in an advertising environment (Bruner 1990, p. 94; Murray/Murray 1996, p. 51). Figure 2 provides an overview of the most significant studies focusing on the effect of music.

If one takes a closer look at the results, the effects of music are often ambiguous (Kellaris et al. 1993, p. 119). According to the results of a meta-analysis of background music, which included over 153 studies conducted in 1996 and 1997, only 43.8% of all studies could definitely prove effects, 22.9% could pinpoint complex and weak effects, and 33.3% could not show any statistically significant effects (Behne 2001, p. 146). Contradictory results can be found: for example the use of music as an instrument of classical conditioning was proved in a study by Gorn (1982), however the outcome was rejected in a replication study (Kellaris/Cox 1989). **Under which conditions acoustic stimuli have a positive influence on the integration of communicative measures** also remains unclear. Although, some studies (e.g., Edell/Keller 1989; MacInnis/Park 1991, p. 166; Kellaris et al., 1993, p. 116; Hung 2000, p. 27; 150f.) provide first approaches toward the integration of acoustic stimuli into other sense modalities. However, in these studies, either the lyrics of the song were adapted to the advertisement, or the promoted product fitted the music. Up to now, the acoustic meaning has not been adjusted to other communication modalities and there has been no coordination of the transferred messages with the relevant brand content. Furthermore, the results indicated that involvement is a key variable for the use of acoustic stimuli in marketing communication (Park/Young 1986, p. 22; MacInnis/Park 1991, p. 166). For example, depending on the level of involvement, an acoustic stimulus can have a negative effect on the formation of brand knowledge; it may even be contra productive. In these cases, the acoustic stimulus can distract from the central brand content, if it is not connected to the communicated message (Kafitz 1977).

To sum up, the findings of earlier studies suggest that the involvement and the integration of different modalities of sense may have a decisive influence on the effectiveness of marketing communication to build brand knowledge.

Studies on the effect of acoustic stimuli		
Study	Research object	Variables
Activating / arousal effect of acoustic stimuli		
Kafitz (1977)	E.g., activation through measuring skin reaction	Music vs. no music, liking
Kellaris, Kent (1991)	Activation through questions about subjective experiences	Key and time of music
Segal, Fusella (1970)	Activation through observing motor reaction	E.g., acoustic stimulus vs. no acoustic stimulus
Communication of emotion and information of acoustic stimuli		
Baumgartner (1992)	Arousal of emotions	Attitude, mood, earlier experiences, musical training
Blair, Hatala (1992)	Communication of specific meaning	Style of music
Campbell (1942)	Expression of emotions	Different pieces of music, style of music
Cupchik et al. (1982)	Evaluation of similarity and liking	Style of music
Gorn (1982)	Attitude, buying behavior - esp. classical conditioning	Appeal of the music
Gundlach (1935)	Expression of emotions	Time, rhythm, instruments, pitch, volume, pitch range
Hevner (1935)	Expression of emotions	Key
Hevner (1936)	Expression of emotions	Rhythm, melody, harmony, key
Holbrook, Bertges (1981)	Communication of specific meanings	Time, rhythm, phrasing
Hoyer, Scivastava, Jacoby (1986)	Causes for misinterpretation of an advertisement	E.g., acoustic stimulus vs. no acoustic stimulus
Kellaris, Cox (1989)	Attitude, buying behavior – esp. classical conditioning	Appeal of the music
Kellaris, Kent (1991)	Appeal, liking of music	Key, time
Rigg (1940)	Expression of emotions	Time
Swanwick (1973)	Communication of specific meanings	Melody, rhythm, time
Watson (1942)	Expression of emotions	Pitch, volume, time, sound, dynamics, rhythm, age
Yaich, Spangenberg (1993)	Buying behavior	Background music, foreground music, and no music
Yaich, Spangenberg (2000)	Atmosphere, buying behavior	Familiar vs. non-familiar music
The effect of acoustic stimuli on knowledge (recall and recognition)		
Galizio, Hendrick (1972)	Recall of text, attitude, mood	Spoken vs. sung texts, style of music
Hagemann, Schürmann (1988)	Recall, evaluation of product	High and low involvement product category; different acoustic stimuli in the background
Hahn, Hwang (1999)	Information processing	Time and familiarity with background music
Huss, Weaver (1996)	Recall of stimuli	Modality of presentation (verbal, non-verbal acoustic)
Kafitz (1977)	Recall/recognition of advertisement; brand recall, brand recognition	Music vs. no music, liking of music, integration of music and text, style of music
Kellaris, Cox, Cox (1993)	Recall/recognition of advertisement; brand recall, brand recognition	Fit, attention getting value of the acoustic stimulus

Krumhansl (1991)	Recall of pieces of music	Time and sound related components, repetition of the piece of music
Lee, Sternthal (1999)	Brand recall	Mood
MacInnis, Park (1991)	Information processing	Fit, emotional value of the acoustic stimulus, involvement
McFarland, Cacace (1995)	Recall of stimuli	Modality of presentation
Miller, Marks (1992)	Imagery processes, emotional reaction, recall of relevant brand information	Distinctive sounds, fit
Park, Young (1986)	Information processing, attitude toward brand, planned behavior	Music vs. no music, involvement
Russell (1987)	Recall of melody	Interpretation of melody, liking, familiarity
Sewall, Sarel (1986)	Brand recall	Music vs. no music
Sharps, Pollitt (1998)	Recall of information	Modality of presentation
Stewart, Farmer, Stannard (1990)	Recall/recognition of acoustic stimulus and of advertisement, product recall, product recognition	Jingle
Stewart, Furse (1986)	Recall/recognition of advertisement; brand recall, brand recognition	Music vs. no music
Stewart, Punj (1998)	Recall/recognition of the acoustic stimulus and advertisement, product recall, product recognition	Jingle
Stout, Leckenby (1988)	Learning effect	Key, time, volume of music, music vs. no music
Wallace (1994)	Recall of text	Spoken vs. sung texts, repetition of melody, symmetry
Yalch (1991)	Identification of brand name when slogan is given	Jingle vs. spoken advertising text

Figure 2: Studies on the effect of acoustic stimuli

5 Method

Design. In order to test the hypotheses, the factor “level of integration of the acoustic stimuli in the communicative measure” was combined with the factor “involvement” to form a two factorial plan of the experiment (cf. fig. 3):

mode of integration involvement	no acoustic stimuli	formal integration of acoustic and visual stimuli	semantic integration of acoustic and visual stimuli	semantically incongruous acoustic and visual stimuli	Σ
high-involvement	n = 30	n = 30	n = 30	n = 30	n = 120
low-involvement	n = 30	n = 30	n = 30	n = 30	n = 120
Σ	n = 60	n = 60	n = 60	n = 60	n = 240

Figure 3: Factorial design of the study (Roth, 2005)

Respondents and procedure. A random sample of students (N=296) was divided into different test groups. Altogether a total of 120 female students and 176 male students were questioned. The data of 240 respondents who remembered the stimulus either actively or passively was used in the analysis. The study consisted of **different phases** and used a cover story, a one time only presentation of the stimulus in the test medium internet, and the answer to a questionnaire. The personal questioning included open as well as closed questions. The study was conducted at German universities and the average survey time was 35 minutes.

Stimuli. Following the design of the study, to vary the degree of integration, it was necessary to generate four different test stimuli. The selection of the stimuli was based on four pretests which took the form of written or oral surveys among a total of 560 students. According to the results, brands, internet presentations, and pieces of music were chosen for the main study (Roth 2005). To guarantee a realistic outcome, only existing internet presentations, brands, and pieces of music were taken into account. Based on the pretests, a **visual internet presentation** of Hachez was selected (cf. figure 4). Hachez stands for exquisite, high quality chocolates and pralines in an upper price category. Founded 1890 in Belgium, Hachez combines tradition and modernity.

The positioning of the brand Hachez is supported by the elegant design of the chocolate boxes and the pralines itself.

The visual internet presentation of Hachez was combined with differing acoustic stimuli for various test conditions. The pretest selected the sound of opening a chocolate bar (rustling paper, cracking chocolate) as the **formally integrated acoustic stimulus** and Mozart's "Eine kleine Nachtmusik" as the **semantically integrated picture-sound combination**, since central image features of the visual and acoustic modalities (e.g., exclusive, noble, etc.) matched each other. Finally, for the condition "**no semantic integration**", an

acoustic stimulus was chosen which evoked different image characteristics than the visual stimulus. Here the music piece “Piedritas en el Camino” was used.

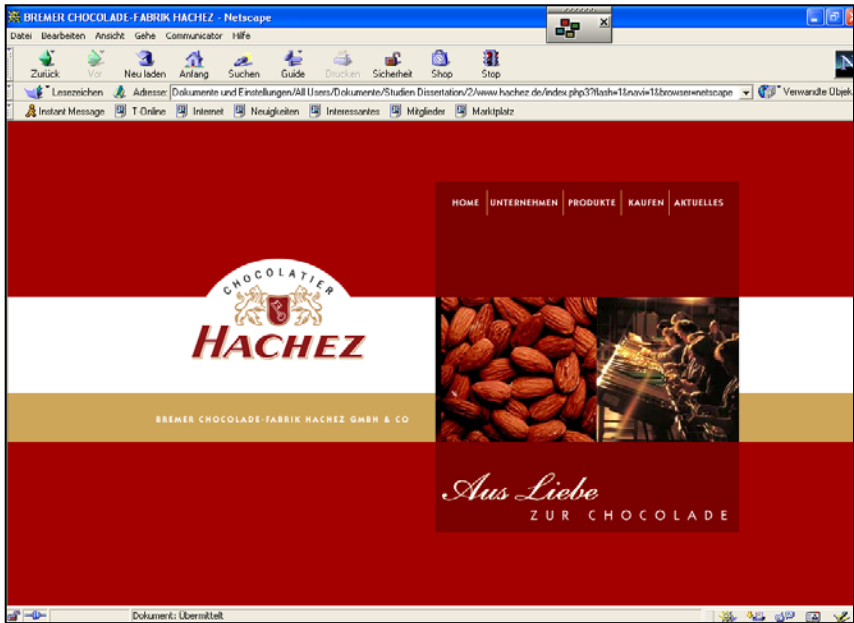


Figure 4: Internet presentation of Hachez

Manipulation of the involvement. The variation of the involvement was based on different manipulation techniques (Jeck-Schlottmann 1987, p. 85). The actual purpose of the study was disguised with the help of a cover story (**distraction technique**) and the involvement was manipulated by using a particular **instruction technique** (e.g., an instruction for the low involvement condition: “[...] and please surf the Web as you usually do.”). Finally, the stimulus was realistically presented via the computer and the participants could surf the Web as long as they wished (**stimulus presentation technique**).

Measures. Brand image was measured via an intermediate level, since it is hardly possible to build a profound brand knowledge structure after a single and short exposure to the stimulus (Keller 2001, p. 823; Esch 2005, p. 86f.). Therefore, the dependent variables were measured by using different dimensions, such as the mental image evoked by the internet presentation of Hachez, the vividness of the mental image, the appeal of the mental image, and the ease of evocation of the mental image (Marks 1973; Ruge 1988, p. 227; Bone/Ellen

1992, p. 97). In addition, the content of the associations was recorded by asking open questions about the mental image. It was then evaluated according to different criteria (e.g., the share of emotional associations) (Keller 1993). To do this, two independent evaluators coded the verbal responses. The results of both of them showed a correspondence of 96.5%. In cases of discrepancy, a third evaluator was consulted.

6 Empirical study

Manipulation check. The **manipulation check of the degree of integration** showed significant differences (total: $\chi^2=10.8$, $p=0.005$; low involvement $\chi^2=7.37$, $p=0.025$, high involvement $\chi^2=6.85$, $p=0.033$): Whether the acoustic stimulus matched the internet presentation or not was ranked on a scale from 1 (=good) to 5 (=bad). The group concerned with semantic integration had the best results (total: 1.95; low involvement: 2.14; high involvement: 1.74), followed by the group “formal integration” (total: 2.52; low involvement: 2.86; high involvement: 2.18). On third position followed the values for the group “no semantic integration”. The check of **the manipulation of the involvement** was based on different indicators²: The differences between the low involvement groups (average: 73.4 seconds) and the high involvement groups (average: 90.6 seconds) were not significant. However, the frequency of different associations was significant (corresponding to the involvement measurement of Park/Young 1986, p. 17). The respondents mentioned significantly ($\chi^2=9.58$, $p<0.01$) more associations in the high involvement condition ($X=892$) as in the low involvement condition ($X=766$). This was also true for the number of cognitive associations (high involvement: $X=716$; low involvement: $X=566$; $\chi^2=17.55$, $p<0.01$).

Vividness, appeal, and ease of evocation of the mental image. According to the results of the **multivariate analysis of variances**³ (MANOVA), the influence of the degree of integration on the three test variables “vividness of the mental image”, “appeal of the mental image”, and “ease of evocation of the mental image” was statistically significant $F(6.340) = 2.83$, $p=0.011$. The effect of involvement on these variables was also statistically significant $F(3.170) = 2.99$, $p=0.032$. There was no statistically significant interaction between the

² An additional study tested the effectiveness of the instruction techniques used. The test demonstrated that the different instruction techniques generated significant differences in the level of involvement.

³ An analysis of the correlation between the vividness, the appeal, and the accessibility of the mental image indicated that all variables significantly correlate (all correlations were significant, $p<0.01$). Therefore, a multivariate analysis of variances was conducted. This analysis also considered the covariances “liking of the internet presentation” and “imagery ability” (Roth 2005).

level of integration and the involvement. The mean values of each test condition are summarized in figure 5.

According to theoretical considerations, the effects of the group “no semantic integration” could not be influenced in a positive way by altering the independent variable “level of integration”. Moreover, the scope of the effects was not predictable. Therefore, special tests were conducted for this group. The MANOVA for the groups “semantic integration” and “no semantic integration” came to the following results⁴: The effects of the level of integration on the indicators of the mental image ($F(3,111) = 6.48, p < 0.01$) were statistically significant. The variable “appeal of the mental image” did not meet all preconditions for the analysis of variances (normal distribution of residuals). For this reason, only the results for “vividness of the mental image” and “ease of evocation of the mental image” were taken into account and showed statistically significant differences. The influence of the different levels of involvement on the indicators of the mental image was statistically significant ($F(3,111) = 2.24, p = 0.088$). The data clearly showed an interaction between involvement and the level of integration ($F(3,111) = 3.107, p = 0.029$).

⁴ To compare the different results, the analysis of variances was conducted following the same pattern, i.e., the same covariant was used. However, in the group “no semantic integration”, one respondent displayed such a weak mental image that he could not evaluate the likeability (1. covariant). Therefore, only the data of 29 participants was used for the evaluation in the group “no semantic integration”.

	Low Involvement (N=30)	High Involvement (N=30)
Vividness Scale: 0 (=ambiguous and vague) to 100 (=clear and distinct)		
No acoustic stimuli	39.17	40.17
Formal integration	38.43	45.07
Semantic integration	45.43	52.90
No semantic integration	36.85	38.33
Pleasantness Scale: 0 (=not appealing) to 100 (= very appealing)		
No acoustic stimuli	42.33	52.83
Formal integration	44.93	46.93
Semantic integration	51.33	61.00
No semantic integration	48.17	41.33
Ease of evocation Scale: 1 (=easy) to 5 (=difficult)		
No acoustic stimuli	3.4	3.17
Formal integration	3.5	3.13
Semantic integration	3.17	2.2
No semantic integration	3.53	3.53

Figure 5: Mean values for the image dimensions in the test groups

Content of the associations. In the open questioning, a total of 1,658 associations by the 240 participants were coded. Of particular interest are those citations which mainly refer to one group (share of citations > 50%). The results showed differences between acoustic stimuli add various meaning dimensions to the visual stimulus. The citation “opening of chocolate bar” (N=31, 100%) and “rustling” (N=25, 100%) were mainly mentioned by the formal integration groups. For the group “**no semantic integration**” the following results were found: In particular the associations “Hispanic/exotic” (13 citations, 81.25%) “rhythmically stimulating” (7 citations, 70%), and “unpleasant music” (10 citations, 55.56%) distinguish the associative structures of this test group from the other groups. For the group “**semantic integration**” the following results were found: The associations evoked mainly differ from those of the other test groups due to descriptions, such as “expensive” (8 citations, 53.3%), “agreeable” (8 citations, 53.3%), “reassuring”, and “relaxing” (8 citations, 80%) as well as the reference to “classical music” (39 citations, 90.7%). Furthermore, the share of associations, such as “traditional” (42.31%), “old/antique” (40.9%), or “exclu-

sive” (41.3%) is the highest in these test groups. In particular, expensive, exclusive, or traditional were associations evoked by acoustic and visual stimuli.

Conclusion. The results demonstrate that the semantic integration of the acoustic stimulus into the visual internet presentation positively supports the image of the tested brand Hachez. **Therefore, hypothesis 2 was proved.** Moreover, the semantically integrated stimulus also has a more positive effect on the image than the formally integrated stimulus. **This supports hypothesis 3.** According to the results, the formally integrated stimulus is able to add a further dimension to the image. **Hence, the findings correspond to hypothesis 1.** Since the results of the group “no semantic integration” indicate that the central values (scales of the mental image) are surpassed by the group “semantic integration”, **hypothesis 4 is also supported.** Furthermore, the results reflect that a strong confrontation (high involvement) with the internet presentation and the test stimulus may for instance increase the mean values on the scales which measure the dimensions of the mental image. Additionally, the involvement could also have a decreasing effect in the semantically different group. **These results support hypothesis 5.**

The outlined findings lead to the assumption that theoretical relations were tested with an appropriate method of analysis. However, there are some limitations to this study due to the overall design and the operationalizing of the dependent and independent variables. It is likely that, for instance, the popularity of and familiarity with Mozart’s piece of music may have influenced the results. Nonetheless, the replication study, which used different stimuli, emphasized that these effects are not restricted to such a well-known piece of music (Roth 2005).

7 Practical and theoretical implications

The findings prove that the effectiveness of acoustic stimuli in brand communication is influenced by the level of integration with other sense modalities used. Whether the acoustic stimulus successfully contributes to the brand image or not, depends on the level of integration into other modalities of the communication.

The results are also helpful for the **use of acoustic stimuli in practice.** Acoustic stimuli can be used in marketing communication to create a multisensual experience of the brand in the target groups. Acoustic stimuli can especially well carry specific meanings, if they are integrated in other modalities of communication (visual, verbal, etc.). Broadly speaking, the use of semantically integrated acoustic stimuli is very effective. The study highlighted the fact that when visual and acoustic modalities interact, the mode of semantic integration is more effective in communicating brand knowledge than an unimodal ap-

proach. Moreover, the results also demonstrate that the use of acoustic stimuli has to be carefully planned to avoid the worst case scenario in which a stimulus is not only neutral but opposes the basic purpose of the communicative measure.

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Bas van den Putte

A comparative test of the effect of communication strategy, media presence, and previous purchase behaviour in the field of fast moving consumer goods

1. Introduction
2. Method
 - 2.1. Questionnaire
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Abstract

The integrative framework for effective communication (IFEC) describes nine communication strategies. The awareness strategy can be used to increase campaign awareness and brand awareness. The likeability strategy can be used to increase campaign likeability and brand likeability. The IFEC describes seven consumer need strategies, each addressing a different need that can be used to increase purchase intention and purchase behaviour. To test the IFEC, 11,830 consumers were interviewed about forty advertising campaigns. Four campaign effects were measured: campaign awareness, campaign likeability, brand awareness, and purchase intention. It is shown that different communication strategies should be used for different campaign goals.

1 Introduction

This study outlines and tests a typology of communication strategies, the integrative framework for effective communication (IFEC), which is based on a typology of Franzen (1999). The IFEC can be used to choose the potentially most effective communication strategy taking into account both consumer needs and brand needs (for a more elaborate overview, see Van den Putte 2002). Because the effects of advertising campaigns also depend on advertising reach and previous consumer behaviour, this study takes into account differences in advertising reach as well as differences in previous purchase behaviour. After the IFEC has been described, it is discussed how the IFEC can be used to choose the communication strategy that is most likely to achieve the advertising objectives. This discussion focuses on whether matching or mismatching communication strategies to the most relevant consumer need is the most effective strategy. To test the IFEC, the effects of 40 advertising campaigns in the field of food and cleaning products were studied.

The IFEC can be used to determine what communication strategy can be best applied for a certain target group of a certain brand. The prime rationale behind the use of the IFEC is that the choice of a consumer need strategy should be based on an analysis of consumer purchase motives. Nevertheless, the brand situation can not be ignored. In the IFEC, three conditions are formulated that every successful advertising campaign must fulfil.

The first condition of a successful advertising campaign is that consumers must be aware of the brand. If a brand is new or if a brand is not as well known as its competitors, the awareness strategy should be used. People must become aware of a brand before they can consider buying it (Rossiter and Percy 1998). The awareness strategy aims at establishing top-of-mind brand awareness by using novel or unusual formats.

The second condition for successful advertising is that consumers must like the campaign and the brand. If the prevailing attitude towards a brand is not positive, the likeability strategy must be considered. If this strategy is used, advertising campaigns aim at entertaining consumers in order to achieve appreciation of the advertising campaign, leading to a positive attitude toward the brand. While this strategy might not be sufficient to stimulate sales, it can strengthen the effect of the use of other strategies because use of the likeability strategy stimulates a general positive feeling about the advertised brand (Muehling and McCann 1993).

The third condition for successful advertising is that it should be clear what consumer need the brand fulfils. To address consumer needs and motives, the IFEC includes seven consumer need strategies: (1) the information strategy aims at convincing consumers that the advertised brand offers them relevant, preferably new or improved, instrumental advantages; (2) the emotions strategy aims at associating the brand with specific feelings, often by showing people who experience emotions in an product usage situation; (3) the social strategy aims at convincing consumers that the brand can be used to communicate their social identity to others or to seek the approval of others; (4) the identity strategy aims at convincing consumers that the brand identity matches their private self-identity or their private self-image; (5) the self-efficacy strategy aims at convincing consumers that a brand can help them to make difficult tasks easier to perform; (6) the stimulus response strategy aims at bringing about an immediate consumer response, often by making special offers; (7) The variation strategy shows the variation in choice a brand offers and aims at appealing to consumers who seek variety in their lives, either by discovering new possibilities or by preventing boredom in their daily routines.

An overview of the strategies is given in Table 1.

When selecting a consumer need strategy, the most logical approach is to choose a communication strategy that matches the most important consumer need of the target group. However, there is some evidence that using a matching strategy is not always the best approach. To explore this issue, studies comparing the effectiveness of two or more communication strategies will be discussed. A review of the literature shows that these studies used various theoretical frameworks: behavioural determinant models, attitude function theory, self-monitoring theory, and attitude base theory. In this short manuscript, only studies that tested behavioural determinant models and attitude base theory will be discussed.

Table 1: Summary of the nine communication strategies

<i>Communication strategy</i>	<i>Short description</i>
Awareness strategy	Advertisements aim to establish top-of-mind brand awareness by using novel or unusual formats.
Likeability strategy	Advertisements aim to entertain consumers in order to achieve appreciation of the advertising campaign, leading to a positive attitude toward the brand.
<i>Consumer need strategies</i>	
Information strategy	Advertisements aim to convince consumers that the advertised brand offers them relevant, preferably new or improved, instrumental advantages.
Emotions strategy	Advertisements aim to associate the brand with specific feelings, often by showing people who experience emotions in an product usage situation.
Identity strategy	Advertisements aim to convince consumers that the brand identity matches their private self-identity or their private self-image. In this strategy, the brand is seen as a person with its own personality. This strategy is focused on the consumer as an individual.
Social strategy	Advertisements aim to convince consumers that the brand can be used to communicate their social identity to others or to seek the approval of others. This strategy is focused on consumers as members of a social environment.
Stimulus response strategy	Advertisements aim to bring about an immediate response. Advertisements are usually rational, often making special offers.
Self-efficacy strategy	Advertisements aim to convince consumers that a brand can help them to make difficult tasks easier to perform.
Variation strategy	Advertisements aim to appeal to consumers who seek variety in their lives, either by discovering new possibilities or preventing boredom in their daily routines. Advertisements show the variation in choice a brand offers.

Several authors have described how behavioural determinant models, such as the theory of planned behaviour, can be used to select the potentially most effective communication strategy in a certain situation (Fishbein and Yzer 2003; Sutton 2002). The main premise of these models is that a message is more effective if it addresses the behavioural determinant that is most strongly related to the consumer's purchase behaviour or purchase intention. For example, if instrumental behavioural consequences are the most important behavioural determinant, the information strategy should be used. If social influences are most important, the social strategy should be used. If various consumer needs are found to be relevant, several communication strategies can be combined within one advertising campaign. In a review of these studies, Van den Putte and Dhondt (2005) found that a matching strategy influenced purchase intention more than mismatching strategies in only one out of seven studies. Also, they found that matching strategies influenced purchase behaviour more than mismatching strategies in four out of six studies. On the basis of this evidence, it is questionable whether choosing a strategy that matches the most important determinant is always the wisest choice. Perhaps, in some situations advertisements should mismatch the most important behavioural determinant.

Attitude base theory can be placed within the tradition of multicomponent attitude theory that distinguishes between a cognitive attitude base and an affective attitude base (Zanna and Rempel 1988). The attitude base is cognitive when the attitude is formed on the basis of positive and negative attributes of the object or when the attitude is formed on the basis of positive and negative consequences of behaviour. The attitude base is affective when it is formed on the basis of feelings and emotions elicited by the behaviour or by the object. Researchers studying persuasive strategies that take account of the dominant attitude base have formulated two competing hypotheses: the matching hypothesis and the mismatching hypothesis. The matching hypothesis postulates that a persuasive appeal should match the dominant attitude base, because changing this attitude component will result in a change in the total evaluation of the attitude object (Edwards 1990). The mismatching hypothesis, on the other hand, postulates that it is not effective to aim messages at the dominant attitude base because people tend to defend their salient beliefs when these beliefs are attacked with a persuasive message (Millar and Millar 1990). A mismatching message will be seen as less threatening. A mismatching message is also more likely to contain new information against which people will have a less strong defence. The conclusion is that the total evaluation of the attitude object will be more effectively changed when a mismatching strategy is used. The matching and mismatching hypotheses have generally been studied by comparing an informative strategy with an affective strategy to see whether a match or a mismatch has more effect. Results of these studies have been mixed, usually supporting the hypothesis propagated by the authors. Moreover, many methodo-

logical caveats make it difficult to draw any conclusion (for a critical review, see Fabrigar and Petty 1999). The most likely conclusion is that use of a mismatching strategy is more effective when consumers have experience with the advertised brand and have a strong prior attitude based on strong beliefs. Use of a matching strategy is more effective when consumers have little or no experience with the brand and when they have no strong beliefs and a weak prior attitude (Drolet and Aaker 2002; Fabrigar and Petty 1999).

There is no reason to assume that the mediating role of experience, attitude, and beliefs is only valid when communication strategies are matched to the attitude base. A similar phenomenon might also occur when strategies are matched to the most important behavioural determinant. This has never been studied. This warrants further examination of the mismatching hypothesis outside the realm of attitude base theory. Therefore, in the IFEC it is hypothesized that attitude towards the brand, purchase intention, and purchase behaviour are most effectively influenced when the communication strategy matches the most important consumer need for consumers with little or no experience with the advertised brand, or for consumers with a weak attitude, weak beliefs, and little or no knowledge about the advertised brand. For consumers with more experience, more knowledge, a strong attitude, and strong beliefs about the advertised brand, the wiser choice is a communication strategy that mismatches the most important consumer need. In other words, for large brands that more people have experience with and many people have strong beliefs about, the wisest choice is to use an advertising strategy that mismatches the behavioural determinant that is important for most consumers. For small brands, a matching strategy is the better choice.

As an initial test of the IFEC, the effects of forty advertising campaigns in the field of detergents, food, and candy products were compared. In each of these campaigns one or more of the communication strategies described in the IFEC was applied. The effect of each of the communication strategies on four outcome variables was compared: campaign recall, campaign appreciation, brand awareness, and purchase intention. The following hypotheses were tested:

H₁: Campaign awareness will be most strongly increased by the awareness strategy.

H₂: Campaign appreciation will be most strongly increased by the likeability strategy.

H₃: Brand awareness will be most strongly increased by the awareness strategy.

H_{4a}: For brands that more consumers buy regularly, purchase intention is more effectively increased by a mismatching consumer need strategy than a matching consumer need strategy.

H_{4b}: For brands that fewer consumers buy regularly, purchase intention is more effectively increased by a matching consumer need strategy than by a mismatching consumer need strategy.

2 Method

Each campaign consisted of a number of different commercials, but generally these were all variations of one main campaign theme. There were 18 campaigns for cleaning products and 22 campaigns for food and candy products. Two trained coders independently coded the communication strategies used in each campaign. To measure the campaign effects, Intomart GfK - a Dutch research organization - conducted 11.830 telephone interviews. A random sample of Dutch households was drawn and in each household the person who did most of the daily shopping was interviewed. The respondents answered questions only about product categories they actually used, with a maximum of two campaigns per respondent. On average, 1.200 respondents were interviewed per campaign. The response rate was 30%.

To establish what consumer need(s) best matched each product category, ideally consumers should be interviewed about their needs and motives. However, taking costs into consideration, this was not possible in the telephone interviews that were used in this study because of questionnaire length and large sample size. Nevertheless, it was reasonable to expect that the instrumental advantages of a brand were the most important consumer need for cleaning products. Therefore, the information strategy was assumed to be the matching strategy. Unfortunately, all brands in the cleaning products category used this strategy in their campaign. Therefore, H_{4a} and H_{4b} could not be tested for cleaning products. For food and candy products, it was reasonable to expect that pleasing the senses was the most important consumer need (see also, Dubé, Chattopadhyay, and Letarte 1996). Advertising showing people enjoying consuming food products or candy might persuade consumers to try a brand themselves. Therefore, the emotions strategy was assumed to be the matching strategy. Of the campaigns for food and candy products, 73% used the emotions strategy whereas 27% did not use this strategy.

2.1 Questionnaire

The respondents answered the following questions in this order:

Brand awareness: In an open question, respondents were asked to name all the brands they could think of in a certain product category. Brand awareness was operationalized both as whether a brand was mentioned at all, and as top-of-mind brand awareness when a brand was the first that a respondent mentioned. Both variables correlated .94. Top-of-mind awareness was used in all

analyses because this is the main aim of the awareness strategy. On average, the brands in this study were top-of-mind for 13% of the respondents (range from 1% to 65%).

Campaign recall: The respondents were asked which advertisements they remembered having seen in the past few weeks in a certain product category. If they remembered one of the brands that was part of the study, they were asked to describe the content of this commercial. The campaign was only coded as recalled if the respondent correctly remembered at least one content element of the commercial. On average, 11% of the respondents spontaneously recalled a campaign (range ,02% to 33%).

Campaign appreciation: Respondents were asked to score each campaign they could remember from 1 to 10. On average, the campaigns scored a 6,5, varying from 4,6 to 8,5. (To measure campaign appreciation, respondents were prompted with the names of brands they had not mentioned, and if they correctly remembered the campaign after this cue, they were asked to rate these campaigns as well.)

Previous behaviour: First, respondents were asked what brand they usually bought, then what other brands they bought occasionally. Previous behaviour was defined as the set of brands that was occasionally bought. This definition correlated ,97 with the definition of previous behaviour as the most often bought brand.

Purchase intention: For each product category respondents were asked what brand they planned to buy at their next purchase. Purchase intention averaged 10% (range 1% to 47%).

2.2 *Coding of the communication strategies*

Based on the description of the communication strategies formulated above as well as that of Franzen (1999), a coding form was developed that contained 28 items measuring typical content elements of each strategy as objectively as possible. For instance, did the commercial gave information about instrumental advantages (an aspect of the information strategy), was a discount offered (stimulus response strategy), or was the commercial intended to be humorous or to amuse the audience (likeability strategy)? Two trained coders independently coded the communication strategies used in each campaign. Discussion between the coders solved any disagreements.

Most campaigns consisted of a number of commercials which almost always used the same strategies. For each strategy, a dummy score was calculated that had the value '1' if a certain communication strategy was used in at least one of the commercials in the campaign. Otherwise, the value '0' was given.

2.3 Procedures

The effects of a campaign were not only dependent on the communication strategy used, but also on previous consumer behaviour and the amount of contact consumers had with a campaign. Therefore, each of the four effects (campaign recall, campaign appreciation, brand awareness, and purchase intention) was regressed on strategy use, previous behaviour, and share-of-voice of GRPs in the product category. Standardized regression coefficients will be reported. To test H_{4a} and H_{4b} , an interaction term between used strategy and previous behaviour was added to the regression analysis. If there is an interaction term in a regression analysis, it is not possible to interpret the standardized coefficients and the unstandardized coefficients will be reported. However, we standardized all variables before calculating the interaction term. If this procedure is used, it is allowed to interpret the unstandardized coefficients as if they are standardized (Cohen, Cohen, West, and Aiken, 2003; Jaccard, Turrissi, and Wan, 1990).

It was not possible to test the effect of all strategies simultaneously, as the results would be unreliable if the effect of eleven variables were simultaneously tested on forty campaigns. Therefore, the effect of each strategy was separately tested.

Strategy use and previous behaviour were measured as indicated above. Regarding amount of contact with a campaign, it is very difficult for respondents to indicate reliably how often they have seen a certain advertisement in the weeks before the interview. As an indication of exposure to a campaign, I used the amount of gross rating points (GRPs), measured by a people meter panel of 1300 households, also maintained by Intomart GfK. GRP is a statistic that indicates the reach of a campaign among members of the target group. Especially important is how often a brand is advertised in comparison with other brands in the same product category. The amount of GRPs a campaign has in comparison with the competition in the same product category is generally called *share-of-voice*.

3 Results

It was hypothesized that campaign recall would increase most for campaigns using the awareness strategy (H_1). Table 2 shows that the awareness strategy had a significant effect on campaign recall ($\beta = ,28$). For campaigns which used the awareness strategy (either alone or in combination with other strategies), the campaign recall was significantly higher (on average, the campaign was recalled by 12,6%) in comparison with campaigns which did not use the awareness strategy (on average, 7,4%). However, campaigns which used the likeability strategy were even slightly more effective ($\beta = ,30$). Especially for campaigns in which the likeability strategy and awareness strategy were combined, the cam-

paigned recall increased ($\beta = ,35$). When both strategies were combined, 13,2% of the consumers recalled the campaign.

Table 2 also shows that share-of-voice had a significant regression coefficient in each analysis. The size of the effect of share-of-voice was larger than the effect of each of the strategies. However, when the awareness strategy and likeability strategy were combined, the effect of the communication strategies and share-of-voice was about equal.

Table 2: Effect of communication strategies on campaign recall

Strategy	<i>Strategy</i>	<i>Share of voice</i>	<i>Previous purchase behaviour</i>	R^2
Likeability	β	β	β	
Likeability	,30*	,33*	,27 [#]	,30**
Awareness	,28*	,34*	,21	,29*
Identity	,14	,34*	,22	,23*
Emotions	,07	,34*	,22	,22*
Variation	,05	,36*	,19	,22*
Information	,02	,37*	,19	,21*
Social	-,07	,36*	,18	,22*
Self-efficacy	-,08	,35*	,21	,22*
Stimulus response	-,08	,34*	,20	,22*
Likeability and Awareness	,35*	,33*	,25 [#]	,33**

*** $p < ,001$. ** $p < ,01$. * $p < ,05$. [#] $p < ,10$.

It was hypothesized that the likeability strategy would be most effective at increasing campaign appreciation (H_2). As shown in Table 3, use of the likeability strategy had a positive effect on campaign appreciation, but the regression coefficient was not significant ($\beta = ,26$, $p = ,11$). The average score for campaigns which used the likeability strategy was 6,5, whereas it was 6,1 for campaigns which did not use the likeability strategy. Again, campaigns which combined the likeability strategy and awareness strategy showed the largest effect ($\beta = ,32$; average score, 6,6).

Analogue to the effects on campaign recall, share-of-voice had a (marginally) significant effect in each analysis. When the awareness strategy and likeability strategy were combined, the effect of the communication strategies and share-of-voice was about equal.

Table 3: Effect of communication strategies on campaign appreciation

Strategy	<i>Strategy</i>	<i>Share of voice</i>	<i>Previous purchase behaviour</i>	R ²
Awareness	,26 [#]	,34*	,01	,19 [#]
Likeability	,26	,33 [#]	,06	,19 [#]
Emotions	,14	,31 [#]	,04	,14
Identity	,13	,34 [#]	,01	,14
Stimulus response	,05	,37*	-,01	,13
Information	-,09	,33 [#]	,02	,13
Self-efficacy	-,14	,34*	,02	,14
Variation	-,16	,38*	,00	,15
Social	-,16	,36*	-,03	,15
Likeability and Awareness	,32*	,33*	,04	,23**

*** $p < ,001$. ** $p < ,01$. * $p < ,05$. [#] $p < ,10$.

The average top-of-mind awareness (TOMA) was almost entirely explained by previous purchase behaviour (Table 4). All regression coefficients were between ,95 and ,98. In accordance with H₃, most of the remaining unexplained variance was explained by use of the awareness strategy ($\beta = ,09$). Campaigns which used the awareness strategy were more effective (on average, TOMA was 14.8%) than campaigns which did not use the awareness strategy (on average, 11.7%). In contrast with the results for advertising recall and advertising appreciation, combined use of awareness strategy and likeability strategy was not more effective ($\beta = ,08$; average TOMA was 12,6%). Share-of-voice had no relationship with brand awareness.

Table 4: Effect of communication strategies on brand awareness

Strategy	<i>Strategy</i>	<i>Share of voice</i>	<i>Previous purchase behaviour</i>	R^2
Awareness	,09*	-,01	,97***	,94***
Stimulus response	,06	,02	,96***	,93***
Identity	,06	-,01	,97***	,93***
Likeability	,05	-,01	,98***	,93***
Emotions	,04	-,01	,98***	,93***
Information	,01	,00	,96***	,93***
Self-efficacy	,01	,00	,96***	,93***
Variation	-,01	,00	,96***	,93***
Social	-,07	,00	,95***	,93***
Likeability and Awareness	,08 [#]	-,01	,98***	,93**

*** $p < ,001$. ** $p < ,01$. * $p < ,05$. [#] $p < ,10$.

Finally, the effect of the communication strategy on purchase intention was tested (Table 5). For food and candy products, the hypothesis was that the emotions strategy would be most effective for smaller brands, whereas other strategies that mismatched the dominant behavioural determinant would be more effective for larger brands. Because of the small number of campaigns for food and candy products (22 campaigns), results on the effect of the strategies on purchase intention were tentative, giving a first indication of the effectiveness of the communication strategies.

Table 5: Effect of communication strategies on purchase intention for food and candy brands

Strategy	β	Share of voice β	Previous purchase behaviour β	Interaction: strategy* previous behaviour β	R ²
Information	,00	-,01	,71***	,47***	,96***
Self-efficacy	,03	,15*	,82***	,24***	,95***
Variation	-,05	,12 [#]	,95***	,23***	,95***
Social	-,09	,06	,85***	-,08	,91***
Identity	-,08	,08	,88***	-,15	,91***
Likeability	-,03	,14*	,78***	-,21***	,95***
Emotions	-,06	,14*	,81***	-,21***	,95***
Awareness	-,03	,15*	,85***	-,25***	,95***
Stimulus response ¹	---	---	---		

Note. Because an interaction term is estimated, the unstandardized coefficients are reported. However, before calculating the interaction term, all coefficients were standardized. This procedure allows an interpretation of the unstandardized coefficients as if they are standardized (Jaccard, Turrisi, and Wan, 1990).

*** $p < ,001$. ** $p < ,01$. * $p < ,05$. # $p < ,10$.

¹ Only one campaign used the Stimulus response strategy. Therefore, it is not possible to estimate coefficients for this strategy.

Previous purchase behaviour had most effect on the purchase intention. None of the communication strategies had a direct effect, but there were significant interaction effects between previous purchase behaviour and six communication strategies.

In accordance with H_{4a} and H_{4b}, a significant interaction effect was found between use of the emotions strategy and previous purchase behaviour ($\beta = -,21$). If a brand was bought more often in the past, the emotions strategy had less effect on the intention to purchase this brand again. The largest interaction effect was found between previous purchase behaviour and the information strategy ($\beta = ,47$). If a brand was bought more often in the past, the information strategy had more effect on the purchase intention. These results confirmed that for large brands, a mismatching strategy was the better option. Other significant

interaction effects were found between previous behaviour and self-efficacy strategy ($\beta = ,24$), variation strategy ($\beta = ,23$), likeability strategy ($\beta = -,21$), and awareness strategy ($\beta = -,25$).

4 Conclusion

Above, the integrative framework for effective communication (IFEC) is outlined. The IFEC can be used to choose between many possible persuasive communication strategies. Nine communication strategies are distinguished, each clearly linked to a specific brand need or a specific consumer need. Depending on the campaign goal(s), a different communication strategy should be used. The campaign goal(s) should be chosen based on an analysis of consumer needs and an analysis of the brand's market position. The awareness strategy is a good choice for advertisers who want to achieve campaign recall or for advertisers who want to increase brand awareness. The likeability strategy should be used if a brand is not liked. Consumer need strategies should be used to communicate that the advertised brand can be used to fulfil a consumer need. This might influence brand attitude, purchase intention, and purchase behaviour. The IFEC mentions seven important consumer needs, each linked to a matching communication strategy. When consumers have no experience with the product category or have no strong existing beliefs and no strong attitude toward the advertised brand, a communication strategy that matches their most important need(s) is more effective than a mismatching strategy. On the other hand, if consumers have experience with the product category or brand, and have strong existing beliefs or a strong prior attitude, a mismatching strategy is more effective than a matching strategy. A mismatching strategy does not challenge existing beliefs and attitudes, and therefore the consumer is more easily convinced of the beliefs in the message. Of course, use of a mismatching strategy will only be effective if consumers are open to different opinions and if other consumer needs can potentially be satisfied by use of the advertised brand.

The IFEC is supported in an initial test based on forty advertising campaigns. In this test, also taken into account is the effect of previous purchase behaviour and share-of-voice (i.e., the amount of GRPs a campaign has in comparison with the amount of GRPs of the competition in the same product category). It is found that campaign recall and campaign appreciation increase most strongly when a combination of the likeability strategy and awareness strategy is used. The effect of share-of-voice on campaign recall and on campaign appreciation is about equal to the effect that the likeability and awareness strategy have on these two objectives. Previous purchase behaviour has a small non-

significant positive effect on campaign recall and is not related to campaign appreciation.

However, brand awareness and purchase intention are almost entirely determined by previous purchase behaviour. Even so, use of the awareness strategy has a small significant positive effect on brand awareness. Brand awareness is not related to share-of-voice. With respect to purchase intention, the hypothesized interaction effects were supported. An important behavioural determinant of purchasing food and candy are the expected affective benefits, that is, the enjoyment of a pleasant taste. This can best be communicated by use of the emotions strategy. In fact, this was the strategy that was chosen in 73% of the campaigns. However, the emotions strategy is not effective for brands that are bought by more consumers. The purchase intention of the larger brands is more effectively increased by campaigns that use the information strategy, self-efficacy strategy, or variation strategy. Especially the information strategy and self-efficacy strategy are not strategies that communicate affective benefits. Instead they have strong informational elements. The information strategy communicates the instrumental benefits of a brand. The self-efficacy strategy is often used to inform consumers how a meal can easily be prepared by using the advertised product.

Concluding, both campaign recall and campaign awareness can most effectively be influenced by a combination of the awareness strategy and likeability strategy, making sure that the campaign has more GRPs than the campaigns of competitors have. Brand awareness and purchase intention are almost entirely influenced by previous purchase behaviour. Therefore, it is hard to influence consumers with respect to these two objectives. Nevertheless, the top-of-mind brand awareness can be increased by use of the awareness strategy. Finally, no direct effects of the communication strategies on purchase intention were found. However, in the field of food and candy products, the emotions strategy was more effective for brands that were previously bought by fewer people, whereas the information strategy was more effective for brands that were previously bought by more people. This confirms that for small brands a matching communication strategy should be used, whereas for large brands a mismatching communication strategy should be used.

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Part II

Advertising and Information Processing

Larry Percy

Unconscious processing of advertising and its effects upon attitude and behaviour

1. Introduction
2. Implicit memory
 - 2.1. Priming
 - 2.2. Neural system of implicit memory
3. Emotion
4. Summary

Abstract

This paper looks at the idea of implicit memory and whether or not it is likely to be involved in the processing of advertising. Given what is known about implicit learning and memory, it is doubtful that even if there was unconscious or implicit processing of advertising, that there would be any effect upon attitude or behaviour. The only unconscious response to advertising likely to have an impact upon attitudes and behaviour is emotion.

1 Introduction

Is implicit learning and memory likely to be involved in the processing of advertising, as a number of people have been suggesting over the last few years? The short answer is, no. Only if we include emotion as implicit memory, and more specifically, nondeclarative emotional memory, would the answer be 'yes.' In fact, as will be discussed below, nondeclarative emotional memory is likely to play an important role in the processing of advertising. But the idea of implicit learning and memory, as it is usually understood, playing any part, let alone a significant one in the processing of advertising is highly unlikely. While the notion that somehow there is unconscious attention and learning going on that gives advertising a much stronger impact than is generally measured may seem appealing, as we shall argue, the nature of implicit learning and memory militate against it.

2 Implicit memory

Interestingly, the idea of implicit memory is a rather recent notion. The term was introduced in a 1985 article by Graf and Schacter. At its simplest level, implicit memory (or nondeclarative memory) is associated with unconscious learning while explicit memory (or declarative memory) involves conscious learning. It is this idea of 'unconscious learning' that has been so seductive to those advocating the role of implicit memory in the processing of advertising. But implicit memory is not only unconscious, it is also a *nonintentional* form of memory (Kolbe and Whishaw, 2003). As Squire and Kandel (1999) have pointed out, implicit memory typically "involves knowledge that is *reflexive* rather than *reflective* in nature" (their emphasis). It involves unconscious changes in behaviour as a result of some previous experience. Not surprising when one considers the major forms of implicit memory.

Nondeclarative or implicit memory includes associative and non-associative learning, along with motor learning (cf. the classification of memory discussed by Milner, Squire, and Kandel, 1998, among others). Non-associative learning

such as habituation and sensitization require repeated exposure to a single stimulus, not a likely scenario for processing advertising. Both habituation and sensitization are considered very elementary forms of learning because they do not involve the creation of an association between stimuli, only a change in how one responds to repeated stimulation of a single kind (Eichenbaum, 2002). Associative learning such as classical or operant conditioning is also unlikely to be operating with advertising. As for motor learning, it is hardly appropriate.

2.1 Priming

Priming, because it results in an unconscious memory formation, may be classified as implicit learning or memory (see Bowers and Marsolek, 2003 for a thorough discussion). In fact, as Whittleston (2003) has remarked, “priming is supposed to be the archetypical example of implicit memory.” Priming is generally thought to fall into two broad categories: perceptual and conceptual. The more usual is *perceptual*, where priming increases the likelihood of being able to identify a stimulus later, or identify it faster; or to complete a perceptual fragment. *Conceptual* priming is where prior processing of a stimulus meaning facilitates future processing or access to concept meaning in memory.

Additionally, a key property of priming is that the primed stimulus is remembered best when encountered in the same form in which it was originally encountered. So again, assuming unconscious attention is paid to an advert at some level, and priming occurs, it would not prime evaluation of decision situations. If priming did occur, at least perceptual priming, it would merely increase the likelihood of remembering the advert itself if seen again.

Let us consider priming. It is a form of perceptual learning that seems to be dissociated from declarative memory. Having seen or heard words temporarily (even subliminally) can increase the probability of using them later (Kalat, 2004). In the case of advertising, one might wish to suggest that unconscious exposure to an advert should ‘prime’ better recall of the advert or its message later. This would assume, of course, that unconscious *attention* was actually paid to the advert, a tenuous assumption at best given the barrage of visual and verbal stimuli to which we are constantly exposed.

But let’s say it happens. Unfortunately, with priming, *recall* of the primed stimuli (the advert here) is impaired, with or without cueing (Eichenbaum, 2002). We are using the word ‘attention’ here only to suggest that at least some processing of the advert occurred, at whatever level. Actually, there is some question as to whether or not attention occurs early or late in processing, part of the debate over whether attention is involved at all. The phrase ‘preattention

processing' is sometimes used here to refer to any processing that is not affected by attention. For example, is perceptual processing automatic, with what we think of as 'attention' only coming into play when selecting a memory and response (Deutsch and Deutsch, 1963)?

Implicit processing of unintended stimuli (e.g. incidental exposure to an advert), as pointed out by Treisman (2004), complicates things by suggesting that attention can block access to consciousness without blocking perceptual processing totally. But as perceptual processing demand raises, implicit effects often disappear, suggesting it may take more perceptual information to reach consciousness than it does to generate implicit priming effects. This idea, however, seems more related to whether or not there are preset systems in place to identify and process incoming stimuli (the visual and verbal content of an advert, for example). But, this is the subject for another paper.

Leaving aside the questions of attention, while one might wish to argue that conceptual priming would suggest the potential for better conscious processing of subsequent exposures to the same advertising, this too is a rather tenuous notion. Conceptual priming does increase the likelihood of generating a concept when cued because of previously processing that concept. Prior exposure to an advert, *if* it is processed and associated in memory with the brand and category, could perhaps lead to a higher probability of the brand being recalled with a category cue. But in the case of advertising, one would be hard pressed to argue that unconscious attention to an advert would be enough to generate the processing of meaning. *Conscious* attention and processing of advertising does not often result in memory for meaning.

Adding to the problem is the fact that while conceptual priming is modality-independent (Vaidya et al., 1997), it is greater when the semantic features of a stimulus are attended to during priming than when perceptual features are attended. Since most attention and learning associated with advertising is visual, conceptual priming is unlikely to be operating.

2.2 *Neural system of implicit memory*

Much of what we know about implicit memory comes from studies of amnesia, because subjects generally perform well on implicit memory tests because they avoid reference to the temporal or spatial content in which the information was acquired. This too argues against the likelihood that implicit memory is involved in the processing of advertising. Implicit memory is stored separately from the temporal lobe, which is where we find declarative or explicit memory. We know this originally from the study of the famous case of H.M., whose

temporal lobe was surgically removed, eliminating his explicit memory, but whose implicit memory system was left intact (Kolb and Whishaw, 2003). More recently, findings from neuroimaging studies have generally supported the distinction between explicit and implicit memory. Deppe and his colleagues (2005) used fMRI to study how implicit memory (in terms of emotion) influences brand choice. When people chose their favorite brand, they found significantly reduced activation in those areas of the brain associated with working memory and reasoning coupled with increased activation in areas involved in the processing of emotion and self-reflection during decision-making.

Petri and Mishkin (1994) have proposed different neural circuits and brain structures for explicit and implicit memory. It would appear that most implicit memory functions (including priming) are associated with the neocortex and cerebellum, stimulating the basal ganglia independent of the temporal lobe and hippocampus where explicit memory is stored. Both empirical and experimental studies support a critical role for the basal ganglia in implicit memory (cf. Pascual-Leone et al., 1994), and the hippocampus is always active in the encoding of new information for explicit memory (Eichenbaum, 2002).

But it must be acknowledged that there is a recent body of opinion that argues against the idea of implicit memory, or more properly a distinction between implicit and explicit memory, in memory theory (cf. most of the papers in *Rethinking Implicit Memory*, edited by Jeffrey Bowers and Chad Marsolek, 2003). The argument is primarily that this distinction is more a description of the outcomes of a process, not a description of the knowledge upon which it is based or the process that controls preference and creates awareness.

At root, the disagreement seems to be over whether or not implicit and explicit memory, however defined, are supported by separate or common neural systems. Craik (2003) feels there is no justification for suggesting perceptual information resides in a separate memory store labeled implicit memory. Yet there is a great deal of neural evidence to the contrary (e.g. Squire, 1994; Schacter and Tulving, 1994). In fact, in the latest edition of *The Cognitive Neurosciences*, Bailey and Kandel (2004) state that “explicit memory is critically dependent on structures in the temporal lobe of the cerebral cortex, including the hippocampal formation,” while “implicit memory involves the cerebellum, the striatum, the amygdala” and certain other sensory and motor pathways in the simplest cases.

If we follow the more traditional idea that implicit and explicit memory are housed in different neural structures, it would be difficult if not impossible for implicit memory to inform higher order cognitive processes. Explicit memory utilizes what is called ‘top-down’ processing, where new information is inte-

grated with existing knowledge, and reorganized in memory. Implicit memory, on the other hand, utilizes ‘bottom-up’ processing which simply relies upon sensory input and does not require any processing of the information by higher-order cortical processes.

Information processed in this way is encoded in basically the same format in which it is received without interacting with explicit memory. Often this is insufficient to support flexible cognition. When this occurs, some cognitive control processes will be necessary (Wagner, et al., 2004). Unconscious processing is not as flexible as conscious processing, perhaps because conscious processing is required for the development of executive control processes (Dehaene and Changeux, 2004).

Because of this relatively passive role in encoding implicit memory, voluntary recall of the memory is difficult (Kolb and Whishaw, 2003). Given both of these points, the fact that implicit memory does not interact with higher cognitive processing and that the measures themselves are difficult to recall voluntarily, even if advertising occasioned implicit learning and memory it is unlikely there would be any attitudinal or behavioural consequences.

3 Emotion

We discussed in the last section the fact that explicit memory and implicit memory utilize different neural systems, and that implicit memory does not seem to be associated with cognitive processing. However, one aspect of non-declarative or implicit memory does seem able to inform higher order cognitive processes: emotion. Following Kolb and Whishaw (2003), Figure 1 illustrates the relationships between different types of memory and the neural structures with which they are closely associated. As we see, emotion is considered as part of implicit memory, but it is not associated with the cerebellum or neocortex. It is associated with the amygdala (of which we shall have more to say later), which is an important component of the limbic system. Herein lies the link to higher-order cognitive processes. The limbic system is understood to be the controlling factor in the processing of both emotional and cognitive information. Within the limbic system, it is the amygdala that is concerned with emotional processing and the hippocampus with cognitive processing.

MEMORY

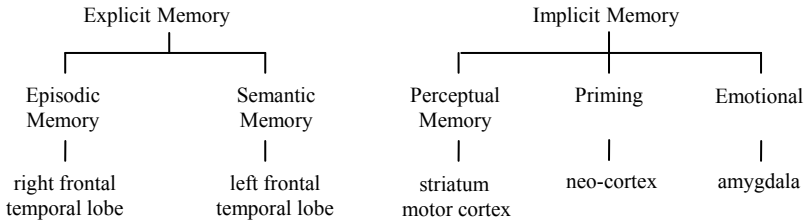


Figure 1: Neural structures most closely related to memory type

The concept of emotion today is perhaps best understood within the perspective of the affect program theory (cf. Griffiths, 1997), which deals with a specific range of emotions that generally reflect Damasio's (1999) discussion of six primary emotions: anger, disgust, fear, joy, sadness, and surprise. These emotional states are phylogenetically ancient, informationally encapsulated reflex-like responses localized within the limbic system. While these emotions are important, we are more concerned with those secondary emotions that appear to be highly integrated with complex and often conscious cognitive processes, and seemingly outside the affect program theory, or 'alien' to use Griffiths' (1997) word.

These emotions play a role in motivating deliberate plans of action rather than in triggering rapid, reflex like responses. They are likely to be integrated into cognitive processing that leads to more long-term planning or decisions. In a sense, this is consistent with the evolutionary neuropsychology notion that there is an adaptive value in having such emotional feelings because they can be important to the long-term planning, explicit processing systems, especially where there are too many factors to be easily taken into account by only the explicit planning system (Rolls, 1999). So, even though emotions, and especially the primary emotions associated with the affect program theory, may have limited involvement with cognitive processing, they will nonetheless be integrated into the cognitive processing of information. Emotion will 'frame' conscious cognitive processing.

The emotional system in the brain can perceive and store information that does not actually reach attention, yet engages the declarative memory system (Eichenbaum, 2002). It would seem to directly activate a separate pathway to the ventral pre-frontal cortex and amygdala (Yamasaki et al., 2002), even

though some attentional resources do seem to be needed in order to detect them (Pessoa et al., 2002). Evidence for this follows from early work by Zajonc and his colleagues (1980, 1984), and people such as Bornstein (1992). Bornstein used a priming stimulus with pictures of faces that were unconsciously exposed to subjects, and found they were later unable to recognize the pictures even though they were more positively rated than pictures to which they were not pre-exposed. Murphy and Zajonc (1993) conducted an experiment using subliminal emotional priming where pictures of smiling or frowning faces are briefly presented but immediately masked, eliminating the ability to consciously recall them. Whether subjects later liked or disliked a stimulus was directly related to whether it was primed by an unconscious smile or frown. Zajonc, of course, talked about this idea of unconscious affective memory occurring independently of declarative memory as 'mere exposure.' But as Lane (2000) has pointed out, while people can accurately make positive and negative judgments about subliminally primed stimuli, they are crude judgments. More refined judgments, such as the type of emotion depicted, are not possible in the absence of conscious awareness.

The key to this as already discussed is the amygdala. It plays a role in affective discrimination and suggests that the central nucleus plays a role in unconscious emotional learning. Yet a critical component of the nondeclarative emotional memory trace is its plasticity which enables it to support emotional memories in the absence of conscious recollection. The nondeclarative emotional memories that are integrated into conscious cognitive processes play a role in motivating considered plans of action rather than simply triggering the rapid, reflex-like responses associated with other unconscious emotional memories (and most implicit memory responses as well). In fact, the conscious affect (feeling) associated with this may act as an internal source of reinforcement for behaviour (Griffiths, 1997).

The outcome of activity in the amygdala is an emotional response, usually unconsciously; the outcome of activity in the hippocampus, seat of explicit memory, is a conscious awareness of experiences or knowledge. But we know that we can be consciously aware of an emotional response, allowing us to integrate it with explicit memories. In this way new explicit memories can be formed, informed by the emotional response (LeDoux, 1998). And even when we are not consciously aware of the emotional response to a stimuli, or the nondeclarative emotional memory association with a new experience, that emotional memory will inform the processing of the new experience and the formation of new explicit memories.

When a person is exposed to advertising, processing will activate conscious cognitive associations in memory as well as unconscious emotional components of that memory. The nondeclarative emotional memory stored in the amygdala will precede into conscious working memory any conscious, hippocampus-dependent explicit memories as the advertising is being processed. This means that when an advert cues memories of either a positive experience with a brand or positive memories associated with the imagery within the advertising, the nondeclarative emotional memory associated with those cognitive memories will immediately and unconsciously enter into working memory as active processing of the advertising begins. This process is illustrated in Figure 2.

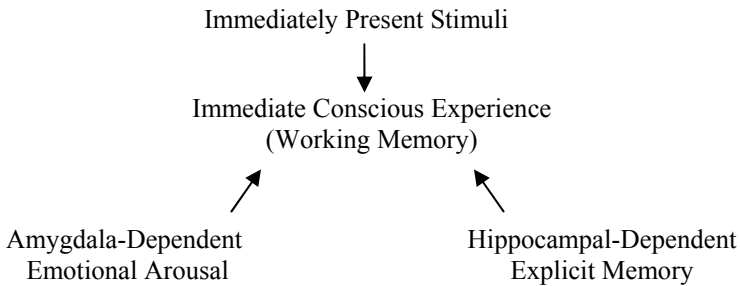


Figure 2: Interaction of emotional memory and explicit memory

In effect, as pointed out by Eichenbaum (2002), we can feel happy or upset at an image that evokes an emotional memory, even before, or independently of, our ability to recognize the source of such feelings. While we are certainly capable of consciously monitoring what we are processing, it may nevertheless proceed unconsciously owing to either a conscious or unconscious decision to not pay attention. This can happen any time someone is distracted or specifically directs their attention to some other aspect of their immediate environment; an all-too-likely occurrence when exposed to advertising. In the case of inattention, you are not aware of the emotional response to a stimulus (for example an advert), but the emotional association is still constructed in memory (Griffiths, 1997).

Here, of course, is where advertising can have an ‘implicit’ effect. To the extent that adverts stimulate an appropriate emotional response, even subliminally, that is associated in memory with the brand, it will help positively frame later encounters with the brand. The emotional learning is stored in the amygdala. Later contact with the brand (e.g. in another advert or at the point-of-

purchase) triggers amygdala-dependent arousal of the nondeclarative emotional memory, parallel with (or in advance of) activation of explicit memories associated with the brand from the hippocampal system.

4 Summary

In this paper we have discussed why implicit memory, as generally understood, is simply not likely to be involved in the processing of advertising. Even if some implicit learning occurred, the nature of the neural systems involved suggest that implicit memory would have no effect upon brand attitude or behaviour.

The exception, as we have seen, is *emotion*. Because emotion, as Ochsner and Schacter (2000) point out, can influence the nature and distinctiveness of what one encodes and stores in memory, it strongly determines what will potentially be available for subsequent recall. The parallel functioning of the amygdala and hippocampus means that even bottom-up perceptions of an advert may reflexively activate information in memory of its affective properties, as studies by Bargh and his colleagues (1992) show. This means that nondeclarative emotional memory can be the first source of information about how to respond to an advert.

As Scherer (2000) has remarked, "After a period of almost exclusive interest in emotion-free, cold recognition, there has been a remarkable surge of interest in 'hot cognition,' that is, the way in which memory, learning, thinking, and judgment are affected by affected states." Emotional memory associated with an advert will indeed inform cognitive processing of a brand and its advertising. Research in advertising should be concerned with emotion, not general systems of implicit learning and memory.

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Processing outdoor posters: product- and brand recognition in a split of a second

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Abstract

How do consumers process outdoor posters within a split of a second? The very short time it takes to recognise the brand and the product advertised on 187 outdoor posters was measured using a tachistoscope and explained by 80 content and format variables ($R^2 = 64\%$ and 57%).

Product recognition is enhanced by clear branding (brand name, pack shot), including new product information and slowed down by large amounts of text, different colours and pictures of people (especially with eye contact).

Quick brand recognition is also enhanced by branding and slowed down by large and long headlines, information cues, humour and pictures of women.

1 Purpose of the paper

The world is full of outdoor posters. We are mostly confronted with outdoor posters during very short moments, many times a day. Some of these posters are more successful than others, there are big differences in the appreciation and speed of recognition. Because consumers are confronted with outdoor posters for very brief periods of time, many times a day, outdoor posters need to communicate their message very quickly.

The aim of this study is to contribute to the understanding of the workings of outdoor advertising and the way consumers process posters within a split of a second. This study also provides advertisers with suggestions to allow a quick recognition of the product and brand on their poster. To that end, the relationship between 80 characteristics of outdoor advertising posters and the time it takes to recognise the product and brand is investigated. Among the questions addressed are: "How important is the use of images?", "Is it better to use a lot or a little text?", "Is humour effective?", "What is the best placement for the logo?".

The central research question is: "Which aspects of format and content of outdoor advertising posters influence the speed of the recognition of the brand and product?".

Because outdoor advertising is a fleeting medium, it is important that a poster is able to communicate in a very brief instant at the very least the sender of the advertising message. This study is designed to determine the format and content factors that contribute to communication of the brand and product on the poster within this brief moment.

For outdoor posters several different kinds of effectiveness can be distinguished. Some posters are designed to intrigue an audience, but only very few have this stopping power. The communication of most posters is limited to very brief moments. Therefore we limited ourselves for the purposes of this study to the average time necessary to recognise the product and the brand (product

recognition and brand recognition) during the first fraction of a second that one views an advertising poster.

2 Empirical study and method

In this section the method of our empirical study is discussed. Attention is given to the measurement of brand and product recognition, units of analysis, the implementation of the content analysis and the statistical analyses carried out to provide an answer to the central research question.

2.1 *Brand and product recognition*

Since 1992 Viacom Outdoor in the Netherlands investigates the effectiveness of outdoor posters in a pre-test called the Maximiser (first carried out by Inter/View and later by Intomart GfK). In the Maximiser the time it takes for the product and brand on an outdoor poster to be recognised (product recognition and brand recognition) is measured within a sample of 80 respondents using a tachistoscope, which projects a real size image of the poster in flashes ranging from 0.04 seconds to a full second. In this way scores are obtained for product recognition and brand recognition. The average time it took for a product to be recognised was 0.39 seconds, with a range from 0.04 to 1.30 seconds. The average time it took for a brand to be recognised was 0.46 seconds, with scores between 0.05 and 1.27 seconds. In this research it is assumed that the longer it takes for an advertising message to be recognised, the less effective it is.

2.2 *Outdoor advertising posters in this study*

This study focuses specifically on the functioning of Europanels. This is a collective name for outdoor advertising posters with the dimensions 118.5 cm. wide by 175 cm. high. These dimensions are used throughout Europe. Since 1987 Europanels can be found in the Netherlands, behind glass and lighted, in bus and tram shelters or in a free standing standard on the street near, for example, train stations, shopping centre and gas stations.

2.3 *Content analysis*

The explanatory variables are measured for each of the 187 posters in a content analysis. It is very important for the quality of the research that the variables are measured in a systematic and objective way. To satisfy this demand a comprehensive codebook has been developed in which all 80 variables are delineated and defined. This (Dutch language) codebook can be requested from the authors. With this codebook, each poster has been coded on all the explana-

tory variables, by a group of Communication Science students from the University of Amsterdam.

Variables with an average inter-coders reliability lower than 0.65 (Cohen's Kappa) are removed. As expected, this affects variables with a more qualitative character. The average Kappa score for variables with sufficient reliability is 0.75 and scores vary from 0.67 to 1.00. In order to make regression analysis possible, dichotomous variables were used for the format and content aspects whenever possible.

2.4 *Selection of explanatory variables*

In addition to the inter-coders reliability mentioned above, the explanatory variables are selected on the basis of an analysis of their frequency distribution (variables that occur in less than 5% of the posters are removed from the data set), the number of missing values, testing for multicollinearity (by correlations higher than $r=0.80$ variables are paired and one of the two explanatory variables is removed), normal distribution and linearity. On the basis of these tests variables are transformed or removed from the data set when necessary. Finally there remain 80 explanatory variables.

2.5 *Regression*

Using these 80 content and format variables, two different linear regression models were estimated to predict the effectiveness measures product recognition and brand recognition. Stepwise regression analysis is used to generate an explanatory model for both independent variables, with control for the influence of the product sort, the familiarity of the brand and the year of the measurement. The two regression models presented include only those variables for which the regression coefficient differs significantly from zero ($p < 0.05$).

3 Theoretical background, prior research on the topic

For this study a total of 80 aspects of format and content are determined, and the influence of each on brand and product recognition during a brief exposure to 187 tested outdoor advertising posters is investigated. Because of the very limited scientific literature on outdoor advertising (Bhargava, Donthu & Caron, 1994; Donthu, Cherian & Bhargava, 1993; Hendon, 1972; Whitehill King & Tinkham, 1989; Woodside, 1990) many of these content and format variables have been derived from literature on advertising in other media, such as print.

Basically there are four elements from which an outdoor poster can be constructed: the logo, the pack shot, visual elements (all the images in the poster

except for the logo and pack shot), and text. The text in a poster can be a headline and copy text.

The following content and format variables have been analysed after hypotheses were formulated:

- identification of the product and brand: position and size of logo, brand name and pack shot;
- text and visuals: position, size and length of headline and copy text, use of illustrations and pictures, number of elements and images;
- colour: use of colours in background and text font;
- integration: compatibility of poster elements and relative position;
- use of characters: character types, use of close up and eye contact;
- information content: the amount of information, types of information cues, new information;
- use of humour;
- other variables: year, brand familiarity and product type.

For a detailed description of each of the operationalisation of the variables, the authors can be contacted for more information.

3.1 Identification of the product and brand

A successful outdoor poster should have a strong branding (Gibson and Sanger, 2001). According to the literature, recognition and recall of (outdoor) advertising is positively influenced by the use of and the size of the pack shot and the logo (Franzen, 1994; Hendon, 1972; Twedt, 1952). A strong product focus can also have a positive effect on choice behaviour (Stewart & Furse, 1986; Stewart & Koslow, 1989). Therefore it is expected that the prominent use of product and brand identifications markers (pack shot, logo and brand name) will increase the speed of product and brand recognition. To determine to what extent a poster uses product and brand identification, it is measured if these markers are present, how often they appear on each poster and what their size is.

Another important element concerning product and brand identification is the position of the markers in the poster. When confronted with an outdoor advertisement, the poster is first broadly scanned to determine if something is worth our attention. The conventional scanning route in Western culture is from upper left to lower right. With outdoor advertising posters it is sometimes assumed that the eyes first fixate at the eye level in the middle of the poster, before the Western reading strategy is taken over. In line with this reasoning it is expected that to achieve fast product and brand recognition, product and brand identification markers should be placed in the upper half of the poster and best not in the lower right corner of the poster.

3.2 *Text and visuals*

It is often been said that one of the most important features of effective advertising is that it is more visual than textual. Visuals have many functions: they draw attention, stop the eyes when they're scanning an advertisement, they stimulate impact and interest, increase appreciation, and visual elements are easier to process and remember than textual elements (Edell & Stalin, 1983; Franzen, 1994; Scott, 1994). In line with prior findings, it is expected that for outdoor advertising posters, visual elements work more effectively than the use of large amounts of text, and when using visuals, it has been showed that photographs work better than illustrations. For outdoor advertising posters, it thus can be expected that a visual focus works more effectively than the use of large amounts of text.

Many studies found a positive effect of the use of images (Edell & Stalin, 1983; Hendon, 1972; Hollbrook & Lehmann, 1980; Moriarty, 1987; Rossiter, 1981; Twedt, 1952). A previous study on outdoor advertising found no relationship between the amount of image use and recall, but did find that the amount of text correlated negatively with recognition and recall (Bhargava, Donthu & Caron, 1994).

Visual elements can be made up of photos and/or illustrations. In various studies of print as well as outdoor advertising a positive relationship was found between the use of photographs and realistic images and recognition/recall (Donthu, Cherian & Bhargava, 1993; Hollbrook & Lehmann, 1980). However, other research on outdoor advertising posters found a negative influence of photographs on recall, partly through the mediating effect of humour (Bhargava, Donthu & Caron, 1994).

The strong communication power of visuals doesn't mean that the use of text in outdoor advertising is superfluous. Text is more able to communicate factual product information and can support and strengthen the visual elements. Because of the mostly brief contact with outdoor advertising posters it is important that the text is simple, short and clear (Gardner & Luchtenberg, 2000). In general, the receivers of outdoor advertising aren't motivated to read long lines of text and the sight of a lot of text can draw the attention away from the poster. Many print and outdoor studies have found negative correlations between the amount of text and advertising effects, such as attention, recognition, recall and likeability (Bhargava, Donthu & Caron, 1994; Donthu, Cherian & Bhargava, 1993; Gardner & Luchtenberg, 2000; Hendon, 1972; Rossiter, 1981).

The number of elements used on a poster is another point of attention. Because of the mostly short confrontation with outdoor posters, it can generally be supposed that an outdoor poster must communicate in a brief, powerful and direct way. Previous research on outdoor advertising indicated a negative relationship between the number of elements and the recognition and recall of the poster.

3.3 *Colour*

Many colour decisions in advertising are based on intuition and anecdotic evidence (Gorn, Chattopadhyah, Yi & Dahl, 1997). Colours can evoke a great many things and emotions. Especially the colours red and blue have a variety of associations (Smits, 1967). For example, the colour red is often associated with warmth and love, but in traffic, where people most often come into contact with outdoor advertising, the red of stoplights and stop signs has another, very different latent meaning. Red draws attention, but because of its signal function, it can negatively influence the functioning of an outdoor advertising poster. Red can make people alert that something dangerous is coming up, perhaps not the best atmosphere for advertising. The colour blue is generally associated with water and open air and yet can evoke calm. In the relatively grey Dutch weather a blue sky indicates good weather and calls up positive feelings that can positively influence the functioning of an outdoor advertising poster.

An experiment of Walter and Svebak (1982) showed that magazine advertisements with a red or blue background led to more likeability of the product.

In research on magazine advertisements it was found that the number of colours used in an advert could produce a positive effect (Grønhaug, Kvitastein & Grønmo, 1991; Du Plessis, 2001). On the other hand, looking at outdoor advertising, the use of many colours could make a poster too busy and is more likely to produce confusion.

3.4 *Integration*

When the basic elements (pack shot, logo, texts and visuals) stand in clear relationship to one another (congruency), the message can be easier processed, and the desired effects can occur sooner (Franzen, 1994). It is expected that integrating the different elements in an advertisement, and especially integrating the brand identification markers into visual elements, will speed up brand and product recognition.

3.5 *Use of characters*

An important aspect of advertising campaigns is the use of all kinds of human, animal or cartoon characters. Especially the portraying of people, and their faces and hands grabs people's attention (Franzen, 1994). The use of attractive models can result in an association of the positive qualities of the person in the poster with the advertised product (Aronson, 1999; Smith & Engel, 1968; Van der Lee, 1999). The use of ordinary looking people in adverts could result in the consumers identifying with the product on the poster, what can lead to a higher emotional involvement. Using eye contact and close-ups can stimulate the interaction between poster and viewer and draw the viewer into the advertisement (Messaris, 1997).

3.6 *Information content*

Consumers prefer advertising with relevant information that can help them in making decisions, because that information can reduce uncertainties that come with purchasing (Zanot in Abernethy & Franke, 1996). But too much information can have a negative influence on the effectiveness of advertising: it makes the message complex and can lead to confusion (Stern, Krugman & Resnik, 1981).

An important kind of information is new information. Earlier studies on television advertising show that commercials containing new product information were less well remembered (Stewart & Furse, 1986; Stewart & Koslow, 1989). On the other hand, research on outdoor shows that people give more attention to new information and remember this information better (Whitehill King & Tinkham, 1989).

Table 1 shows the checklist that is used to determine the information content of the posters in this study. This checklist is based on an often-used method of Resnik and Stern (1977) to determine the information content of advertising. Over sixty studies used (variants of) this method (Abernethy & Franke, 1996).

Table 1: Information-cues (source: Resnik & Stern, 1977)

<i>Information-cues</i>
1. Price-value information
2. Quality information
3. Sensory information
4. Components or contents information
5. Availability information
6. Packaging information
7. Guarantees or warranties
8. Safety information
9. Research information
10. Information about results of use
11. New product information

3.7 *Use of humour*

Humour is often used in advertising, with mixed success (Gagnard & Morris, 1988; Haley & Baldinger, 1991; Weinberger & Gulas, 1992). In an earlier study on outdoor advertising, a positive relationship was demonstrated between humour and recall (Bhargava, Donthu & Caron, 1994). The most important pitfall is that all the attention goes out to the humour, and that only the humour but not the brand is memorized.

3.8 *Other variables*

Year, brand familiarity and product type were included in the analysis to control for the effects expected from these variables (Aronson, 1999; Du Plessis, 2001; Franzen, 1994; Grønhaug, Kvitastein & Grønmo, 1991; Rossiter & Percy, 1991; Stewart & Furse, 1986).

4 Empirical findings

4.1 *Product recognition*

The regression model for product recognition is shown in table 2. The model (20 steps) has an accounted for variance of 64% (adjusted R²). A higher score on product recognition means that, on average, the product is more quickly recognised. With the exception of humour and brand recognition, all other types

of explanatory variables appear in the model (text & image, colour, layout, characters, amount of information and product, brand and year).

Table 2: Regression model product recognition ($n=176$, $R^2 = 68\%$, adjusted $R^2 = 64\%$)

<i>Variables</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
Visual method (illustration/photo)	.16	.03	.27**
Total number words	-.01	.00	-.26**
Letter size text	-.20	.04	-.23**
Number letters headline	.00	.00	-.17**
Colour poster blue	.18	.04	.27**
Colour text black	.12	.04	.21**
Colour text white	-.11	.04	-.19**
Number of colours	-.03	.01	-.13**
Colour poster red	-.09	.05	-.10 *
Inclusion of brand name in copy text	.22	.04	.37**
Inclusion of brand name in headline	.16	.03	.27**
Position pack shot lower right	-.14	.03	-.22**
Presence of person	-.12	.04	-.20**
Eye contact	-.11	.05	-.13 *
Number of information cues	-.09	.02	-.38**
Information cue: new product information	.19	.05	.32**
Information cue: components	-.10	.04	-.15**
Product other	-.23	.05	-.27**
Product electronics	-.24	.06	-.24**
Brand familiarity	.02	.01	.11 *

* = $p < 0.05$; ** = $p < 0.01$

We find the strongest effect on product recognition for the amount of information cues on the poster ($\beta = -0.38$). The less the amount of information on a poster, the faster product recognition can occur. There is one positive exception to this rule: the presence of new product information produces a strong positive contribution to the speed with which a product is recognised (an increase of 0.19 seconds). The addition of other information cues produced a delay in the speed of product recognition of 0.09 seconds. It seems that such information draws the attention from the product, while the mention of 'new' draws extra attention to the product.

Another important factor that influences the speed by which the product on a poster is recognised, is -as was expected- the use of product and brand identifications. Product recognition is higher when the brand name is clearly displayed on the poster. Placing the brand name in the copy text or the headline produces an increase in the speed of Product Recognition of respectively 0.22 and 0.16 seconds. The use of a pack shot will, of course, speed up Product Recognition, but it should be avoided to place the pack shot in the lower right of the poster. In accordance with the question mark theory, placing the pack shot at the end of the scanning route slows down product recognition with 0.14 seconds.

There is also a clear influence of the use of text and images. The strongest effect within this group of variables is the visual method that is used: photographs work better than illustrations. Using an illustration rather than a photo can delay product recognition by 0.16 seconds. That a large amount of text draws attention from the product is shown by the negative effect of the total number of words on product recognition: each extra word on the poster gives a delay of 0.01 seconds. Also, the headline should be as short as possible. Further evidence that text can distract from the product is the negative effect of text size.

That not every photograph results in quicker product recognition is apparent from the negative effect of the portrayal of people on posters, and especially when they make eye contact. While the literature shows that the use of people do attract attention and can lead to a higher evaluation of the advertisement, they draw attention away from the product with an average delay of 0.12 seconds. When eye contact is made, there is an additional negative effect on product recognition of 0.11 seconds.

The dominant colour that is used on the poster can also affect the speed of product recognition. A restful blue has a positive effect of 0.18 seconds, while a more vivid colour as red delays the product recognition by 0.09 seconds. The preference for a tranquil colour scheme is reflected in the colour of the text on the poster. Black text speeds the recognition of the product, while the generally more vivid white text slows it down. The amount of colours used should be minimised to increase product recognition: each colour added contributes a delay of 0.03 seconds.

4.2 Brand recognition

The regression model for brand recognition is given in table 3. The model contains twenty variables which together account for 57% (adjusted R^2) of the variance in brand recognition. All eight advertising variable themes occur in the model.

Table 3: Regression model brand recognition ($n=174$, $R^2 = 62\%$, adjusted $R^2 = 57\%$)

<i>Variables</i>	<i>B</i>	<i>SE B</i>	<i>β</i>
Number of letters headline	-.01	.00	-.39**
Visual method	.18	.03	.31**
Size headline	-.01	.00	-.25**
Number lines headline	.05	.02	.20**
Colour text black	.15	.04	.27**
Position brand name (above/below)	.23	.04	.40**
Brand name included in copy text	.17	.04	.29**
Position logo lower right	-.14	.04	-.26**
Brand name included in headline	.14	.03	.24**
Position logo above	.17	.06	.23**
Size of brand name	.03	.01	.22**
Main person woman	-.16	.04	-.24**
Number of information cues	-.11	.03	-.45**
Information cue: new product information	.23	.05	.38**
Presence of one information cue	.13	.05	.22**
Information cue: product components	-.09	.04	-.14 *
Humour	-.19	.03	-.33**
Brand familiarity	.07	.01	.35**
Year	.03	.01	.28**
Product: clothing	.14	.06	.14 *

* = $p < 0.05$; ** = $p < 0.01$

As was the case with product recognition, the correct use of information forms the most important predicting factor when it comes to the speed of brand recognition. The strongest effect in the explanatory model for brand recognition is the negative influence of the number of information cues ($\beta = -0.45$). Information cues slow down the brand recognition, especially information about product ingredients or technical specifications. As with product recognition, it is therefore advisable to be very conservative about the amount of information displayed on a poster. However not including any information cues on a poster is not recommended. Displaying a single information cue appears to attract attention to the brand and helps to process the message, including the brand information. Both product and brand recognition is stimulated by the presence of new product information; the gain in brand recognition is as much as 0.23 seconds.

As could be expected, the advertised brand on a poster will be more quickly recognised when it is displayed on the poster. The effect of brand identification can be found in six variables in the explanatory model. First, placing the brand name in the upper half of the poster delays brand recognition by 0.23 in comparison with placing it in the lower half of the poster. Viewed in the light of the question mark theory this is an unexpected effect. Following the scanning route of this theory, the upper half is seen before the lower half. A possible explanation is that placing the brand name in the upper half of the poster leaves less room in that location for more visual brand identification markers as the logo.

The placement of the logo is another significant factor that can be found in the model for brand recognition. Placing the logo in the upper half of the poster speeds up brand recognition (by 0.17 seconds), while the least favourable position for the logo is the lower right hand corner of the poster (0.14 seconds delay). So in this case the question mark theory is supported. Just as with product recognition, inclusion of the brand name in the copy text or headline speeds up brand recognition (here by respectively 0.17 and 0.14 seconds). Also, the larger the brand name is displayed, the faster the brand is recognised.

While displaying the brand in the headline speeds up brand recognition, the headline should be limited as much as possible. Both the number of letters in the headline and the size of the headline have a negative effect on the time it takes for a brand to be recognised. Reducing the headline by 10% (as a percentage of the poster as a whole) increases brand recognition by 0.08 seconds. Strikingly, spreading the headline over several lines also slightly increases the speed of brand recognition. Looking at the images, the use of photographs is generally advisable over illustrations.

Of all the colour variables that could be found in the model of product recognition, only the use of black text appears in the model for brand recognition. Black text results in an increase in the speed of brand recognition of 0.15 seconds.

Another notable effect is the negative influence of humour on brand recognition. When humour is used, the brand recognition is on average 0.19 seconds slower than when there is no humour used on the poster. Based on the results, when the use of humour in outdoor advertising is considered, it should be kept in mind that humour can distract from brand identification and brand association, with the risk that only the humour and not the brand will be seen and remembered. The use of female persons can also be seen as a distracting factor. When a female person is used, the brand recognition delays with 0.16 seconds.

Finally, effects were found for product, brand and year. Logically high brand familiarity results in higher brand recognition. Because of the very intense brand labelling, consequent image building and the traditionally high use of outdoor advertising, clothing brands as H&M and Hunkemoller, brand recognition was 0.14 seconds faster for posters of clothing than for posters of other products.

The average time it takes to recognise brands on outdoor posters has decreased throughout the years since 1992. This can perhaps be explained by a better creative execution of outdoor posters (controlled for all effects in the model), but perhaps also by the increasing capability of consumers to recognise visuals in a split of a second, as the number of frames in drama, music clips and commercials on television has increased as well in the last decade.

5 Practical and theoretical implications

This study is an exploration and a stock-taking of the aspects of form and content that account for the operation of outdoor advertising posters. This study indicates that the time it takes to recognise the brand and product on outdoor advertising posters can be well accounted for. The two models generated in this research provide good insight into the effect of a large number of features of format and content on the readability of posters. Generally speaking, brand and product recognition can be increased by clear branding on the poster, leaving out other distracting content. Less is certainly more when it comes to outdoor advertising.

In comparison to earlier studies of outdoor advertising (Hendon, 1972) as well as print media (Holbrook & Lehmann, 1980) and television (Stewart & Furse, 1986), the power of the two regression models for outdoor advertising posters is considerable. The explained variance in the measures of effect is so high that, in a competitive market environment, the explanatory advertising variables could make the difference between success and failure for an outdoor advertising poster.

However, the research results provide no guarantee for the success of an advertising campaign. There is no magic formula for the creation of an effective outdoor advertising poster. The making of advertising remains a creative proc-

ess, which turns on originality and the right combination of elements. Application of the success and failure factors that have come out of this research could increase the readability of the brand and product on outdoor advertising posters, but outdoor advertising design is not the only factor that influences the effectiveness of an advertising campaign. Because this is an exploratory study in a largely virginal field of research, with a number of clear limitations, the research results should only be seen as an indication of how consumers process outdoor advertising posters within a split second and the effect of content and format variables on this process. Hopefully this study will motivate further scientific attention to the underrated medium of outdoor advertising. This research offers a solid basis for similar follow-up research.

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Rhetoric in advertising: attitudes towards schemes and tropes in text and image

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Abstract

Rhetorical figures can be effective means in the persuasion process. Traditionally, rhetorical figures are subdivided into schemes (i.e., superficial deviations such as rhyme) and tropes (i.e., meaningful deviations such as metaphors and puns). This paper reports of an experiment and interviews on the effects of verbal and visual schemes and tropes (versus non-rhetorical figures) in magazine advertisements on the attitude towards the ad. A taxonomy consisting of 9 categories (verbal versus visual non-rhetorical figures, schemes, and tropes) was used, and 4 ads per category (36 in total) were each presented to 79 participants (non-students). The results showed, amongst others, that the attitude towards ads with visual tropes was higher than towards ads without rhetorical figures. If and how the attitude towards ads with tropes differs from the attitude towards ads with schemes remains to be investigated.

1 Introduction

Advertisers often use rhetorical figures in text as well as in image, to communicate the ad's message (e.g., 'Product X has property Y') in an artfully divergent way. Rhetorical figures can play an important role in the persuasion process. They may evoke positive feelings, which can influence the attitude towards the ad and the attitude towards the product or brand (cf. Meyers-Levy & Malaviya 1999).



Figure 1: Verbal scheme
'Tough against pain,
soft for your family'



Figure 2: Visual scheme

Rhetorical figures are often categorized as schemes and tropes (e.g., Corbett & Connors 1999, Leigh 1994, McQuarrie & Mick 1996). Schemes are superfi-

cial deviations, which are explicit and perceptible to everyone. Traditional examples of schemes are rhyme, alliteration, et cetera. Schemes are decorations. They attract our attention but they contribute little to the identification of the advertising message. The advertisement for the painkiller Panadol (Figure 1), for example, contains a scheme in the headline: ‚Hard tegen pijn, zacht voor je gezin’ [‚Tough against pain, soft for your family’]. The contradiction between ‚tough’ and ‚soft’ barely does more than attract our attention. In the ad for a detergent (Figure 2), a visual scheme can be found in the repetition of the round shapes. This repetition is also a mainly superficial decoration.

Tropes are meaningful deviations, which can be noticed and interpreted only on the basis of our prior knowledge or other elements in the advertisement. Tropes are implicit and offer a cognitive challenge. The interpretation of tropes contributes to the identification of the advertising message. Tropes are expected to be perceived as more complex than schemes (and non-rhetorical figures) (cf. McQuarrie & Mick 1996, p.434, Mothersbaugh et al. 2002).

Traditional examples of tropes are metaphors, puns, et cetera. An example of a verbal trope can be found in Figure 3. The receiver has to infer that ‚Always look on the light side’ refers to ‚Always look on the bright side’. Figure 4 contains an example of a visual trope. A gigantic personified bottle of detergent is shown, to stress that this bottle of detergent is now extra large (as stated in the accompanying text).

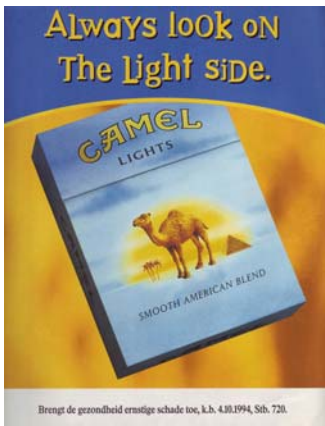


Figure 3: Verbal trope
‚Always look on the light side’



Figure 4: Visual trope

In the present study, rhetorical figures were distinguished from non-rhetorical figures and schemes were distinguished from tropes, in text and in

image. The crossing of these variables (non-rhetorical figures - schemes - tropes, text - image) has led to the taxonomy in Table 1¹.

Table 1: Taxonomy rhetorical figures

	<i>Image</i>		
	<i>Non-rhetorical figure (NRF)</i>	<i>Scheme</i>	<i>Trope</i>
Headline			
Non-rhetorical figure (NRF)	Image: NRF Headline: NRF	Image: scheme Headline: NRF	Image: trope Headline: NRF
Scheme	Image: NRF Headline: scheme	Image: scheme Headline: scheme	Image: trope Headline: scheme
Trope	Image: NRF Headline: trope	Image: scheme Headline: trope	Image: trope Headline: trope

From Relevance Theory (Sperber & Wilson 1995 [1986]), assumptions can be derived about the effects of rhetorical figures. Relevance Theory is about human communication, about the way in which people interpret utterances (e.g., advertisements, see Forceville 1996, Tanaka 1992, 1994). The concept 'optimal relevance' plays an important role in this theory. An utterance is relevant when the receiver gains something from processing it (e.g., the advertising message). An utterance is optimally relevant when the benefits of interpreting the utterance outweigh the costs, that is, when the effect of interpreting the utterance is at least equal to the effort needed to interpret this utterance. If an utterance is addressed to a certain receiver, he can assume that the sender made an attempt to make the utterance optimally relevant to him, by assessing what the receiver knows or is capable of inferring (even in the case of mass communication, see Forceville 1996, p.100-102).

An advertisement with a scheme or trope can be optimally relevant as well, although the extra effort needed to process a rhetorical figure may not seem at first glance to be compensated by the effect, in terms of the retrieved advertising message. However, the effort needed to interpret a trope is not only compensated by the retrieval of the advertising message but also by the pleasure from processing the trope (cf. Tanaka 1992, p.95, see also Yus 2003). It can be pleasurable to 'solve the puzzle', to interpret the trope or to have interpreted the

¹ In this taxonomy, we initially focus on the headline and the main image in the advertisement.

trope successfully (cf. Berlyne 1971, p.136). For advertisements with schemes, optimal relevance is also possible although schemes do not have to be interpreted. It was mentioned above that schemes and tropes are artful devices that can yield pleasure of processing. It is pleasurable to experience something artful and this, in combination with relatively little effort to process schemes, can bring about optimal relevance.

It is assumed that the pleasure of processing schemes and tropes yields a more favourable attitude towards these ads than towards ads without rhetorical figures (cf. e.g., Dingena 1994, McQuarrie & Mick 1992, 1999, 2003b, Meyers-Levy & Malaviya 1999). Furthermore, the attitude towards ads with tropes may be more favourable than towards ads with schemes (cf. McQuarrie & Mick 1999, 2003b) because of the difference in perceived complexity between schemes and tropes. Perceived complexity is assumed to be related to the effort needed to interpret the advertisement. The more effort the receiver has to make to interpret an advertisement, the more complex (i.e., more difficult to understand) he will probably find the ad. This difference in perceived complexity may yield a more favourable attitude towards ads with tropes than towards ads with schemes (and ads without rhetorical figures). The more effort it costs to interpret the rhetorical figure, the more effect, in terms of pleasure of processing, the interpretation of the rhetorical figure may yield (cf. Van Driel 2002). The receiver may find it more satisfying to retrieve the message himself than to be told what the message is.

On the other hand, it could be the case that attitudes towards ads with non-rhetorical figures, schemes and tropes resemble an inverted U-curve (cf. Van Mulken, Van Enschoot & Hoeken 2005, Phillips 2000). Ads with tropes, just as ads without rhetorical figures, may be appreciated less favourably than ads with schemes because ads with tropes are understood less often than ads with schemes and non-rhetorical figures. To be processed successfully, tropes demand the active participation and prior knowledge of the receiver, whereas schemes and non-rhetorical figures are processed more or less automatically (McQuarrie & Mick 1999, 2003a). As mentioned above, the sender will always try to produce an optimally relevant utterance. However, the sender may have made an over-optimistic assessment of what the receiver knows or is capable of inferring. The sender may have selected a trope that is too divergent and implicit for the receiver to interpret successfully. The receiver might feel frustrated as a result because he does not succeed in interpreting the ad (cf. Meyers-Levy & Malaviya 1999). His expectation of optimal relevance has not been met; the benefits do not outweigh the effort. This frustration may lead to a relatively unfavourable attitude towards the ad (cf. Ketelaar, Van Gisbergen & Bosman 2004, Van Mulken et al. 2005).

The research question and hypotheses were formulated as follows:

- RQ1: To what extent do attitudes differ towards advertisements without rhetorical figures, advertisements with schemes and advertisements with tropes?
- H1: Advertisements with tropes are perceived as more complex than advertisements with schemes and advertisements without rhetorical figures. Advertisements with schemes are perceived as complex as advertisements without rhetorical figures.
- H2: Advertisements with tropes are understood less often than advertisements with schemes and advertisements without rhetorical figures. Advertisements with schemes and non-rhetorical figures are understood equally often.
- H3: The attitude towards an advertisement is less favourable when the receiver does not understand the advertisement than when the receiver understands the advertisement.

Furthermore, it was investigated to what extent ads with verbal rhetorical figures differ from ads with visual rhetorical figures. A picture superiority effect (cf. McQuarrie & Mick 2003b, Kisielius & Sternthal 1984, Shepard 1967) may occur because images are more distinctive and therefore more salient than text. The research question with regard to this topic was formulated as follows:

- RQ2: To what extent do advertisements with verbal rhetorical figures differ from advertisements with visual rhetorical figures in terms of perceived complexity and attitude towards the ad?

2 Experiment

2.1 Method

Materials. 36 advertisements were selected from a large corpus of magazine advertisements collected between 2001 and 2003. All the advertisements had been published in popular magazines. The advertisements were nearly all for low involvement products targeted at a broad audience (e.g., beer, butter, detergent, fruit juice, pancakes, and sandwich filling). For each category, 4 advertisements were selected. If only one advertisement per category had been selected, the scores for a specific category could have been the result of some

idiosyncratic characteristic of the ad (or product) other than the rhetorical figure (cf. Jackson, O'Keefe & Jacobs 1988). The advertisements were carefully selected and screened by the three authors and twenty Master students of Business Communication Studies at Radboud University Nijmegen.

Design. A within-subjects design was used: each participant saw all 36 advertisements. To neutralize sequence effects, a latin square design was used to create four different sequences.

Participants. 79 participants, aged 25-61 (M: 44), took part in the experiment: 39 men, 40 women. Their educational backgrounds varied from lower vocational education to higher education.

Instrumentation. In the first part of the questionnaire, judgments on complexity and attitude towards the ad were tapped. Perceived complexity was measured by means of three seven point scales: 'I think that the advertisement is very explicit' versus 'I think that the advertisement is very implicit', 'I think that the advertisement is easy to understand' versus 'difficult to understand', and 'I think that the advertisement is simple' versus 'complex'. The concepts 'explicit' and 'implicit' were explained in the accompanying instructions. Attitude towards the ad was measured by means of two seven point scales: 'I think that the advertisement is bad' versus 'good', and 'I think that the advertisement is unattractive' versus 'attractive'. It was determined that the homogeneity of the perceived complexity scales as well as the attitude scales was at least adequate for nearly all the ads ($\alpha > .70$).

To measure understanding of the advertisement, the participant had to indicate whether he had a given message in mind (yes, no, or partially, e.g., 'You keep walking with Clarks shoes'). Furthermore, attitude towards the product was assessed and participants were asked to answer a number of biographical questions (e.g. sex, age and education level).

The questionnaire was pretested on 22 participants who did not take part in the actual experiment. As a result, a number of problems and errors were removed and the questionnaire was shortened.

Procedure. To prevent the task becoming too exhausting for the participants, the questionnaire was divided into two parts. In each part, 18 of the 36 advertisements were presented; participants took a break of minimally two hours between filling in each of the parts. The questionnaire was administered individually in a natural setting. It took the participants an average of sixty minutes (two sessions of thirty minutes) to fill in the questionnaire.

2.2 Results

For perceived complexity and attitude towards the ad, two-way ANOVA's were performed for participants ($F1$, repeated measures) and stimuli ($F2$), with verbal rhetorical figure and visual rhetorical figure (non-rhetorical figure, scheme, trope) as factors. One-tailed tests were used when differences between categories were expected. Two-tailed tests were used when no differences between categories were expected or when there were no expectations either way. For the analysis of a possible main effect of perceived complexity, a one-tailed test was used. For the analysis of a possible main effect of attitude towards the ad and for the interaction analyses, two-tailed tests were used. One-way ANOVA's for participants ($F1$, repeated measures) and stimuli were performed to test for a possible interaction, with verbal rhetorical figure and visual rhetorical figure respectively as factors. With all analyses, the Bonferroni test was used to make pairwise comparisons. For perceived complexity, one-tailed tests were used to compare non-rhetorical figures with tropes and schemes with tropes. Two-tailed tests were used to compare non-rhetorical figures with schemes. For attitude towards the ad, one-tailed tests were used to compare non-rhetorical figures with schemes. Two-tailed tests were used to compare non-rhetorical figures with tropes and schemes with tropes. Differences were said to exist when the $F1$ - as well as the $F2$ -analysis reached significance. Only then can the results for participants as well as stimuli be generalized.

Perceived complexity. Table 2 shows the results regarding the effect of verbal and visual non-rhetorical figures, schemes and tropes on perceived complexity.

Verbal rhetorical figures were found to have had an effect on perceived complexity ($F1(2, 77) = 62.80, p < .001, \eta^2 = .62; F2(2, 27) = 5.85, p < .01, \eta^2 = .30$). Pairwise comparisons showed that advertisements with verbal tropes were perceived as more complex than ads without a verbal rhetorical figure. Against expectations, ads with verbal schemes were perceived as more complex than ads without verbal rhetorical figure and no differences were found between ads with verbal schemes and with verbal tropes.

Visual rhetorical figures were also found to have had an effect on perceived complexity ($F1(2, 77) = 73.34, p < .001, \eta^2 = .66; F2(2, 27) = 9.16, p < .001, \eta^2 = .40$). Pairwise comparisons showed that ads with visual tropes were perceived as more complex than ads without visual rhetorical figure. In addition, ads with visual schemes were perceived as more complex than ads without visual rhetorical figure. No differences with regard to perceived complexity were found between ads with visual schemes and visual tropes. In fact, the $F1$ -analysis showed that ads with visual schemes were perceived as *more* complex than ads with visual tropes.

Table 2: Mean judgments (and SDs) of perceived complexity (1 = very simple, 7 = very complex) of the various advertisements, as a function of verbal and visual rhetorical figure (non-rhetorical figure, scheme, trope).

	Image			
	NRF	Scheme	Trope	Total
Headline				
NRF	2.02 ^{1,a} (0.76)	3.45 ^{3,a} (1.04)	2.49 ^{1(2),a} (0.80)	2.65 ^a (0.68)
Scheme	2.66 ^{1,a,c(b)} (0.94)	3.26 ^{1,2(2),a} (0.84)	3.99 ^{2(3),c} (1.04)	3.30 ^b (0.70)
Trope	3.02 ^{1,c} (0.89)	3.59 ^{1,a} (0.91)	3.14 ^{1,b} (1.02)	3.25 ^b (0.78)
Total	2.57 ¹ (0.71)	3.43 ²⁽³⁾ (0.72)	3.21 ² (0.78)	3.07 (0.63)

Different superscripts indicate that means differ from each other significantly, same superscripts indicate that means do not differ from each other significantly; numbers account for rows, letters account for columns. Superscripts in brackets indicate effects in the *F1*-analysis and not the *F2*-analysis.

Besides the main effects of verbal and visual rhetorical figures, an interaction effect was found as well ($F1(4, 75) = 29.61, p < .001, \eta^2 = .61$; $F2(4, 27) = 3.48, p < .05, \eta^2 = .34$), as can be seen in Figure 5 and 6.

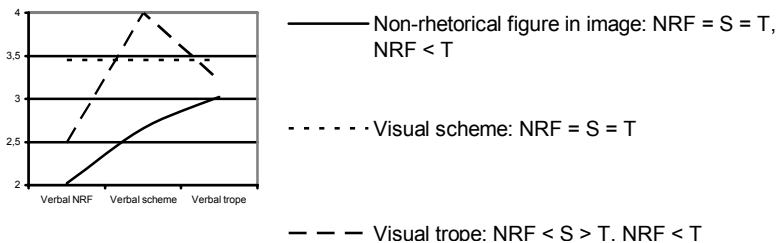


Figure 5: Interaction effects perceived complexity verbal rhetorical figures

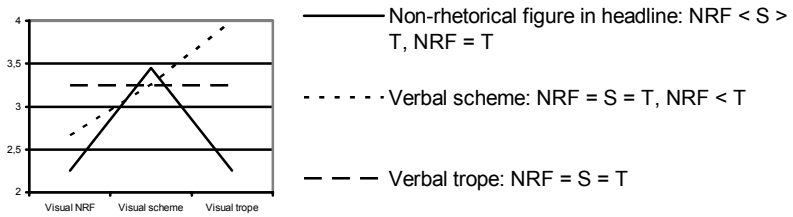


Figure 6: Interaction effects perceived complexity visual rhetorical figures

The perceived complexity of non-rhetorical figures was almost always found to be equal to or lower than the perceived complexity of schemes and tropes. Two findings are particularly remarkable in this respect. For the ads with a visual trope, the perceived complexity of ads with verbal schemes is greater than the perceived complexity of ads without verbal rhetorical figures and ads with verbal tropes. For the ads without a verbal rhetorical figure, the perceived complexity of ads with visual schemes is greater than the perceived complexity of ads without visual rhetorical figures and ads with visual tropes.

Attitude towards the ad. Table 3 shows the results regarding the effects on attitude towards the ad.

Table 3: Mean judgments (and SDs) for attitude towards the ad (1 = very unfavourable attitude, 7 = very favourable attitude) of the various advertisements, as a function of verbal and visual rhetorical figure (non-rhetorical figure, scheme, trope).

	<i>Image</i>			
	<i>NRF</i>	<i>Scheme</i>	<i>Trope</i>	<i>Total</i>
Headline				
NRF	4.16 (1.13)	3.81 (1.05)	4.64 (0.87)	4.20 ^a (0.81)
Scheme	3.88 (0.87)	4.22 (0.96)	4.47 (1.00)	4.19 ^a (0.71)
Trope	4.21 (0.80)	4.52 (0.77)	4.74 (0.90)	4.49 ^a (0.65)
Total	4.08 ¹ (0.78)	4.18 ^{1[1,2]} (0.78)	4.62 ^{12} (0.73)	4.29 (0.65)

Different superscripts indicate that means differ from each other significantly, same superscripts indicate that means do not differ from each other significantly; numbers account for rows, letters account for columns. Superscripts between square brackets indicate effects with $p < .10$ instead of $p < .05$. Superscripts in round brackets indicate effects in the $F1$ -analysis and not the $F2$ -analysis.

Verbal rhetorical figures were found to have had an effect on attitude towards the ad, but only in the *F1*-analysis ($F1(2, 77) = 13.28, p < .001, \eta^2 = .26$; $F2(2, 27) = 1.08, p = .35$). The same result accounted for visual rhetorical figures, although a trend was found in the *F2*-analysis ($F1(2, 77) = 20.53, p < .001, \eta^2 = .35$; $F2(2, 27) = 3.07, p = .06, \eta^2 = .19$). Pairwise comparisons showed that ads with a visual trope were appreciated more than ads without a visual rhetorical figure (although the *F2*-analysis merely showed a tendency, $p = .08$). No difference was found between ads with a visual scheme and ads without a visual rhetorical figure. Only in the *F1*-analysis, were ads with a visual trope found to have been appreciated more than ads with a visual scheme. An interaction effect was only found in the *F1*-analysis ($F1(4, 75) = 8.36, p < .001, \eta^2 = .31$; $F2(4, 27) < 1$).

Perceived understanding of rhetorical figures. To assess whether non-rhetorical figures, schemes and tropes differ from each other with regard to the percentage of participants that did not have the given message in mind (to test Hypothesis 2), the same analyses were performed as with perceived complexity and attitude towards the ads. One-tailed tests were used for the analyses of possible main effects and for the comparisons of schemes with tropes and non-rhetorical figures with schemes. Two-tailed tests were used for the interaction analysis and to compare non-rhetorical figures with schemes. Differences were said to exist when the *F1*- as well as the *F2*-analysis reached significance.

Table 4 shows the percentage of participants who indicated that they did not have a given advertising message in mind. Verbal rhetorical figures had an effect on the percentage of participants who did not have the given message in mind, although the *F2*-analysis merely showed a tendency ($F1(2, 77) = 18.65, p < .001, \eta^2 = .33$; $F2(2, 27) = 2.33, p = .06, \eta^2 = .15$). Pairwise comparisons showed that, with respect to verbal trope ads, a higher percentage of participants did not have the given message in mind than with ads without a verbal rhetorical figure (although the *F2*-analysis only just showed a tendency: $p = .08$). No differences were found between verbal trope ads and verbal scheme ads and between verbal scheme ads and ads without verbal rhetorical figures. In the *F1*-analysis, it was found that a higher percentage of participants did not have the given message in mind with verbal scheme ads than with ads without verbal rhetorical figure.

Table 4: Mean percentages (and SDs) of participants who did not have the given message in mind, as a function of verbal and visual rhetorical figure.

	<i>Image</i>			
	<i>NRF</i>	<i>Scheme</i>	<i>Trope</i>	<i>Total</i>
Headline				
NRF	8.33 (16.98)	21.94 (26.09)	12.97 (17.39)	14.42 ^a (14.57)
Scheme	15.51 (23.45)	23.63 (22.62)	27.43 (23.00)	22.19 ^{a[a,b](b)} (16.96)
Trope	18.67 (19.80)	35.13 (26.10)	17.72 (21.61)	23.84 ^{ab} (17.44)
Total	14.17 ¹ (14.79)	26.90 ²⁽³⁾ (18.25)	19.37 ^{1,2(2)} (16.64)	20.15 (14.08)

Different superscripts indicate that means differ from each other significantly, same superscripts indicate that means do not differ from each other significantly; numbers account for rows, letters account for columns. Superscripts between square brackets indicate effects with $p < .10$ instead of $p < .05$. Superscripts in round brackets indicate effects in the $F1$ -analysis and not the $F2$ -analysis.

Visual rhetorical figures also had an effect on the percentage of participants who did not have the given message in mind ($F1(2, 77) = 24.44, p < .001, \eta^2 = .39; F2(2, 27) = 3.71, p < .05, \eta^2 = .22$). Pairwise comparisons showed that, with visual scheme ads, a higher percentage of participants did not have the given message in mind than with ads without a visual rhetorical figure. No differences were found between visual scheme ads and visual trope ads and between visual trope ads and ads without a visual rhetorical figure. Only in the $F1$ -analysis, was the percentage of participants who did not have the given message in mind higher with regard to the visual scheme ads than with regard to the visual trope ads. In the $F1$ -analysis, this percentage was higher for the visual trope ads than for the ads without a visual rhetorical figure. An interaction effect between verbal and visual rhetorical figures was only found in the $F1$ -analysis ($F1(4, 75) = 7.57, p < .001, \eta^2 = .29; F2(2, 27) < 1, \eta^2 = .12$).²

² In the experiment, another measure of perceived understanding was used (participants had to indicate their level of certainty about their own interpretation). This measure yielded results similar to the ones presented in this paper.

Effects perceived understanding. To assess the effects of perceived understanding (given message in mind: yes, partially, no), one-way ANOVA's (one-tailed) with repeated measures were performed. The Bonferroni test (one-tailed) was used to make pairwise comparisons. The results of these analyses can be found in Table 5.

Perceived understanding had an effect on perceived complexity ($F2(2, 34) = 100.91, p < .001, \eta^2 = .86$). An ad was perceived as most complex when the participant did not have the given message in mind. An ad was perceived as the least complex when the participant had the given message in mind. Perceived understanding also had an effect on the attitude towards the ad ($F2(2, 34) = 44.35, p < .001, \eta^2 = .72$). The attitude towards the ad was most favourable when the participant had the given message in mind. The attitude towards the ad was least favourable when the participant did not have the given message in mind.

Table 5: Mean judgments (and SDs) over perceived complexity (1 = very simple, 7 = very complex) and attitude towards the ad (1 = very low attitude, 7 = very high attitude) for the various advertisements, as a function of understanding (given message in mind: yes, partially, no).

	<i>Given message in mind</i>		
	<i>Yes</i>	<i>Partially</i>	<i>No</i>
Complexity	2.58 ¹ (0.63)	3.32 ² (0.68)	4.20 ³ (0.79)
A _{ad}	4.62 ³ (0.58)	4.19 ² (0.58)	3.58 ¹ (0.80)
A _{pr}	4.91 ³ (0.47)	4.51 ² (0.54)	3.93 ¹ (0.74)

Different superscripts indicate that means differ from each other significantly, same superscripts indicate that means do not differ from each other significantly.

Attitude towards the product. The advertisements differed from each other not only with regard to the rhetorical figure used in them, but also with respect to the product advertised. Therefore checks were run to establish whether attitude towards the product influenced attitude towards the ad. Correlations (Pearson's r) indicated a relationship between attitude towards the ad and attitude towards the product. In nearly all the ads, attitude towards the ad and product correlated positively and significantly with each other (.26 to .60). Furthermore, the results show that rhetorical figure had an effect on attitude towards the product that resembled the effect on attitude towards the ad.

To gain insight into the direction of the relationship between attitude towards the ad and product, a one-way ANOVA (two-tailed) was used to see

whether there was an effect of understanding on attitude towards the product (see Table 5). If attitude towards the product would have been found to have influenced attitude towards the ad, it would have been unlikely that attitude towards the product would have been influenced by the understanding of the ad. If, conversely, attitude towards the ad would have been found to have influenced attitude towards the product, it would have been likely that the understanding of the ad had influenced attitude towards the product. In that case the understanding of the ad would have influenced attitude towards the ad and that would subsequently have influenced attitude towards the product.

The analyses showed that attitude towards the product was indeed influenced by the understanding of the ad ($F(2, 34) = 57.42, p < .001, \eta^2 = .77$). Attitude towards a product was more favourable when the participants had the given message in mind than when they did not or partially have the given message in mind. Attitude towards the product was also more favourable when the participants had the given message partially in mind than when they did not have the given message in mind. Based on these results, it seems plausible that attitude towards the ad influences attitude towards the product instead of the other way around.

Perceived complexity and attitude towards the ad as a function of perceived understanding. Pearson's r 's (two-tailed) were used to check whether there was a correlation between perceived complexity and attitude towards the ad as a function of perceived understanding.

When the participants indicated that they did not have the given message in mind, there was a negative correlation between perceived complexity and attitude towards the ad ($r = -.604, p < .001$). The higher the perceived complexity, the less favourable the attitude towards the ad. However, when the participants indicated that they had the given message in mind, the positive correlation between perceived complexity and attitude towards the ad did not reach significance ($r = .039, p = .82$).

2.3 *Conclusions and discussion*

A picture superiority effect (Research Question 2, cf. e.g., McQuarrie & Mick 2003b) only seems to have occurred with respect to attitude towards the ad. Ads with visual rhetorical figures had an effect, whereas no differences were found for ads with verbal rhetorical figures. Furthermore, no interaction effect was found between verbal and visual rhetorical figures. The picture superiority effect does not seem to apply to perceived complexity. Ads with verbal as well as visual rhetorical figures had an effect on perceived complexity and the effect sizes of ads with verbal and visual rhetorical figures were comparable.

With respect to the effects of verbal rhetorical figures on perceived complexity, it is noteworthy that ads with verbal schemes were perceived to be equally complex as ads with verbal tropes, whereas ads with verbal schemes were perceived to be more complex than ads without verbal rhetorical figures (contrary to Hypothesis 1). Furthermore, contrary to Hypothesis 2, ads with verbal schemes and verbal tropes were not understood equally often. This is unexpected because schemes, in contrast to tropes, communicate the message explicitly. The unexpectedly high perceived complexity of the verbal schemes can be explained by the perceived complexity of one specific category: the category of advertisements with a visual trope and a verbal scheme. This category was perceived as more complex than the categories without a verbal rhetorical figure and with a verbal trope. The other two categories with a verbal scheme (without a visual rhetorical figure and with a visual scheme) were perceived to be as complex as the categories without a verbal rhetorical figure. Therefore, the relatively high perceived complexity of the ads with verbal schemes does not seem to be caused by the verbal schemes but by the visual tropes in this particular category.

It seems to be the case that, given the effects on perceived complexity, verbal rhetorical figures are recognized. The explanation for the absence of an effect of verbal rhetorical figures on attitude towards the ad (Research Question 1) should be sought elsewhere. Possibly, attitude towards ads with verbal tropes and schemes is no more favourable than attitude towards ads without verbal rhetorical figures, because the ads with verbal schemes and tropes were not understood more often than the ads without a verbal rhetorical figure (contrary to Hypothesis 2). Subsequently, the attitude towards ads that were not understood was less favourable than towards ads that were understood (cf. Hypothesis 3).

Ads with visual rhetorical figures had an effect on perceived complexity (Hypothesis 1) as well as on attitude towards the ad (Research Question 1). The attitude towards ads with visual tropes was more favourable than towards ads with visual schemes and ads without visual rhetorical figures. Contrary to expectations, the attitude towards ads with visual schemes was no more favourable than towards ads without visual rhetorical figures. This may be because the ads with visual schemes were understood less often than the ads without visual rhetorical figures and attitude towards ads that were not understood was less favourable than towards ads that were understood (cf. Hypothesis 3).

Viewed in light of the theoretical framework, it seems particularly striking that ads with visual schemes were perceived to be more complex than ads without visual rhetorical figures and ads with visual tropes. In addition, ads with visual schemes were not understood more often than ads without visual rhetorical figures and ads with visual tropes. The receiver may search for meaning because of the rarity of visual schemes (Phillips & McQuarrie 2002, Van

Mulken 2003); he approaches the visual schemes as tropes, which are used far more frequently. Because the receiver does not succeed in his search, he may perceive visual schemes as more complex than visual tropes.

In the second phase of the study, semi-structured interviews were used to try to determine why ads with visual schemes were perceived to be relatively complex. An explanation could be that the receiver searches in vain for meaning in the visual schemes. Because of the fact that the ads differed from each other in more aspects than the rhetorical figure, an explanation could also be that the perceived complexity of the visual schemes was caused by other factors than the visual scheme itself (such as an unclear font or the inclusion of too many visual elements). Respondents, other than the ones who had taken part in the experiment, were asked to give and explain their judgments of the complexity of the ads in the experiment. This phase of the study is described below.

3 Interviews

3.1 Method

Materials. From the 36 advertisements in the experiment, ten were selected for the interviews, to prevent the task from becoming too exhausting for the respondents. Because the interviews were set up to gain insight into ads with visual schemes, it is these ads that were mainly selected. Two ads were selected from each of the three categories with visual schemes (without a verbal rhetorical figure, with a verbal scheme, and with a verbal trope): these were the ads that were perceived as least complex versus most complex in the experiment.

To be able to compare the visual scheme ads with the visual trope ads and the ads without rhetorical figures, ads with a visual trope and an ad without a rhetorical figure were also presented to the respondents. Three ads with a visual trope were selected. Each of these three ads was randomly selected from a different category (without verbal rhetorical figure or with a verbal scheme or trope). One ad without a rhetorical figure was selected. This ad was perceived as least complex in the experiment

Respondents. Eleven respondents were selected from the same population as the participants in the experiment: six women and five men, aged 22-62 (M: 39). Their educational background varied from lower vocational education to higher education.

Procedure. Prior to the interview, the interviewer explained broadly what the research and the interview were about. Furthermore, the respondent was

guaranteed anonymity. The interviewer encouraged the respondents to base themselves on their intuitions, and not to rush or to think aloud.

The ten ads were presented in two different sequences to neutralize sequence effects. The ad without a rhetorical figure was always presented first. The interviews took one hour on average

The interviewer used an interview scheme which included the following questions: ‘Is there something in the ad that immediately attracts your attention? If this is the case, in what way?’, ‘How difficult or, put differently, how easy do you think the advertisement is? Why?’. The respondents were also asked to indicate whether there was a difference in level of difficulty between the ad they were looking at and the ad without rhetorical figure. If the respondent had still not addressed the visual schemes spontaneously after some time, the interviewer would ask a direct question about the visual schemes (e.g., ‘Is there something in the image that attracts your attention?’). If necessary, the interviewer addressed the visual scheme specifically.

3.2 *Results and conclusion*

The interviews were held to gain insight into the relatively high perceived complexity of the visual scheme ads in the experiment. To be able to use the results of the interviews to interpret the results of the experiment, it was first determined whether the judgments on complexity of the ads used in both the experiment and the interviews were comparable. This was indeed found to be the case.

The visual schemes, as opposed to the visual tropes, turned out to have little influence on the perceived complexity of the advertisement. The visual schemes were often perceived as decoration, in accordance with their definition, and were not mentioned as factors that influence perceived complexity. The perceived complexity of the visual scheme ads was mainly determined by other factors, such as the verbal trope, or the incomplete or indistinct product or brand positioning. In a wine ad, for example, respondents commented: ‘I do not understand the text very well’, and ‘It is unclear. You don’t know what it is about’. About an ad for sausages, a respondent said: ‘The image tells us little about the product. That is what makes it more difficult’. The only way in which the visual schemes (e.g., the repetition of the round forms in the Sun ad, see Figure 2) influenced perceived complexity was in making the ad look cluttered. For example, the respondents commented that ‘there are too many images’, and ‘too many stimuli’.

The interviews showed that the respondents regularly searched for meaning in the visual schemes, and always succeeded in finding a meaning, despite the assumption that schemes are not meaningful. In an ad for a noncarbonated soft drink, for instance, a visual scheme was present in the repetition of a glass of

the soft drink. However, respondents interpreted this repetition commenting that the two glasses signified that the soft drink was now available in two versions: one carbonated, one noncarbonated.

4 General discussion

The attitude towards ads with visual tropes was, in accordance with McQuarrie and Mick (1999, 2003b), more favourable than the attitude towards ads with visual schemes and towards ads without visual rhetorical figures. This more favourable attitude towards ads with visual tropes cannot be attributed to higher perceived complexity. It is remarkable that ads with visual schemes were perceived as more complex than ads without visual rhetorical figures and ads with visual tropes. In addition, visual scheme ads were understood less often than ads without visual rhetorical figures and visual trope ads.

Interviews were held to determine why the ads with visual schemes were perceived as relatively complex. One possible explanation was thought to be that receivers searched for meaning, despite the lack of meaning in schemes. Receivers may approach schemes as (meaningful) tropes because they are more used to tropes than to schemes (cf. Phillips & McQuarrie 2002, Van Mulken 2003). Because they do not succeed in their search, however, they may perceive visual schemes as more complex than visual tropes. This explanation was not confirmed in the interviews. The visual scheme was often regarded as decoration, in accordance with its definition. The respondents sometimes searched for meaning but did not do so in vain. When they searched for a meaning, they usually found it. In such cases, visual schemes were not approached as schemes but as tropes. However, time on task may have played a role here. The interviewees took ample time to process the ads in the interviews, whereas the participants in the experiment were exposed to a far greater number of ads in a shorter period. As a result, the respondents in the interviews may have searched for meaning more often than the participants in the experiment.

Because of the limitations regarding the verbal scheme ads (see paragraph 2.3) and the visual scheme ads, it is difficult to test the assumptions on the attitudes towards the ads with non-rhetorical figures, schemes and tropes respectively. It is likely that as a result of these limiting factors, ads with tropes were not perceived as more complex than schemes (and non-rhetorical figures), contrary to expectations. However, it cannot be determined whether ads with cognitively challenging tropes are appreciated more (cf. McQuarrie & Mick 1999, 2003b) or less (cf. e.g., Ketelaar, Van Gisbergen & Bosman 2004, Van Mulken, Van Enschoot & Hoeken 2005, Phillips 2000) than ads with relatively simple schemes.

The results of the experiment indicate that a cognitive challenge may not be appreciated, even when an advertisement has been understood (cf. Ketelaar,

Van Gisbergen & Bosman 2004, Van Mulken, Van Enschoot & Hoeken 2005). Higher perceived complexity was not found to be related to a more favourable attitude towards the ad when the receiver had the given message in mind. In terms of Relevance Theory (Sperber & Wilson 1995 [1986]): an advertisement that is perceived as too complex, whether or not it has been understood, may not be optimally relevant to the receiver. The effects (particularly the pleasure of processing) do not outweigh the effort. This may be caused by the fact that people are exposed to too much advertising. People may not be willing to make too much of an effort to interpret these kinds of utterances.

To increase external validity, existing ads were used in the experiment. The problem with the use of existing ads, however, is that the results cannot be contributed unequivocally to the factors under study. The interviews showed that the relatively high perceived complexity of the visual scheme ads seems to be caused by other factors than the visual schemes themselves (such as the number of visual elements in an ad or the unclear positioning of the product or brand). A replication study is needed with ads that only differ from each other in the rhetorical figure used: non-rhetorical figure, scheme, trope. In such a study, confounding factors would be neutralized and the results could then be contributed to the rhetorical figures with more certainty.

The advertisements for the present experiment were selected and screened by the authors of this paper and students of Business Communication Studies. To minimize the possibility that visual scheme ads are selected that unexpectedly turn out to be meaningful (as was the case in the present experiment), follow-up research should incorporate pretests with respondents who are not familiar with rhetorical figures. Such pretests would ensure that schemes that can be approached as tropes, and that are assigned with a meaning that was not detected by the researchers beforehand, are detected and removed. If ads are pretested in this way and if potentially confounding factors are neutralized, it is questionable whether ads with visual schemes would still be perceived as more complex than ads with visual tropes and ads without visual rhetorical figures.

To conclude, rhetorical figures do seem to make a difference. The attitude towards ads with visual tropes is higher than towards ads without a rhetorical figure. If and how the attitude towards ads with tropes differs from the attitude towards ads with schemes remains to be investigated.

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A window to the consumer's mind: application of functional brain imaging techniques to advertising research

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Abstract

The measurement of emotional responses to advertising stimuli is a central field of advertising research. Although the role of feelings at a verbal and therefore conscious level has been investigated extensively in the marketing literature, little is known about how the human brain is involved in advertising perception processes. The methodological problems associated with previous pioneering approaches in this context seem to be mostly compensated for new methods of modern neuroscience. These methods and possible applications for advertising research are discussed in the present paper with a particular focus on the method of functional magnetic resonance imaging.

1 Towards a neuroscientific foundation of advertising research

Theories and models of consumer information processing and stimulus perception related to advertising changed dramatically at the end of the last century (Vaughn 1980, Petty, Cacioppo and Schumann 1983, Rossiter and Percy 1991 and Vakratsas and Ambler 1999).

One focus has been the role of emotion in consumer responses to advertising (Edell and Burke 1987, Holbrook and Batra 1987a). Within this context, individual studies have analyzed global measures such as attitude toward the ad (Moore and Harris 1996), emotional responses evoked by advertisements (Batra and Ray 1986) and general classifications of different emotions in the advertising context (Holbrook and Batra 1987b).

Although, retroactively, conscious emotional information processing and advertising perception have been studied extensively in advertising research, little is known about how advertising stimuli are processed in the human brain during the advertising presentation. The main benefit to advertising research of observing the brain *in vivo* during these information processing procedures is that subconscious processes like the intuitive integration of emotions can also be investigated (Kenning and Plassmann 2005). The latter processes cannot be elicited by interviewing techniques.

Initial approaches to measuring the response of the peripheral nervous system to advertising stimuli such as skin-conductance measurement were already applied in the late seventies (Kroeber-Riel 1979). Later, methods of measuring electric brain waves were also employed in this context (Rothschild et al. 1988, Rossiter 2001). These studies contributed substantially to consumer research by measuring amplitudes of neurophysiologic activation. However, due to methodological problems such as evaluating the valence (positive vs. negative) of

the activations, these studies have not satisfactorily answered the question of how consumers process emotional responses to advertising stimuli.

At present, technological innovations in the field of functional brain imaging appear to override the methodological problems of the former approaches. Functional brain imaging methods facilitate the analysis of human brain functions directly while the testpersons perceive advertising stimuli. Neuroscientific approaches divide the brain into different areas with the help of brain atlases and coordinate systems (Kenning and Plassmann 2005). Thus, besides information about the activation magnitude, the information process can be visualized and the location of the activation identified. Furthermore, the pool of results of past neuroscientific studies facilitate linking a brain area such as the Amygdala to a function such as fear processing. On this basis, intervening variables become observable and, to date, non-observed influences of the effect and interplay between analytic and affective information processing can be analyzed by means of the new methodologies. The purpose of the present paper is to apply tried and tested measurement methods from modern neuroscience to advertising research and to consider their advantages and disadvantages.

The paper is structured as follows. The first part reviews several functional brain imaging techniques and concludes that the method of *functional magnetic resonance* is currently the most promising approach to answering fundamental advertising research questions. Accordingly, methodological issues of fMRI experiments and data analysis are explained in the second part of the paper. The last section considers some preliminary implications for advertising theory and management.

2 Functional brain imaging as a new approach to advertising research

2.1 Overview of neuroscientific techniques

It is possible to differentiate between different neuroscientific methods (table 1). These can be grouped into two main categories according to the underlying mechanisms: procedures for measuring electrical activity of the brain and those for measuring neural metabolism processes (for an overview see Kandel, Schwartz and Jessell 1996).

Table 1: Overview of neuroscientific techniques

<i>Changes in electric currents</i>	<i>Changes in metabolism</i>
Elektroencephalography (EEG)	Positron-Emissions-Tomography (PET)
Magnetencephalography (MEG)	Functional transcranial Doppler-Sonography (FTCD)
	Functional Magnetic Resonance Imaging (fMRI)

2.1.1 Methods for measuring electrical activity

Electroencephalography (EEG) is an important tool for studying the temporal dynamics of the large-scale neuronal circuits within the human brain. EEG measures voltage fluctuations on the scalp. The underlying currents occur remotely from the electrodes (across skin, skull and meninges) in cortex areas near the surface. An electrode on the skin “detects” the summed potential of a huge number of neurons. The main shortcoming of EEG is the so-called inverse problem, i.e. localizing the sources of currents in the brain from scalp measurements, because an infinite number of source configurations can generate identical potentials on the skin. Solving the inverse problem therefore requires appropriate a priori assumptions, which may then yield physiologically meaningful data. Given these constraints, however, the temporal resolution of EEG is limited only by the nature of the hardware and is down to the milli- and sub-millisecond range, i.e. easily able to resolve the time course of neuronal activity.

Magnetoencephalography (MEG) is sensitive to changes in magnetic fields induced by electrical brain activity. The temporal resolution is comparable to the EEG, so that this modality can, for example, resolve the temporal sequence of different cortical activities involved in decision-making (Ambler et al. 2004, Braeutigam et al. 2001, Braeutigam, 2005). However, in contrast to the EEG, MEG is also able to depict deeper brain structures. Nonetheless, the inverse problem still applies to MEG and accurate source localization depends on valid assumptions as well.

2.1.2 Methods for measuring metabolic processes

Positron emissions tomography (PET) is a nuclear medicine technology through which metabolic processes in the body can be investigated (Aine 1995). Positrons, the antiparticles of electrons, are emitted by certain radio-nuclides. These nuclides have the same chemical properties as their non-radioactive iso-

topes and can replace the latter in biologically relevant molecules. The spatial distribution of these modified molecules can be detected and visualized by a PET-scanner. This device is sensitive to the radiation resulting from the annihilation of the emitted positrons when they collide with their antiparticles, the electrons. In this manner, the distribution and metabolism of a large variety of biologically relevant molecules, e.g. modified glucose or neurotransmitters, and also brain perfusion can be visualized in tomograms after the injection or inhalation of tiny amounts of the labeled substances. Spatial resolution is quite high (theoretically down to ~ 2 mm), but temporal resolution is low. Measurements are fairly expensive, and, because radioactive tracers are used, the application to healthy test persons is restricted.

By means of *functional transcranial Doppler sonography (fTCD)*, event-related changes in cerebral blood flow velocity are measured simultaneously within two cerebral arteries by ultrasound (Deppe, Ringelstein and Knecht 2004). Thus, fTCD is a blood-flow-sensitive counterpart to PET and fMRI with high temporal, but limited spatial resolution, because this method basically integrates changes in cerebral blood flow induced by neural activity in those parts of the brain that are supplied by the respective cerebral arteries. Before experiments are planned, the researcher must therefore have a good idea of the respective vascular territories in which relevant activation changes are most likely to occur. Nevertheless, in contrast to PET and fMRI, the equipment for fTCD is less expensive and - even more important - easily portable. When the brain areas involved in economically relevant behavior have been identified, for example by PET or fMRI, experiments based on fTCD can then be conducted with high temporal resolution in various "non-artificial" environments, as e.g. the point of sale.

Functional magnetic resonance tomography (fMRI) is currently the most popular technology in this area. fMRI is a technique for estimating neural activity non-invasively. Whereas conventional MRI provides images of structure (e.g., bone vs. muscle vs. fat), functional MRI provides images that estimate function (brain activity). This procedure uses magnetic fields and radio waves in order to depict different kinds of body tissue. The strength of transmitted MR signals varies according to the density of different kinds of body tissue and the strength of the magnetic field. The MR signals are captured by detectors and, by means of a computer, converted into coloured maps through mathematical and statistical procedures. Activations in specific regions can be isolated with the aid of mathematical transformations and statistical inference. Generally, the temporal resolution of fMRI is higher than that of PET, but clearly lower than that of EEG, MEG and fTCD. The spatial resolution is relatively high. In contrast to fTCD, the need for a MR-scanner makes measurements at the point-of-

sale rather difficult. Also, the noise and the narrow scanner bore require sophisticated study designs to obtain results transferable to “real”, economically relevant situations.

Depending on the particular research interest and objective, EEG, MEG, fMRI and fTCD all seem to offer a new and promising approach to investigating advertising perceptions directly in the consumer’s brain. However, because the initial approaches to applying these techniques to advertising, various research issues are still in their infancy and basic research is necessary to investigate whether and where neural correlates of advertising processing can be found. Thus, for this kind of basic research, the fMRI method provides an appropriate instrument and its methodological foundations are therefore described briefly in the following section (for details, in particular, about the physical foundations, see Frackowiak et al. 2004 or Huettel, Song and McCarthy 2004).

3 An outline of neuroeconomic studies

3.1 Study design

At the beginning of a neuroeconomic project a meaningful problem or hypothesis must be formulated. Even this first step is sometimes difficult, because scientists in both fields - economists and neuroscientists - need to cross the borders of the different approaches and terminologies to be able to communicate and understand each other’s methods and scientific problems.

After developing a hypothesis, the applicability of neuroscience, that is to answer the specified question, should be ascertained. Subsequently, the most suitable method or combination of methods needs to be determined. Translating the scientific question into a sound stimulation paradigm or study design, as devoid of possible confounders as possible, constitutes another critical issue. Various mistakes can be made right at the beginning of a study which may later obstruct data analysis (Savoy 2005).

3.2 Comparing brains

When neuroeconomic studies collect data from groups of individuals, certain steps must be taken to enable data analysis across several individuals. Like fingerprints, no two brains are identical to each other. In order to compare activations across individual subjects, the various brains are usually spatially normalized to a template brain. That is, they are transformed so that they are similar in overall size and spatial orientation. Generally, the aim of this transformation is to bring homologous brain areas into the closest possible alignment.

The Talairach stereotactic coordinate system is used in this context. Talairach and Tournoux (1998) introduced three important innovations: a coordinate system to identify a particular brain location relative to anatomical landmarks; a spatial transformation to match one brain to another; and an atlas describing with anatomical and cytoarchitectonic labels a standard brain. The coordinate system is based on identifying the line connecting the anterior commissure (AC) and posterior commissure (PC) — two relatively invariant fiber bundles connecting the two hemispheres (see Fig. 2). This line - *the AC-PC line* - defines the y-axis of the brain coordinate system. The origin is set at the AC. The z-axis is orthogonal to the AC-PC-line in a foot-head direction and passes through the interhemispheric fissure. The x-axis is orthogonal to both the other axes and points from AC to the right. Any point in the brain can be identified relative to these axes, which define the Talairach coordinate system.

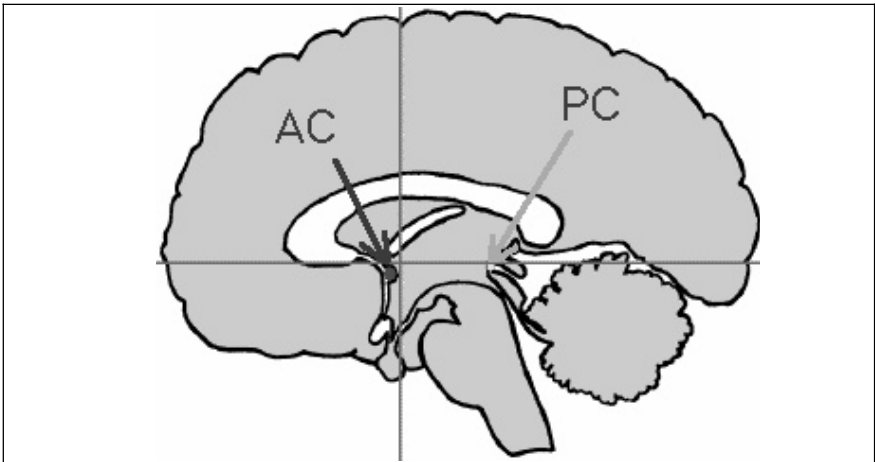


Figure 1: The AC-PC-Line

Most analysis software such as SPM currently uses templates created by the Montreal Neurological Institute (MNI), based on the average of many normal MR scans. Although similar, the Talairach and the MNI templates are not identical, and care must be taken to assign localizations given in MNI coordinates correctly to, for example cytoarchitectonically defined brain areas like the Brodmann areas (see below). Due to the great variability of brain anatomy and function, this problem is anything but trivial. A detailed description of this issue can for example be found in Brett, Johnsrude, Owen (2002).

3.3 *Data interpretation*

The fact that certain brain functions like speech or vision, are processed in dedicated brain areas, has been common knowledge for quite some time. Even before the emergence of non-invasive neuroimaging techniques, patients with brain lesions caused by trauma or disease were studied. Since then, it has been known that, for instance, the destruction of parts of the occipital lobe leads to cortical blindness, and aphasia may be a consequence of lesions in the temporal (Wernicke's area) or frontal lobe (Broca's area). More complex functional losses result from lesions of the ventromedial prefrontal cortex, as in the well-known case of Phineas Gage. When this part of his frontal lobe was destroyed in an accident in 1848 Gages personality and social behavior were severely altered, whereas his intellectual capabilities largely remained intact (Steedman, 1962).

Experiments with intra-operative direct brain stimulation can be given as an example of other historic sources of knowledge about localizing brain functions (Penfield and Boldrey, 1937).

Another, older, approach describing brain localizations is derived from microscopic anatomy. The foundations were laid by Korbinian Brodmann almost 100 years ago (Brodmann, 1909). According to variations of cytoarchitecture in stained brain sections, he divided the human cortex into 52 distinct areas, the so-called Brodmann areas (BAs, Fig. 3).

The convention of relating activation foci to these cytoarchitecturally defined areas was adopted early in the history of functional imaging and the results of activation localizations are often ascribed to Brodman-Areas ("BA") in neuroimaging studies (for example see Deppe et al. 2005a). However, their microanatomical (rather than functional) derivation should be kept in mind. Although, for some areas (e.g. the motor cortex, BA 4), there seems to be a clear correlation between areas delineated by cytoarchitecture and their function, this relation is less certain for other areas (for details see, Brett, Johnsrude and Owen, 2002) A closer correlation may possibly be revealed by recent microanatomical approaches utilizing, for example receptor autoradiography to analyze the regional and laminar distribution of various neurotransmitter receptors in order to delineate distinct brain areas (Zilles, Palomero-Gallagher and Schleicher, 2004).

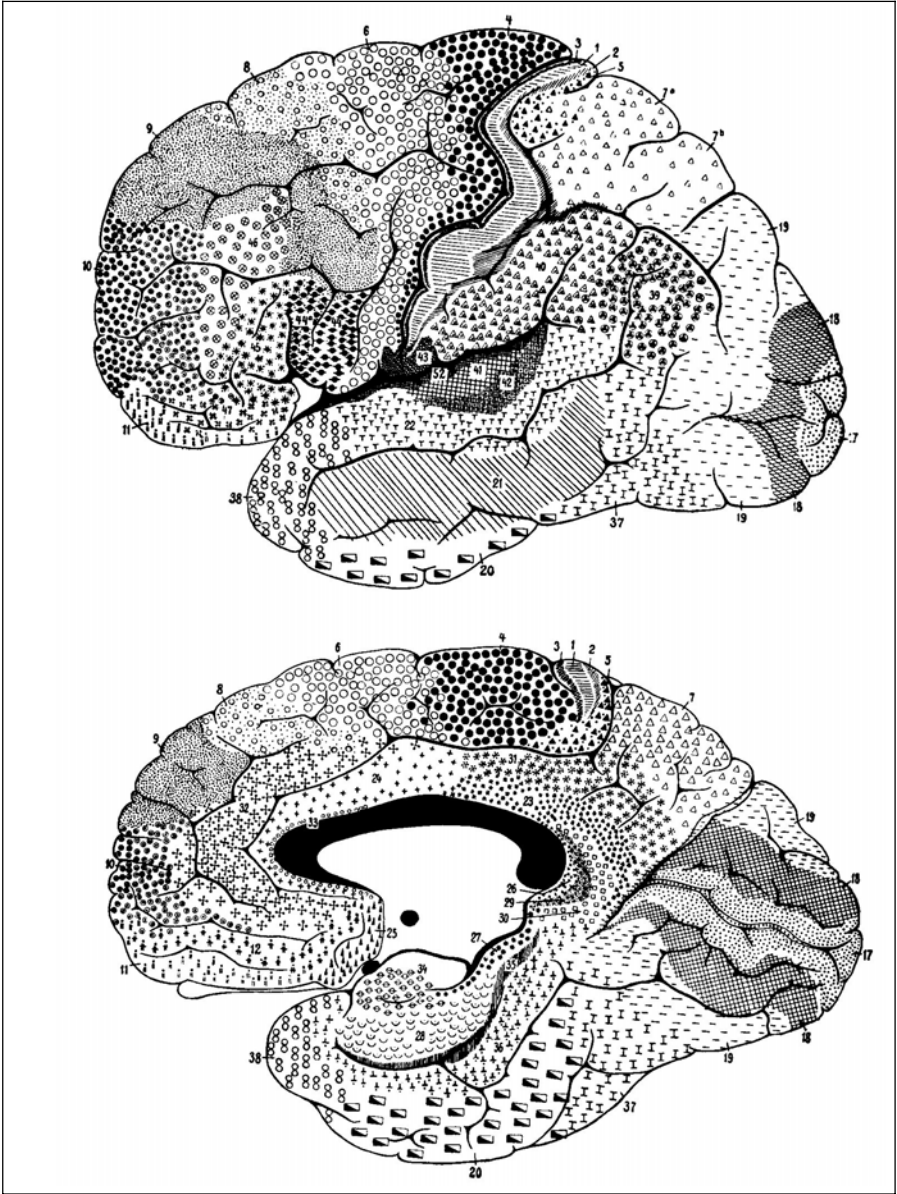


Figure 2: Lateral and medial aspect of the human brain. The Brodmann areas (BAs) are designated by the various symbols.

Our knowledge about the localization of even more complex brain functions (e.g. decision making or emotions) is currently expanding at a rapid pace, due mainly to the development of non-invasive brain imaging research techniques. The sources of knowledge mentioned above represent only a fraction of the various available methods, which, as a whole, provide the necessary background for interpreting neuroeconomic studies. It should be noted, however, that even the most refined neuroscientific tools currently available are rather coarse compared to the complexity of our central nervous system and that we are far from an in-depth understanding of the brain. For a compact review of the history and future of Human Brain Mapping, see Savoy (2001).

4 Methodological issues about fMRI data analysis

4.1 Experimental procedure and data acquisition

The procedure of a typical fMRI experiment can be described as follows: during the fMRI experiment, a test person is asked to lie still in an MRI scanner for 60 to 90 minutes. The first 6 to 15 minutes of an experimental session usually consist of several anatomical/structural scans of the brain. Once the structural scans have been performed, functional data are collected in a series of “runs” between 3-10 minutes each. During each run, the participant performs whatever tasks the experimenter has designed. Often, visual stimuli are projected onto a screen in front of the participant who can make responses by pressing different buttons. While the task is being performed, the MRI scanner records the so-called blood oxygen level depending (BOLD) signal, throughout the brain every couple of seconds (Kwong et al. 1992). These images are then analyzed to identify brain areas that are significantly more or less active during the specified experimental condition in comparison to the control condition. Different types of experimental design can be identified such as a blocked or an event-related design (Friston 2004). During a typical fMRI experiment, functional images are recorded three times per second. Each image is divided into a very large number of cubes called volume pixel (voxel). The data from a single voxel over the course of the fMRI experiment constitutes a time series of BOLD signals.

4.2 Data analysis

For the data analysis, different software packages can be applied. Many researchers use “Statistical Parametric Mapping” (SPM, freeware from the Wellcome Department of Cognitive Neurology, London, UK; <http://www.fil.ion.ucl.ac.uk/spm> as an example see Deppe et al. 2005a). This software package is referred to below.

The analysis of fMRI Data comprises three initial steps: preprocessing, model fitting and statistical inference (see Figure 3).

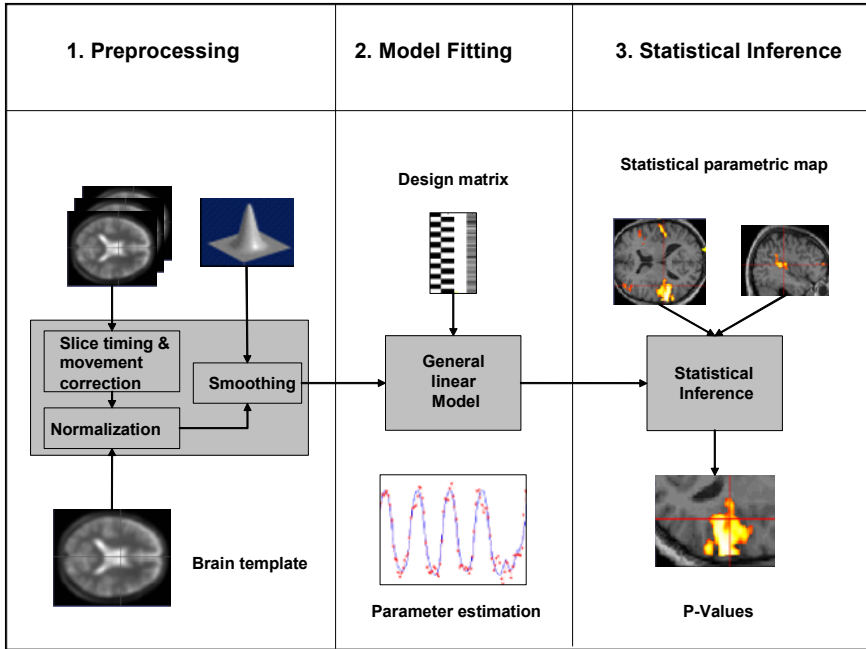


Figure 3: Overview of fMRI data analysis procedure with SPM
(Source: Friston et al. 1995, p. 601)

4.3 Preprocessing

In order to preprocess the fMRI data, four different steps can be identified (Friston et al. 1995).

Firstly, given the fact that different slices within a single brain image are collected sequentially rather than at exactly the same point in time, a temporal adaptation called *slice timing* must be performed.

Secondly, if a participant moves during an fMRI experiment, the brain area to which a specific voxel corresponds, will change. Therefore, a movement correction is executed, a process called *realignment*.

Thirdly, the brains of different individuals obviously differ in size and shape. If the results from different participants are to be combined, it is necessary to transform the data into a standard, “template brain”. This process is called *normalization*.

Fourthly, the last preprocessing step is *spatial smoothing*. Essentially, functional brain images are blurred slightly by convolving them with a Gaussian kernel. Therefore, during the smoothing procedure, the value at each voxel is replaced with a weighted average of its value and those of surrounding voxels.

4.4 *Model fitting*

Once the data has been preprocessed, each voxel is analyzed individually in an attempt to find voxels whose time series correlate significantly with the experimental conditions. The standard approach is to fit a general linear model to each voxel’s time series (Frackowiak et al. 2004). The model would then include covariates corresponding to the different conditions in the experiment, which are specified in the so-called *design matrix*. Therefore, for example, if the participant has repeatedly alternated between 10 scans of the experimental condition and 10 of the control condition, the model might include a covariate with the value 1 for each scan, corresponding to the experimental condition, and the value 0 for each scan corresponding to the control condition. After the design matrix has been defined, the different parameters are estimated, based on the general linear model. Therefore, a method of estimating parameters that “best fit” the data is required. The least square estimates applied by SPM Version 2 are restricted maximum likelihood estimates.

4.5 *Statistical inference*

The coefficients associated with each covariate in the best fit are called the beta values and they are used to compute the statistical values (e.g. t-values) associated with each voxel for a given contrast of covariates. Different contrasts can be analyzed in terms of the experimental design and research questions. Once statistics have been computed for each voxel, these can be displayed together in a statistical parametric map, which is simply a brain image in which the value at each voxel is its corresponding statistic. These maps can then be “thresholded” and overlaid onto structural images in order to graphically display which areas of the brain exhibit activity that passes whatever threshold of statistical significance is desired. Often, different color schemes are used to aid visualization (e.g. red for t-values above 3.5, yellow for t-values above 5.0, etc.).

After the statistical analysis on a single subject level has been concluded, SPM allows various group analyses in order to generalize the results to the underlying population (Frackowiak et al. 2004). In advertising research context group analysis offers an extremely important methodological feature.

These issues discussed above reveal that fMRI is not a “mystical” way of producing “colored brain images”, but a profound and complex statistical method for investigating brain functions. Thus, the question arises as to whether and how this research tool can help advertising researchers and practitioners gain new insights into relevant fields of interest.

5 Theoretical and practical implications

Functional brain imaging technologies will not be available to marketers for routine market studies such as packaging and product development research for years to come, but important key areas can already be explored theoretically. From the practitioner’s perspective, two relevant areas of application are as follows:

- Pretesting of advertisements content

Often, marketing managers find themselves in a situation in which they must make decisions about different advertising concepts. This might be to decide which story board for a commercial is more appealing, or which individual sequence of a commercial should be included in the final TV spot. Depending on the specific targeted advertising message, fMRI can be employed to compare the neural correlates of different video sequences in the consumer’s brain.

- Pretesting of media contexts

Apart from the advertising content, the marketing manager must decide on the advertising environment. An important question, for example, is whether, in order to increase advertising effectiveness, an advertisement should be printed in magazine A rather than in magazine B. A recent study by Deppe et al. demonstrated the neural correlates of non-conscious framing effects on credibility judgements of news headlines induced by different magazine brands (Deppe et al. 2005b). Thus, with the help of fMRI, the prevailing perception of the media frame and its impact on the advertisement could be investigated.

In conclusion, initial studies show that a reliable and valid application of functional brain imaging techniques to consumer research questions is possible (Ambler et al. 2004). In particular, the initial fMRI studies in the field seem

promising (McClure et al. 2004, Deppe et al. 2005a). However, in order to answer the advertising-research question of whether fMRI or other techniques such as MEG or fTCD really provide a “window into the consumer’s mind” further empirical evidence is needed.

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Part III

Communication and Branding

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Creating powerful brand names

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Abstract

Brands with a consumer-relevant and unique brand positioning are often preferred in purchase decisions. Hence, conveying a distinctive brand positioning is a key concern of modern brand management. This study considers the contribution brand names can provide to communicate a brand positioning. Recent cognitive theories of conceptual combination form the theoretical basis for analyzing consumer reactions toward brand names. Following these theories, three techniques to integrate brand name and product are developed. Reaction time measurements and association tests show that the techniques presented are an effective and efficient means to convey a brand's positioning.

1 Introduction

Today, the consumer's involvement with the brand selection process is usually minimal. At the Point of Sale (POS) the average viewing time for a brand is only a few seconds (Russo and Leclerc, 1994; Pieters and Warlop, 1999). Additionally exacerbating is the fact that meanwhile more than half of all brand purchase decisions are made at the POS (POPAI, 1999). For new brands especially, these few seconds of brand exposure at the POS crucially affect choice of the brand. Thus, the brand elements must convey within the short viewing time favorable associations — and in particular the brand's positioning — to convince the consumer to buy. If the brand elements themselves do not communicate the positioning, then the more expensive and less efficient route of advertising must be used.

Hence, the selection of the brand name is of paramount importance since it is that brand element that establishes the central memory anchor in the consumer's mind and for that reason is always activated with each contact with the brand. A powerful brand name should generally satisfy the following requirements (Keller, 2003, pp.175ff.; Langner, 2003, p. 24f.): The brand name should (1) differentiate the brand from competitive brands, (2) communicate as clearly as possible the brand's positioning, (3) appeal to the target group, (4) be easy to learn, and (5) be registered as a trademark.

Among these requirements, the communication of the brand positioning represents one of the most fundamental concerns of brand management, since brands with a concise, consumer relevant and unique positioning are preferred over competitive brands (Esch, 2005; Keller, 2003, pp. 118ff.). An effective brand positioning is therefore the foundation of long-term brand success. Accordingly, the goal of brand management should be to communicate the desired positioning quickly and clearly with each and every brand contact.

Brands like Patros (feta cheese) or Giotto (Italian cookie specialties) take the present-day general conditions into account in that they make certain that their

brand positioning is communicated by all brand elements. The name Patros, for example, with the brand symbol of the shepherd in a Mediterranean backdrop, the cloth cover and the product itself all together dominantly communicate the positioning as Mediterranean and Greek.

However, today's branding practice seems to neglect the requirement that a brand name should communicate the brand positioning. Many names devoid of content such as Umckaloabo (a natural plant remedy for viral infections), SEB (a banking establishment), or VHV (an insurance company) do not convey any relevant association in positioning the brand. Brand names that do not offer any concrete association can not contribute to the communication of the brand positioning. Often consumers cannot correctly relate anything to a vacuous brand name long after the brand has been introduced (Endmark, 2001). It is necessary here to have an enormous communicative impact just even to anchor the brand name in the minds of target groups and to fill it with content that is appropriate and relevant for its positioning - a luxury that most companies are no longer able to afford considering today's terms and conditions of communication.

The following article therefore deals with the question how brand names can be developed to communicate the brand positioning as quickly and as clearly as possible.

2 Previous research on brand name effects

Previous research on brand name effects has neglected the contribution brand names can provide for the communication of a brand's positioning. Instead, previous research has focused on the investigation of memory effects of brand names (e.g., Kanungo, 1968; Keller, Heckler, and Houston, 1998; Misra and Jain, 1971; Richards and Heller, 1976; Robertson, 1987), phonetic effects of brand names (e.g., Dogana, 1967; Janbandhu and Gupta, 1978; Peterson and Ross, 1972; Pavia and Costa, 1993; Taylor, 1963), and the impact brand names can have on product evaluation (e.g. Heath, Chatterjee, and France, 1990; Le-Clerk, Schmitt, and Dubé, 1994; Miller, Mazis, and Wright, 1971; Zinkhan and Martin, 1987). Up to now, no theories or models have been proposed to explain how consumers derive attribute associations from the conjoint perception of brand name and product. However, integrative theories are indispensable, since brand name and product are usually perceived conjointly, not separately, by the consumer.

Yet, until now there has also been no investigation of how brand names and products can be interlinked so that the name contributes as best as possible to the communication of the brand positioning. In order for a brand name to communicate the positioning, it must possess associations that are logically linked with the product. The brand positioning can then be conveyed through the interaction of name and product. The animal jaguar, for example, is connected with

the attributes of elegance and speed and it is these attributes which represent relevant characteristics of the automobile. Hence, the name Jaguar as a brand name of an automobile contributes in communicating the positioning as elegant and fast.

So far there has also been no approach to analyzing the interaction of the brand name and product, as for example the associations derived from a combination of brand name and product. Although some authors emphasize the great significance of integrated brand design, their guidelines, however, for achieving this remain extremely vague (e.g. Keller, 2003, p. 218f.). Therefore, an integrated approach to investigate the interaction of brand name and product in the communication of the brand positioning will be developed based on current findings in cognitive psychology.

3 Theoretical background

From a psychological perspective the perception of brand name and product is concerned with the joint perception and processing of two concepts: The associations concerning the brand name and those connected with the product enter into an interdependency and in this way generate an overall impression of the brand.

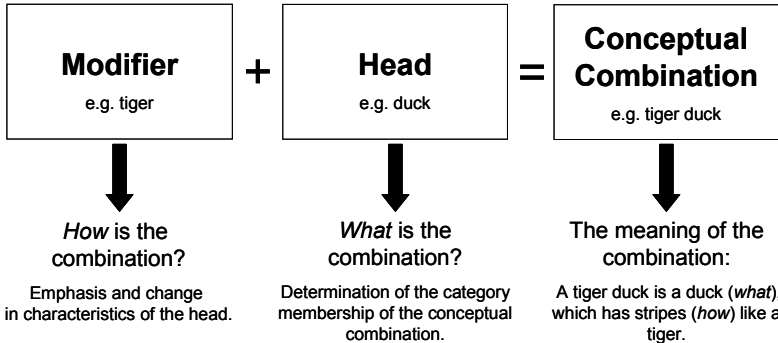


Figure 1: The structure of verbal conceptual combinations

Psycholinguistic theories that suggest models, most of them developed recently, for the explanation of people’s interpretation of conceptual combinations provide a starting point for the examination of the interaction of brand names and products (e.g., Costello and Keane, 2000, 2001; Gagné, 2001; Gagné and Shoben, 1997; Murphy, 1988; Smith, Osherson, Rips, and Keane, 1988; Wisniewski, 1997, 1998, 2001). These models explain how the associations to

different concepts merge with each other to create an overall impression in the course of their first joint perception. The objects considered in these theories are well known to us from our everyday speech. The conceptual combination theories explain the interpretation of pairs of words such as tiger duck, country child, or school bus. The interpretation of such conceptual combinations follows a predetermined pattern, in which both words take on different functions. The first word (the modifier) changes the semantics of the second word (the head) (see Figure 1). A tiger duck is therefore a duck, which has stripes like a tiger, or a country child is a child who grows up in the country.

From a psychological perspective the processing of word pairs and the processing of combinations of brand names and products are quite similar. During both processes the associations to different concepts are interlinked to a common knowledge structure (Langner, 2003, pp. 131ff.). It is assumed that people employ only three different types of cognitive algorithms, with which they are able to interpret all conceptual combinations occurring in language. Following, we outline the most promising conceptual combination theories: the attribute based models of Selective Modification and Property Mapping as well as the relation based CARIN model (for a detailed discussion see Langner, 2003, pp. 81ff.).

3.1 Connecting brand names and products via Selective Modification

The Selective Modification model considers combinations of predicating adjectives and nouns (Smith and Osherson, 1984; Smith et al., 1988). Predicating adjectives, such as “red,” “round,” and “fast,” are much simpler than noun concepts because they are characterized by a single attribute. Both concepts are subject to an asymmetric division of roles: the adjective functions as the modifier, the noun as the head. The conceptual combination generally inherits all attribute associations of the noun. During the interpretation process, the adjective modifies the corresponding slot among the noun’s associated attributes. The result is a combination that changes the character of the noun. In the conceptual combination “red apple,” the modifier “red” fills the slot “color” in the head “apple” and thereby transfers its salient characteristic to the noun. As a rule, the slot-finding process is controlled by the characteristic described by the adjective. Thus, the recipient only has to know the adjective and the noun to find the correct slot. The process of interpretation functions independently of knowledge that lies outside the activated schemata (background knowledge).

The application of the Selective Modification model to the design of brand names presumes that the name takes on the function of the predicating modifier. For example, in terms of a conceptual combination, “Rapido” as brand name for a washing machine would be understood as a “fast washing machine” (see Figure 2). Note that these examples, and our experiments, as in marketing, use a

verbal brand name (the first word in the combination) and a picture of the product, which we presume is automatically verbally labeled by the consumer (providing the second word in the combination).

3.2 *Connecting brand names and products via the Property Mapping model*

In principle, the Property Mapping model proposed by Wisniewski (1996, 1997, 2001; Wisniewski and Gentner, 1991) functions similarly to the Selective Modification model. However, in this model the combinations considered are formations of two *nouns*. The first serves as the modifier and the second as the head. The basis of Property Mapping is a comparison process in which the attributes of modifier and head are compared with respect to their similarity in order to pinpoint a salient difference between head and modifier. A prerequisite for unambiguous Property Mapping is the existence of a salient attribute in the modifier (Wisniewski, 1996; Bock and Clifton, 2000; Gagné, 2000). During the inference process, the value of the salient attribute of the modifier overwrites the corresponding value of that attribute in the head. The combination “zebra dog,” for example, is interpreted as “a dog that is striped like a zebra” because the salient attribute “zebra stripes” of the concept zebra modifies the slot “markings of the fur” within the head concept “dog.” To give another example, the brand name “Mouseno,” which is usually associated with the concept “mouse” (salient association: “small”), will modify the attribute “size” within the pictured concept “cell phone.” This leads to the interpretation of the conceptual combination as a “small cell phone” (again, see Figure 2).

3.3 *Connecting brand names and products via Relation Linking*

The CARIN (Competition Among Relations in Nominals) model, the mostly developed relational model, also concentrates on the slot-filling process of double noun combinations (Gagné and Shoben, 1997; Shoben and Gagné, 1997; Gagné, 2000; Gagné, 2001), but in a different way than the Property Mapping model. In CARIN, recipients must find the appropriate relationship between the two nouns in order to understand the compound. The model is based on the theory that recipients fall back on stored standard relations in the processing of noun compounds; by a process of trial and error the appropriate relation from the repertoire of standard relations is selected and used to interpret the combination of the two nouns. Shoben (1991) suggests a taxonomy of frequently used standard relations to connect head and modifier concepts to each other (e.g., “causes,” “made of,” “for,” “located,” and “uses”). For example, “chocolate bird” is usually understood as “a bird made of chocolate.” During the process-

ing of a conceptual combination, the stored standard relations are checked for their suitability for the interpretation of the current verbal compound.

The cognitive effort for the understanding of the combination depends on how many different relations exist for the modifier and how frequently these are used with the modifier in everyday language. If a modifier is connected with a head using a highly frequent relation, then the cognitive effort needed for the understanding of the compound is smaller. The modifier “chocolate,” for example, is frequently used with the thematic relation “made of.” The combinations “chocolate bird,” “chocolate rabbit,” and “chocolate car” are therefore easy to understand (Shoben and Gagné, 1997, p. 35). However, the interpretation process is more difficult for relations which are less frequent for a modifier. In addition, the cognitive effort necessary for the interpretation increases with the number of thematic relations that compete for a plausible solution.

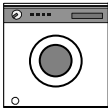



<i>Techniques for combining brand names and products</i>			
<i>Selective Modification</i>	<i>Property Mapping</i>	<i>Relation Linking</i>	<i>Name-Product Discrepancy</i>
			
Rapido	Mouseno	Figurella	Erovin
Brand positioning:	Brand positioning:	Brand positioning:	Brand positioning:
<i>The brand stands for fast washing machines.</i>	<i>The brand stands for small cell phones.</i>	<i>The brand stands for pills that reduce weight.</i>	<i>No sense-making interpretation exists.</i>

Figure 2: Different techniques for combining brand names and products

By applying Relation Linking to brand name design, the thematic relation that links the two constituent concepts creates a meaningful context for brand associations. For example, the picture of a pack of pills is linked with the brand

name “Figurella” via the specific thematic relation “causes” and is consequently understood as “pills that cause weight reduction” (again, see Figure 2).

4 The study

The previously outlined conceptual combination theories were applied to the design of brand names and tested within three conditions regarding the effectiveness and efficiency with which they convey specific brand associations (between-subjects design). In a control group, name-product discrepancies that allow no plausible interpretations were also tested.

4.1 Hypothesis 1: The efficiency of the combination techniques

The hypothesized efficiency of the three combination techniques and the control technique is as follows.

Selective Modification: The initial analysis of the two schemata should be easily accomplished within a short period of time, since the schema activated by the predicating brand name (usually derived from predicating adjectives: “Robusta,” “Rapido”) normally consists of just a single attribute and is generally much simpler than a noun concept that involves a whole range of different features. A conceptual combination that follows the pattern of Selective Modification leaves room for only one interpretation (Smith and Osherson, 1984; Murphy, 1988, p. 535; Smith et al., 1988). Time-consuming tests of alternative interpretations are therefore not required.

Property Mapping: Here, the brand name is a noun. Hence, the initial analysis of the activated schemata will take longer than for combinations generated by the Selective Modification model because the schemata of nouns are more substantial than the schemata of predicating adjectives. Once the initial analysis comes to an end, a search for the salient difference between head and modifier starts (Wisniewski, 1997, pp. 175ff.; Wisniewski and Love, 1998, p. 181). Thus, Property Mapping demands an extensive comparison process in which the attributes of head (product) and modifier (brand name) become evident. When the salient attribute of the modifier is finally identified, its value overwrites the value of the corresponding attribute in the head (“construction process”). If only one salient attribute exists, then only one interpretation is possible. In that particular case, an evaluation of competing solutions does not occur. As this comparison process is not necessary for Selective Modification, the processing of brand names modeled on Property Mapping should consequently display a lower efficiency.

Relation Linking: Again, both of the combined concepts are nouns. For this reason, the time needed for the initial analysis should be approximately the same as for Property Mapping. In contrast to the preceding combinations, there

are, however, frequently used relations which compete in the interpretation process. The recipient's knowledge and experience regarding the frequency of a specific modifier in standard thematic relations leads in many cases to an appropriate interpretation of verbal combinations (Gagné and Shoben, 1997; Gagné, 2001, p. 237). The interpretation of a word pair is tested first with the most frequently used relation for the modifier. If this does not lead to a plausible interpretation, then the second most frequent relation will be tested, and so on. This search continues until a satisfying interpretation is found. Nevertheless, there are some indications that this mechanism is often *not* effective in the interpretation of brand names. In brand design brand names that are combined with products via thematic relations are less frequent than Relation Linking in daily verbal communication. Therefore, it is not surprising that many people lack the experience necessary to facilitate the interpretation process. As a consequence, it is highly probable that for many relational brand names a number of competing thematic relations must be tested before the recipient arrives at a plausible interpretation. This time-consuming evaluation of alternative solutions delays the whole interpretation process. Hence, it can be assumed that relational name-product combinations convey brand associations with a lower efficiency than the preceding combinations.

Name-product discrepancy: There is a further possible type of brand name and product picture combination that is often applied in marketing communications, which can be regarded as generated by a brand name-product discrepancy model (which is not a psycholinguistic model). These are combinations in which the verbal brand name and the product picture do not share a logical connection (e.g., the picture of the car branded as Erovin, shown in Figure 2 earlier). Thus, no plausible interpretation can be immediately found. Brand name-product discrepancies also consist of non-predicating concepts. Hence, the effort put into the initial schema analysis is again comparable to the effort needed in the preceding combinations. When processing name-product discrepancies, the recipients attempt to establish a coherent connection between both concepts. They have to draw on their entire world knowledge looking for information which may then lead to a plausible interpretation of the combination (see also Kunda, Miller, and Claire, 1990). Since both concepts do not share a logical connection, the recipient terminates the search after a while and is satisfied with a less convincing interpretation. This process may require a cognitive effort which goes beyond the interpretation processes described so far. For this reason, it can be hypothesized that name-product discrepancies will take the longest time to be processed. The following overall hypothesis about efficiency can be formulated from the preceding discussion:

H1: Brand names modeled on Selective Modification will generate the highest efficiency, followed by names combined via Property Mapping, then names

modeled on Relation Linking, and least efficient will be name-product discrepancy.

4.2 *Hypothesis 2: The effectiveness of the combination techniques*

The effectiveness with which a combination pattern conveys a brand positioning depends on the number of competing interpretations which need to be evaluated independently from each other within the interpretation process. If more than one interpretation is possible, the probability increases that consumers generate different explanations due to their divergent world knowledge.

As far as Selective Modification and Property Mapping are concerned, there is always just a single logical interpretation. The effectiveness of these combination techniques should therefore be high. With reference to relational combinations, this is slightly different. Here, numerous thematic relations often compete for the interpretation. Due to individual differences in stored world knowledge, the recipients testing the plausibility of alternatives may arrive at diverse results. Lastly, due to the fact that there are no meaningful messages in name-product discrepancies, the effectiveness of such combinations cannot be quantified. Therefore, the following overall hypothesis can be formulated about effectiveness:

H2: Brand names modeled on Selective Modification and Property Mapping will produce a higher effectiveness than those modeled on Relation Linking.

4.3 *Variables*

Independent variables in the study are the four combination techniques. Dependent variables are the efficiency and effectiveness with which the brand names convey the brand positioning. Effectiveness, as a measure of goal achievement, provides information about how unambiguously a name-product combination communicates the right (the intended) brand attribute. This variable is measured by comparing the actual evoked association responses with the intended brand positioning (e.g., Keller, 1993, p. 7). Hence, the measure for effectiveness is reflected by the percentage of the sample that arrived at the appropriate interpretation of a given brand name-product combination. Efficiency, on the other hand, represents the cognitive effort necessary to deduce the brand positioning from a name-product combination. A widely accepted indicator of cognitive effort is reaction time, which directly correlates with the cognitive effort needed to find an answer (Gagné, 2001).

4.4 *Stimuli*

Altogether 21 brand name-product combinations were used for the experiment. Invented words were selected as brand names to evoke a clear association

based on their overall sound pattern. A pretest ($n = 80$) guaranteed that the fictitious brand names communicated the desired associations.

4.5 *Procedure and subjects*

The combination techniques were tested in a between-subjects design ($n=120$; equal number of males and females). In the condition focusing on Selective Modification six stimuli were used, in Property Mapping four, and in the control group five. In the Relation Linking condition, six thematic relations were carefully chosen for six stimuli. A systematic two-fold rotation was employed to prevent serial effects in the presentation of the stimuli. The stimuli were displayed on a computer screen.

5 Results

5.1 *Efficiency of name-product combinations*

The experiment revealed a significant hierarchy of the reaction times with which the name-product combinations communicated the correct brand positioning (or in the case of name-product discrepancies, any association). The fastest reaction time was observed for the processing of combinations following the pattern of Selective Modification (mean=2.88 seconds; $sd=.60$). Slightly slower reaction times were recorded for Property Mapping (mean=3.47 seconds; $sd=1.15$). As expected, the reaction times of Relation Linking (mean=5.08 seconds; $sd=1.53$) were longer due to the alternative interpretations that could be made. Finally, the slowest reaction time (mean=6.26 seconds; $sd=2.24$) was recorded for name-product discrepancies. Hence, H1 was confirmed (all $ps < .05$).¹

5.2 *Effectiveness of name-product combinations*

The effectiveness with which the targeted brand positionings were conveyed was highest for Property Mapping (92.2%) and Selective Modification (92.0%). However, if alternative solutions compete for the interpretation of a conceptual

¹ To check hypothesis H1, the T-Test respectively the Welch-Test were applied. This is a test of a hypothesis system. For this reason, the levels of significant or highly significant combinations must be modified according to the process developed by Shaffer (1986, p. 826). Therefore, the following values result with the Shaffer correction: The lowest level of significance of the hypothesis system must have a value of 0.0017 (significance: 0.0083) to prove a highly significant combination. The second, third, and fourth values must be less than 0.003 (significance: 0.017), the fifth smallest value must be less than 0.005 (significance: 0.025) and the sixth smallest values must be less than 0.01 (significance: 0.05).

combination, the probability increases that subjects will find various explanations for the name-product combination and for this reason the effectiveness of Relation Linking (76.7%) was, as expected, significantly lower than the effectiveness of the first two combination techniques. Hence, H2 was confirmed (all $p < .01$).²

6 Theoretical and practical implications

The present study represents the first attempt, as far as we are aware, to apply theories of conceptual combinations to the field of branding. The present experiment compared all established conceptual inference mechanisms to each other with respect to their efficiency and effectiveness. The findings for brand name plus product picture combinations were exactly as predicted by the respective psycholinguistic word combination theories.

The present study provides a promising starting point for future psychological research in the field of conceptual combinations. The main limitation of this study is, however, that it is based on a laboratory experiment in a high-involvement setting. Subjects could look at the stimuli for as long as they desired. Future research should focus on the effectiveness of combination techniques during incidental brand exposure. Also it will be of interest to examine how the combination techniques influence other consumer responses, such as brand recall prior to the purchase situation and brand recognition during it. The present study assumes that the brand name on the product will be recognized – or initially cognized if seen for the first time – and that the positioning association will then be made to varying degrees across consumers and with varying speeds depending on the psycholinguistic model from which the brand name was generated.

Nevertheless, building on the present results, preliminary conclusions can be drawn for branding practice regarding how to combine brand names with products so that a brand communicates its positioning clearly and quickly.

Brand name development via Selective Modification: Here an adjective-like brand name is sought, which describes the attribute relevant to position the brand (for example a quiet dryer: Silencio from Braun; hypo-allergenic paint: Sensan from Alpina; a large washing machine: Big from Bauknecht). The at-

² To check hypothesis H2, the Mann-Whitney Test was applied. This is a test of a hypothesis system. For this reason, the levels of significant or highly significant combinations must be modified according to the process developed by Shaffer (1986, p. 826). However, in contrast to the previous hypothesis, there are only three pairs of comparisons, since no value can be calculated for the effectiveness of the picture-word discrepancy. Therefore, the following values result with the Shaffer correction: The lowest level of significance of the hypothesis system must have a value of 0.0033 (significance: 0.0166) to prove a highly significant combination. The second and third values must be less than 0.01 (significance: 0.05).

tribute selected should at the same time make a long-term differentiation of the brand from those of competing products possible. Furthermore, it must be of relevance for the most important target groups over a long period of time as well. It is appropriate first to look for adjectives which communicate the intended positioning. Suitable adjectives can then be transferred to associative neologisms, which can be more easily registered as a trademark. The brand name 'Maxus' as a name of stores in the Globus Group is an example of this search approach. The name, like an adjective, emphasizes the central positioning property of the stores, namely 'size'. Our studies show that brand names which follow the pattern of Selective Modification convey the positioning efficiently and effectively.

Brand name development via Property Mapping: In this search approach an object is associated with the brand name, which has a salient feature that is congruent with the intended brand positioning. Brand names and products are connected to each other via the comparison 'is like'. Again, it is necessary that the salient attribute of the noun name is unique and relevant to the target groups in the long term. Examples of this search approach are the car brands Opel Tigra and Jaguar. The first name emphasizes the wild, untamed character and speed of the tiger and the second name conveys the elegance and speed of the Jaguar.

In the derivation of brand names according to Property Mapping the search should begin with an object that has a salient attribute which conforms to the intended brand positioning. The designations of suitable objects could then be transferred to an associative name (Positioning: wild, fast \Rightarrow the object with these attributes: the tiger \Rightarrow the associative neologism: the Tigra). Promising fields for creative searches are for instance the categories landscapes, countries, persons, and animals. Our studies show that brand names based on Property Mapping can convey a brand positioning efficiently and effectively.

Brand name development via Relation Linking: With the third approach the brand name communicates a concept that is connected via a thematic relation to the branded product. Consumers have standard relations stored in their memory (e.g., 'A is made of B'; 'A comes from B'; 'A causes B'; 'A uses B'; 'A is about B'; 'A is for B'), with which they can meaningfully link combinations of different concepts (Downing, 1977, p. 828; Gagne and Shoben, 1997, p. 72). In this combination model name and product do not share common attributes, but are joined together in a meaningful way via a standard relation. The bank group, Credit Suisse, the mattress manufacturer Swissflex, or the Melitta coffee brand Montana emphasize the origin of their products as the central positioning attribute. Here the brand is linked to the products by means of an 'it comes from' relation.

In this approach the search focuses on objects or activities which stand for the circumstances the brand should be associated with. Again, it is necessary

that the positioning is unique and relevant to the target groups in the long term. Suitable objects and activities can then be transferred in an associative brand name. Our studies have revealed, however, that brand names in this approach can only unequivocally communicate a brand positioning if the consumer clearly and easily perceives the thematic relation employed. It is therefore important for the functioning of this approach that the objects or activities are in a logical, easily understandable correlation with the brand and respectively its products. With the application of more commonly used relations (e.g. 'causes', 'is made of', 'is for', 'comes from') the statement made by the brand name is understood correctly by over 90% of the consumers. The processing of the brand name is, however, less efficient than in the previous search approaches.

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How do marketing-events work? Marketing-events and brand attitudes

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Abstract

In the past few years a large number of studies have been published examining the various practical and theoretical aspects of event-marketing and event-sponsorship. The academic research aims to explain the effectiveness of these marketing communication tools. Primarily the elements of recall and recognition have become central factors within this field of research (Walliser 2003). However, the effects of marketing-events on creating a positive attitude towards the involved brands have received little consideration so far. Accordingly, there are inconsistent theoretical approaches and only few empirical studies focussing primarily on this aspect of event-marketing. It is known that marketing-events can modify a certain attitude towards a brand, but it is not clarified why and how. Even though different models have been established to estimate the influence of marketing-events on attitude formation (cf. Baux 1991; Walliser 1993; Ganassali & Didellon 1996; Gwinner 1997; Hoek et al. 1997; Courbet 2000; Meenaghan 2001; Nufer 2002; Drengner 2004), not one of those has proven its superiority in empirical research so far (Walliser 2003). Instead of adding another model to explain the effects of event-marketing and event-sponsorship on attitude formation this paper aims at reviewing the broad approach in this field of research in order to educe a general understanding of the effectiveness of marketing-events. We assume that the attitude towards the brand (A_B), as a main objective of event-marketing and -sponsorship, is essentially influenced by three determining factors: The attitude towards the event (A_E), the attitude towards the communication activities presented at the event (A_{AD}) and the prior attitude towards the brand that existed before visiting the event (A_B^0). This paper outlines the literature reporting an empirical or conceptual investigation of the attitude formation in the context of marketing-events. Based on this state of research we generate our understanding of the impact of marketing-events on the attitude towards the brand. The results of an empirical study which examined the influence of A_B^0 , A_{AD} and A_E on A_B will be reported. Based on our findings practical and empirical implications will be given. We conclude with suggestions for further testing of our model.

1 Introduction

The role of marketing-events has increased remarkably within the last years. This growth of importance has been driven by a variety of factors. While traditional communication tools such as advertising and sales promotion are faced with the problem of cutting through an overload of messages aimed to consumers, marketing-events offer the opportunity of gaining consumers' attention and interest by linking a brand and a communication message with the event. Furthermore, in contrast to consumers' ambivalence towards advertising, consum-

ers' attitudes towards event-marketing and -sponsorship generically are highly favourable (Meenaghan 2001). Marketing-events are used as a channel to communicate a brand and as a platform for a unique presentation of a brand. This can be done via two different marketing communication tools: event-marketing and event-sponsorship. While event-marketing means that a certain company functions as the organizer of the event (Zanger & Sistenich 2003), event-sponsorship can be defined as the provision of resources, e.g. money, people or equipment, by a company directly to an event or activity in exchange for a direct association with the event or activity (Sandler & Shani 1989). According to the International Events Group (IEG), sporting events are the most popular event type. 67 percent of all sponsorship money is invested in sporting events (Roy & Cornwell 2003).

Both activities, the organization of an event as well as the participation as an official sponsor, are motivated by a variety of equal goals. Among those are, for example, the following expected effects: the enlargement of brand awareness, i.e. in sense of recall or recognition, to produce an intention to buy, and to realize media effects, i.e. in form of certain number of media mentions or exposure rates (Meenaghan 1983). One objective appears to dominate the companies' strategic plans: The creation of a positive attitude towards the brand. Attitudes, defined here as an individual's evaluation of an object, e.g. a brand, are of great importance for a company, because they are considered as useful predictors of consumers behavior towards a product or service. The idea of the formation of a positive brand attitude via event-marketing or event-sponsorship is based on the assumption that the connection of a brand and an event may cause an attitude transfer. Through the connection of a brand and an event the liking of the event is transferred over to the liking of the brand.

Even though a great number of publications deal with marketing-events influencing brand attitudes, still only little is known about the process of attitude formation. Therefore, the main purpose of this paper is to analyze and explain attitude transfer that can be caused through the linking of a brand with an event via event-marketing or event-sponsorship.

2 Prior research and literature on the topic

Since the creation of a positive brand attitude through the organization of an event can be seen as one of the most important goals this aspect is of great academic interest. This idea is based on the assumption that the connection of the event and the brand can lead to an attitude transfer. Different theoretical and conceptual frameworks explaining the effects of attitude towards the event on brand-attitude have been discussed and partially validated. For example, the

principles of emotional conditioning have been applied to event-marketing / -sponsorship (e.g., Gierl and Kirchner 1999, Speed and Thomson 2000). Two stimuli – the event and the brand are presented to the consumer simultaneously. Hence, this is a situation where learning through classical or emotional conditioning may occur.

Other effect mechanisms or principles that are discussed are, for example, mere exposure effects (e.g. Bennett 1999), social identity (e.g., Madrigal 2001), vicarious learning and awareness-trial-reinforcement (e.g., Hoek et al. 1997), and congruity theory (e.g., Jagre, Watson, and Watson 2001). So far, none of these theoretical approaches has proven its priority. However, results from empirical studies point towards the possible influencing of attitudes towards a brand through visiting an event. In this section, studies concerning the role of marketing-events to influence brand attitudes/image will be reviewed.

Drengner (2004) expects coherences between event and brand attitudes. In his work he distinguishes between a positive and a negative factor of the event and brand evaluation. Based on the results of his empirical study he was able to show that there is an impact of the negative factor of the event evaluation on the negative factor of the brand evaluation. For the positive factor his results are ambiguous.

Grohs et al. (2004) examine the impact of different influencing factors (event image, brand recall, prior brand image that existed before visiting the event, sponsorship leverage, event-brand-image) on the (post) image of the involved brands. The results of a regression analysis show only a weak impact of the event image and the brand recall on the post brand image. A stronger influence of the prior brand image on the post brand image was indicated. Furthermore, their results suggest that the image transfer between the event and the brand is dependent on sponsorship leverage as well as on the perceived similarity between event and brand.

Lasslop (2003) also focuses on the attitude towards the event and the previous attitude towards the brand as determining factors of the (post) attitude towards the brand. Based on a structural equation modelling he identified a weak influence of the attitude towards the event on the independent variable. His results indicate that the (post) attitude towards the brand is mainly influenced by the prior attitude towards this brand.

The influencing role of the event image on the brand image is also found in the work of Gwinner and Eaton (1999). Furthermore, in their empirical study they analyse the role of the event-brand-similarity on the relationship between

event and brand attitude. Their results support their assumption that the perceived similarity between event and brand enforces the attitude transfer.

This review has shown that different theoretical and conceptual frameworks have been discussed in order to explain the impact of the attitude towards the event on the attitude towards the brand. So far, not one of these has proven its priority. Nevertheless, based on the results of the empirical studies that have been highlighted here, it is confirmed that event-marketing or event-sponsorship can cause an attitude transfer.

3 Theoretical background

To conclude, results of various empirical studies could show an impact of the attitude towards the event on the attitude towards the brand – even if the effects are rather small or medium. To combine a brand with an event through event-marketing or event-sponsorship leads to the visitor translating the liking of the event directly onto the brand. Based on the existing empirical findings and theoretical explanations we also think that the attitude towards event functions as an important influencing factor of the attitude towards the brand. Indeed, we expect a direct effect of the attitude towards the event on the attitude towards the brand. Linking a brand with an event enables firms to gain the consumers' interest and favour by associating their brand with events that are important for them.

H1: A more positive attitude towards the event evokes a more positive attitude towards the (involved) brand.

In our opinion, it is not enough to consider the event as the solely attitude or image builder. From our point of view a crucial factor goes uncommented in this approach that points towards a more differentiated view of the effects of event-marketing and –sponsorship. The confrontation of the visitor with the brand does not merely occur through visiting the event, but rather through observing the communication activities of the companies at the event. Each company or each brand can participate at an event with a variety of communication activities: for example, with a promotion team or by offering give-aways, or certain hospitality activities. Based on this thought, one can argue that the liking or disliking of the communication activities at the event does also have an influence on the attitude towards the brand.

In advertising research, consumers' responses to advertising activities have been of increasing interest. Academic studies have examined the influence of attitude towards the ad on advertising effectiveness. Attitude towards the ad

(A_{AD}) can be defined as a person's feelings of favorability or unfavorability towards a particular advertising stimulus (Lutz 1985). In particular, researchers have proposed that attitude towards the ad functions as an influencing factor of brand attitude as well as purchase intention (Mitchell and Olson 1981, MacKenzie, Lutz and Belch 1986). A large number of studies have provided support for the contention that attitude towards the ad has a direct effect on attitude towards the brand (Brown and Stayman 1992). Furthermore, attitude towards the ad has served as a dependent variable in studies analyzing consumers' reactions to communication stimuli. Different conceptual frameworks and structural models explaining the relationships among A_{AD} have been discussed and partially validated. In the work of MacKenzie, Lutz and Belch (1986) four alternative structural models were proposed and tested against one another. Based on the results of their empirical studies they draw the conclusion that the dual mediation model, which postulates that A_{AD} has a direct and indirect (through the effect on brand cognitions) effect on brand attitudes, is superior.

While in advertising research the interest on consumer's reactions to communication stimuli is hardly new, this aspect has only recently been taken under consideration in the context of event-marketing or –sponsorship. Mau, Weihe, and Silberer (2005) suggested that not only the attitude towards the event but also the attitude towards the communication activities of each company at the event function as influencing factors of the attitude towards the brand. Since visitors of an event differ in their liking or disliking of the presented communication activities of each brand this attitude towards the communication activity has a direct effect on the brand attitude.

H2: A more positive attitude towards the communication activities evokes a more positive attitude towards the (involved) brand.

Since the event itself functions as the frame or platform of the presentation of each brand's communication activities one can also assume that the attitude towards the event is a determinant of the attitude towards the communication activities. Our assumption that the attitude towards the event (A_E) has a direct effect on the attitude towards the communication activities (A_{AD}), arises from the discussion above.

H3: A more positive attitude towards the event evokes a more positive attitude towards the communication activities.

The interactions between the attitude towards the event, the attitude towards the communication activities and the attitude towards the brand are summarized in the figure below (Mau, Weihe, and Silberer 2005).

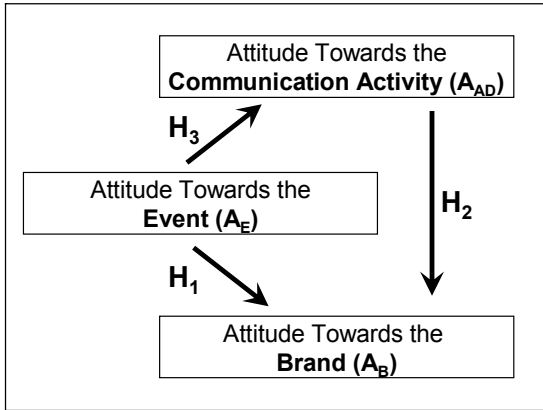


Figure 1: Basic effects of marketing-events

We believe that the ideas discussed above lead to a principle understanding of the central effects of marketing-events on brand attitudes.

However, the attitude towards a brand is not only influenced by the attendance of the event. In most cases visitors of an event already have a certain attitude towards an involved brand that exists before event's attendance (A_B^0). One can assume that this prior attitude influences the effect mechanism of marketing-events. Since attitude is defined as a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object (Mehta and Purvis 1995) it is plausible that a close coherency between A_B^0 and A_B exists. Furthermore, the prior attitude towards the brand also influences the attitude towards the event and the attitude towards the communication activity of the respective brand at the event. This assumption can be explained by the fact that the perception of an object is influenced by the attitude towards this object (cf. Asanger and Wenninger 1999). This is coherent with the assertion of dissonance theory (cf. Silberer 1980). Results of some empirical studies support the impact of A_B^0 in the context of marketing-events (see section 2). These considerations lead to the following hypotheses:

- H4:** A more positive prior attitude towards the brand evokes a more positive attitude towards the brand after the event.

- H5:** A more positive prior attitude towards the brand evokes a more positive attitude towards the event.
- H6:** A more positive prior attitude towards the brand evokes a more positive attitude towards the communication activity.

Figure 2 illustrates the hypotheses related to the different attitudes.

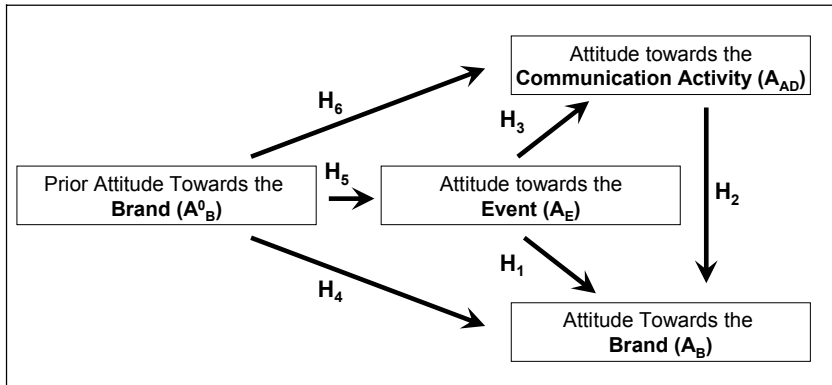


Figure 2: Model and corresponding hypothesis

4 Empirical study

4.1 Purpose of our study

So far, based on a literature review, we discussed a general theoretical understanding of the effects of marketing-events on brand attitudes. Our central assumptions are summarized in the model above (see figure 2). In order to validate our model, we empirically test the six hypothesis, mentioned above, dealing with the interactions of the attitude towards the event, the attitude towards the communication activities and the attitudes towards the brand before and after the event.

4.2 Measures

Attitudes can be defined as a summary evaluation of a given object captured in attribute dimensions such as good-bad, harmful-beneficial, pleasant-unpleasant, and likable-dislikable (Ajzen 2001; Ajzen and Fishbein 2000; Eagly and Chaiken 1993; Petty et al. 1998). Based on this general understanding sev-

eral attitude measures have been developed and are used not only in marketing but throughout the social sciences. A common method for recording the evaluation of a psychological object based on attribute dimensions is to use a semantic differential (cf. Osgood, Tannenbaum, and Suci 1957; Heise 1970). Using this method as a reference, we used a semantic differential composed of eleven unipolar items (conservative, boring, obtrusive, exclusive, successful, serious, original, sporty, traditional, modern, and likable) to measure the attitude values (prior attitude towards the brand (A_B^0), post attitude towards the brand (A_B), attitude towards the event (A_E)). Each attitudinal value was calculated as the mean value of all the items, whereby the first three items were oppositely coded (as a result of a factor analysis). Very good reliability values were determined (A_E *cronbach's* $\alpha = .74$; A_B^0 *cronbach's* $\alpha = .81$; A_B *cronbach's* $\alpha = .86$; Nunnally 1978). In order to minimize the effort for the participants the attitude towards the communication activities was recorded with one single item ('how did you like the communication activities of brand XY at this tournament?'; very good/very bad).

4.3 Procedure

The data was collected at an international show-jumping event over the four days of the event. Since the considered company functioned as the organizer of the event, our study was focused on the examination of the effects of event-marketing on attitude formation.

The relevant constructs were recorded via personal statements from the spectators using paper-pencil questionnaires. Trained interviewers addressed the visitors upon their entering the entrance area of the arena and requested them to take part in a survey about the tournament. If willingness was declared, participating visitors filled out a pre-questionnaire on their own. Besides other variables (e.g., age, gender, involvement) the prior attitude towards the brand of the organizer of the event (A_B^0) was measured with this pre-questionnaire. Another part of this research project focuses on dynamic aspects of attitude formation (Silberer, Mau, and Weihe 2005). Therefore, all participants were asked to fill out a one-page tracing questionnaire ('event diary') for four times during the event. Upon returning this questionnaire, participants were requested to fill out a post-questionnaire which mainly recorded the attitude towards the brand (A_B), the attitude towards the respective communication activities of the same brand (A_{AD}), and the attitude towards the event (A_E). The dynamic aspects of attitude formation are discussed elsewhere (Silberer, Mau, and Weihe 2005).

4.4 Sample

Over the four days a total of 345 visitors filled out the pre-questionnaire. A total of 117 (35.7%) participants filled out the post-questionnaire. On average participants were approximately 40 years old ($M = 40.6$ years, $SD = 26.8$) and about three quarters were females (70.4%). Most participants claimed that they found filling out the questionnaires to be non-disruptive. Participants could remember on average $M = 3.8$ ($SD = 2.0$) of the sponsors after the event.

4.5 Results

4.5.1 Basic effects of event-marketing

A direct influence of A_E on A_B is postulated in hypothesis one. According to hypothesis 2 and 3, it is expected that A_E over A_{AD} has an indirect influence on A_B , here A_{AD} functions as a mediator. According to Baron and Kenny (1998) A_{AD} is a mediatory variable, if (1) the independent variable (A_E) influences the development of the mediator (A_{AD}); (2) if the mediator is related to the dependent variable A_B ; and (3) the relationship between A_E and A_B decreases through a mutual prediction of A_B through A_{AD} and A_E .

To test the first two aspects bivariate correlations were done between the involved variables. The results (correlation between A_E and A_{AD} : $r = .32$; $p < .01$; $R^2 = .10$; $n = 102$; correlation between A_{AD} and A_B : $r = .48$; $p < .001$; $R^2 = .23$; $n = 101$; correlation between A_E and A_B : $r = .71$; $p < .001$; $R^2 = .51$; $n = 94$) show that the attitude towards the event had a moderate effect on the attitude towards the brand, if one does not take the mediatory influence of A_{AD} into account.

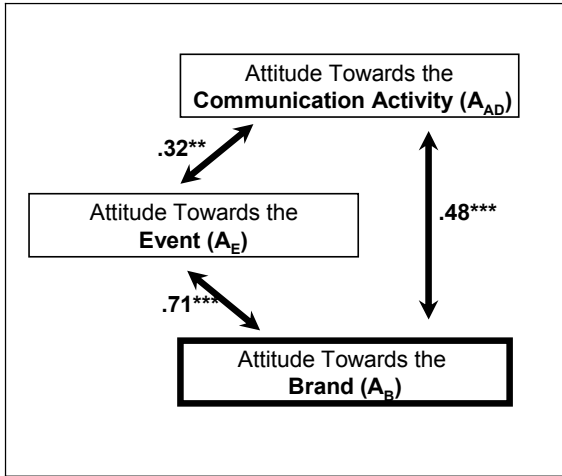


Figure 3: Bivariate correlations

The degree of these relationships is comparable to other studies which do not observe the mediating influence of A_{AD} (e.g., Drengner 2004).

The fact that the attitude towards the communication activities at the event does indeed have a mediatory role in the relationship of A_E and A_B is shown in table 1, which displays the results of step (3) towards the verification of A_E and A_B 's influence on A_B .

Table 1: Results of the regression analysis to predict the attitude towards the brand (A_B)

	<i>(n = 94)</i>		
	<i>B</i>	<i>(SE B)</i>	β
Attitude towards the event (A_E)	0.94	(0.11)	0.62***
Attitude towards the communication activities (A_{AD})	0.26	(0.07)	0.27***
adj. R^2			0.56***

(*** $p < .001$; *(SE B)* standard error)

However, the results obtained here also suggest a strong direct influence of the attitude towards the event upon the attitude towards the brand. It should be pointed out that, in the context of marketing-events, A_E has a stronger impact on A_B than A_{AD} . For event-sponsoring, as a different but resembling marketing communication tool, Mau, Weihe, and Silberer (2005) indicated that A_{AD} functions as a stronger mediator in the relationship of A_E and A_B .

4.5.2 Impact of prior attitude towards the brand

In hypothesis 4, a direct effect of the prior attitude towards the brand (A_B^0) on the post attitude towards the brand is postulated. Additionally, hypothesis 5 and 6 claim an indirect impact of A_B^0 on A_B . In this dependency A_{AD} and A_E are said to function as mediators. The assessment of the data is also done according to Baron and Kenny (1998). The results for step (1) and (2) (correlation between A_B^0 and A_E : $r = .43$; $p < .001$; $R^2 = .18$; $n = 90$; correlation between A_B^0 and A_{AD} : $r = .28$; $p < .01$; $R^2 = .08$; $n = 100$; correlation between A_B^0 and A_B : $r = .46$; $p < .001$; $R^2 = .21$; $n = 90$; other correlations see results above) show that the prior attitude towards the brand has a moderate effect on the attitude towards the brand, if one does not take the mediatory influence of A_{AD} and A_E into account.

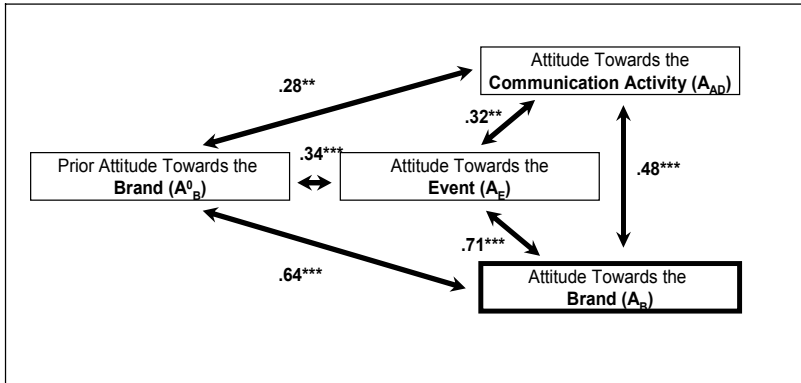


Figure 4: Bivariate correlations

The results of step (3) are presented in table 2. In contrast to our anticipation, the results only show a tendential direct effect of the attitude towards the communication activities on the attitude towards the brand ($p < .10$). However, A_B^0 does have a moderate impact on A_E and A_{AD} and is therefore also influencing A_B indirectly. Overall, in the context of marketing-events, a person's reac-

tions and responses while visiting the event, which are themselves influenced by A_B^0 , seem to have a stronger impact on the attitude towards the brand after the event than A_B^0 itself.

Table 2: Results of the regression analysis to predict the attitude towards the brand (A_B)

	<i>(n = 90)</i>		
	<i>B</i>	<i>(SE B)</i>	β
Prior attitude towards the brand (A_B^0)	0.16	(0.08)	0.15 [†]
Attitude towards the event (A_E)	0.86	(0.12)	0.58***
Attitude towards the communication activities (A_{AD})	0.25	(0.07)	0.26**
adj. R^2	0.59***		

([†] $p < .10$; ** $p < .01$; *** $p < .001$; *(SE B)* standard error)

Results of hypotheses testing prove the great importance of the attitude towards the event as a determining factor of the attitude towards the brand. This finding leads to the question if the found bivariate correlation between A_B^0 and A_{AD} is caused by a direct effect between those two or if this interrelation is mediated by A_E . The bivariate correlations for the three variables are already reported above. Table 3 shows the results of step three of the mediator-analysis.

Table 3: Results of the regression analysis to predict the attitude towards the communication activities (A_{AD})

	<i>(n = 90)</i>		
	<i>B</i>	<i>(SE B)</i>	β
Prior attitude towards the brand (A_B^0)	0.10	(0.12)	0.09 NS
Attitude towards the event (A_E)	0.39	(0.17)	0.25*
adj. R^2	0.07*		

(* $p < .05$; NS not significant; *(SE B)* standard error)

Overall, the total impact that is caused by A_B^0 seems to be mediated by A_E . The fact that neither A_{AD} nor A_E is influenced by the prior attitude towards the brand (A_B^0) directly leads to this conclusion.

5 Discussion

The aim of this paper was to develop a model of attitude formation in the context of marketing-events in which the attitude towards the event, the attitude towards the communication activities and the prior attitude towards the brand function as determining factors. The results of our empirical study show that the attitude towards the event influences the attitude towards the brand in two different ways: directly and indirectly. For the indirect path, the attitude towards the communication activities functions as a mediator. Furthermore, the attitude towards the communication activities also has a direct effect on the attitude towards the brand. Besides this, the results of our empirical study show a surprising effect: Both variables, A_{AD} and (post) A_B are not directly influenced by the prior attitude towards the brand (A_B^0). A direct influence of A_B^0 could only be shown for A_E . A possible explanation for this finding can be the fact that the participants only had a relatively unspecific picture of the brand before visiting the event. We assume that a more definite prior picture of the brand can cause a stronger direct effect of A_B^0 on A_B .

To summarize the essence of our findings, it is evident that A_{AD} is an important influencing factor to explain the effectiveness of marketing-events. In the context of event-marketing A_E is identified as the most important influencing factor of A_B . In contrast to this, the results of empirical research on the effectiveness of event-sponsoring (Mau, Weihe, and Silberer 2005) indicate that in the context of this communication tool A_{AD} is the major influencing factor of A_B . A comparison of the findings of these two empirical studies leads to the assumption that event-marketing and event-sponsoring do not effect the consumer in the same way. A major objective of future research is to find a better explanation for the conditions that are responsible for the different impact of A_{AD} and A_E on A_B in the context of event-marketing versus event-sponsoring.

The presented results lead to some implications for strategic and operative marketing: Due to the importance of attitude towards the communication activities for the effectiveness of marketing-events, the success of an event is not only dependent on the organization of the event but also of the arrangement on the communication activities. If visitors like the event, this does not necessary mean that they also have a positive attitude towards the communication activities at that event.

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Patrick Hartmann and Vanessa Apaolaza Ibáñez

Effects of green brand communication on brand associations and attitude

1. Introduction
2. Green brand associations
3. Communicational implementation of green brand associations
4. Effects on brand attitude
5. Method
 - 5.1. Measurement
 - 5.2. Sample
6. Results
7. Discussion
 - 7.1. Managerial implications
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Abstract

This study analyses the communicational implementation of green brand associations. Three distinct types of emotional brand benefits suitable for green branding are identified: the feeling of well-being (“warm glow”) from acting in an altruistic way, self-expressive benefits, and nature-related consumption experiences. Dimensionality of green brand associations and impact on brand attitude are tested in the scope of a survey of consumer perceptions of three established energy brands in the Spanish consumer-energy market, one of them recently positioned as a green energy brand. Results of the study confirm significant perceptual effects of green brand communications, proposed dimensions of green brand benefits, as well as significant positive attitude effects of green brand associations.

1 Introduction

At present, there is little doubt about the strategic importance of adequately defined brand associations and the relevant role of brand communication in the context of brand implementation (Keller 1993; de Chernatony, and Dall’Olmo Riley 1998; Aaker, and Joachimsthaler 2000; Esch 2001, 2004). Although green marketing has been an important research topic for more than three decades (e.g., Kassarijian 1971; Kinnear et al. 1974; Coddington 1993; Ottman 1994; Weinberg 1994, Peattie, 1995; Polonsky, and Mintu-Wimsatt 1995; Schlegelmilch, Bohlen, and Diamantopoulos 1996; Kalafatis et al. 1999; Polonsky, and Rosenberg, 2001), hardly any research has been conducted that focuses specifically on green branding. While the perceived value of environmentally sound product attributes has been analysed to some extent (Roozen and Pelsmacker 1998), the role of emotional benefits of green brands is still largely unassessed. With an increasing relevance of emotional branding in saturated markets, brand communication offers an effective tool for the implementation of emotional benefits in green branding. The purpose of this study is to analyse the communicational implementation of functional and emotional green brand associations and their impact on brand attitude in the context of the brand building campaign of a green energy brand.

2 Green brand associations

Most authors agree on the multidimensional structure of brand associations and distinguish between functional -product related- attributes and benefits and emotional or symbolic brand benefits (Biel 1992; Keller 1993; de Chernatony and Dall’Olmo Riley 1998; Bhat and Reddy 1998; Aaker and Joachimsthaler 2000; Franzen and Bouwman 2001, Esch 2004). Functional green brand asso-

ciations are established as the result of a brand strategy based on delivering information on technical product attributes related to the reduced environmental impact of the brand. Environmental product attributes may refer to environmentally sound production processes, product use and/or product elimination (Meffert 1993; Peattie 1995). However, functional green branding has its limitations due to the fact that the reduction of a product's environmental impact generally does not deliver individual benefits to the buyer. The perceived customer benefit might be insufficient as a motivating factor for brand purchase (Belz and Dyllik 1996), as for most products the consumer would experience functional benefits (i.e. improvement of environmental quality) only in case of generalized environmentally sound consumer behaviours.

At present, an increasing number of brands is built on emotional benefits (de Chernatony et al. 2000; Aaker 2000; Weinberg and Salzman 2004). The analysis of emotional reactions capable of delivering emotional benefits in green branding leads to the identification of three distinct types of emotional consumption experiences (Hartmann, Apaolaza, and Forcada 2005):

- A feeling of well-being (“warm glow”) from acting in an altruistic way (Ritov and Kahnemann 1997). Environmentally conscious consumers experience personal satisfaction by contributing to the improvement of the common good environment.
- Self-expressive benefits through the socially visible consumption of green brands (Belz and Dyllik 1996). The consumption of green brands allows consumers to show their environmental consciousness to others.
- Emotional nature experiences that can be evoked by the brand, i.e. sensations and feelings normally experienced through contact with nature. The motivational basis of this type of emotional benefit is the feeling of “emotional affinity towards nature,” e.g. “loving nature” or “feeling one with nature” (Kals, Schumacher, and Montada 1999).

3 Communicational implementation of green brand associations

Green brands can evoke positive emotions in certain target groups by simply offering information on environmentally sound product attributes. Knowing that a brand is environmentally sound makes some consumers feel better while purchasing and consuming the brand. However a much stronger and effective emotional response can be obtained through specific emotional benefits evoked

actively by the brand. There is a large number of well studied approaches to the implementation of emotional brand benefits and brand experiences through advertising (Weinberg 1988, 1992; Weinberg, and Gröppel 1989; Weinberg, and Diehl 2001), e.g. transformational advertising (Aaker, and Stayman 1992) and emotional conditioning (Kroeber-Riel 1984; Kim, Lim, and Bhargava 1998; Kroeber-Riel, and Esch 2004). Following these methods, for instance, green brands can be associated through communication campaigns at a perceptual level with imagery of nature and evoke emotional experiences like the above-mentioned “affinity towards nature”. Past communication campaigns of brands such as Opel (“Wonderful World”), AEG Eco-Lavamat, BP, as well as recent campaigns such as the “Energia Verde” (Green Energy) campaign of the Spanish utility Iberdrola embed the brand in pleasant imagery of natural environments, aiming to evoke nature experiences as emotional brand benefits. Regarding the effects of green brand communication on the formation of green brand associations, the following hypothesis is suggested:

Hypothesis 1: Green brand communication leads to the formation of distinct dimensions of green brand associations, representing the perception of either functional environmentally sound product attributes, feelings of well being (“warm glow”) from acting in an altruistic way, self-expressive benefits, or emotional nature experiences.

4 Effects on brand attitude

Regarding the attitudinal effects of green branding, some studies show that in certain situations consumer attitudes can be less positive towards green brands as a consequence of a perceived trade-off between functional performance of the brand and its environmental impact (Coddington, 1993; Schlegelmilch et al., 1996; Fuller 1999). However, most authors suggest that the growing environmental consciousness among consumers leads to generalized more positive attitudes towards brands that are perceived as environmentally sound (Bech-Larsen 1996; Eagly, and Kulesa 1997; Swenson, and Wells 1997).

Hypothesis 2: The communicational implementation of green brand associations leads to a positive effect on brand attitude.

Following the approach of persuasion models such as the ELM (Petty, and Cacioppo 1983) or ARI model (Buck et. al. 1995, 2004), it can be expected that two distinct processes in the perception of green brand attributes lead to the formation of brand attitudes: the cognitive evaluation of functional brand attributes and the affective reaction to emotional brand benefits. In green marketing research, there is a certain controversy regarding the respective strength of the

attitudinal effects of either rational -product attribute centred- or emotional persuasion strategies (Monhemius 1993; Davis 1993; Smith, Haugtvedt, and Petty 1994; Finger 1994; Swenson, and Wells 1997; Fuller 1999). In an earlier experimental study, Hartmann, Apaolaza, and Forcada (2005) found significantly higher attitude effects of emotional green brand positioning, compared to a product attribute centered brand positioning. However, the attitude effects of specific functional and emotional dimensions of green brand associations have not yet been empirically tested against each other. Thus, the following research aim is proposed:

Research objective: Comparative analysis of the respective strength of the effects of distinct green brand associations on brand attitude.

5 Method

At the moment of the data collection, in the Spanish residential energy market only one brand, “Iberdrola Energía Verde” (Iberdrola Green Energy), was positioned as a green energy brand. The data collection was carried out in the 4th and 5th month of an intense brand building effort by this energy provider, mainly through advertising. Earlier studies (e.g., Hartmann, Apaolaza, and Forcada 2002) show a lower degree of environmental associations of the corporate Iberdrola brand before the campaign than of any other brand in the study (Figure 3). The advertising campaign was developed to associate emotional nature experiences with the brand, following recommendations by Hartmann (2002), through the use of specific nature imagery tested in his study, e.g. flying eagle, mountain scenery, waterfall, etc. Furthermore, ads contained claims developed to build “warm glow” emotional benefits (“Now, every time you switch on your light you can feel good because you are helping Nature”).



Figure 1: Visual implementation of the green energy brand “Iberdrola Energía Verde” (extract from TV advertising)

Additionally, the images of a group of young people in the TV-spot and the claim “join us” were aimed at group-specific social norms, associating the brand with self-expressive benefits (Figure 1).

In the study, the respondent’s green brand associations and brand attitude were assessed for the Iberdrola Green Energy brand and the two most important competing energy brands (Endesa and Union Fenosa). The effect of green brand associations on brand attitude was established analyzing the relationship between the respondent’s green brand associations and brand attitude of the brands included in the study. Besides Iberdrola Green Energy, none of the other brands in the Spanish energy market had implemented a green branding campaign at the moment of the study. All brands were well known to the respondents and all respondents had been exposed repeatedly to the TV advertising of the Iberdrola campaign in the months prior to the study.

5.1 *Measurement*

In line with the study’s objective of exploring and testing the dimensions of green brand associations and its effects on brand attitude, scales containing items to measure a brand’s associations related to green product attributes and emotional benefits were constructed. Items consisted of statements representing functional brand associations and the perception of “warm glow”, self-expressive benefits and nature experiences (Table 1). While the development of items on functional brand attributes was straightforward, the scales on the emotional brand associations “warm glow”, self-expressive benefits and nature experiences were constructed and refined in qualitative group sessions with student subjects.

To further assess the non-verbal content of emotional nature experiences, one of the measurement scales consisted of visual items representing nature scenes (Figure 2). The development of this instrument was based on several studies showing the capacity of visuals in evoking emotional responses (e. g. Childers et al. 1985; Louviere et al. 1987; Grunert-Beckmann, and Askegaard 1997), as well as on prior qualitative research. Visual stimuli adequate to evoke the feeling of nature experiences were selected in the scope of in-depth interviews with student subjects, instructed to express their feelings evoked by a selection of images representing nature. Respondents’ agreement or disagreement with the statements was measured on Likert-type scales anchored by “full agreement” and “disagreement”.

Table 1: Verbal measurement scales for the assessment of green brand associations

Brand X cares about the environment.

The energy of Brand X is generated from renewable sources.

Brand X produces less polluting emissions, eg. carbon dioxide.

Brand X helps to avoid global warming.

Clients of Brand X can feel good because they help protecting the environment.

With Brand X, I have the feeling to contribute to humanity's and nature's wellbeing.

Clients of Brand X can feel better because they don't harm the environment.

With Brand X, I can express my environmental consciousness.

With Brand X, I can show to myself and to my friends that I care about environmental conservation.

With Brand X, my friends perceive that I am concerned about the environment.

Brand X makes me imagine nature, mountains, forests and wildlife.

Brand X evokes the sensation of being in nature.

Brand X makes me feel close to nature.

The scales of the measurement model were validated by testing the scales' ability to discriminate between the brand associations of the Iberdrola Green Energy brand and the two conventional consumer energy brands in the study.

Consistent with accepted measures in attitude research (Kim et al. 1998; Herr, and Fazio 1993; Allen et al. 1992; Petty et al. 1991; Mitchel 1986), attitude towards the brand was measured as a three-dimensional construct through

the indicators “overall evaluation”, “positive feeling” and “behavioural intention”. Subjects were asked to rate their agreement with single-phrase statements on Likert-type scales anchored by “full agreement” and “disagreement”.

5.2 *Sample*

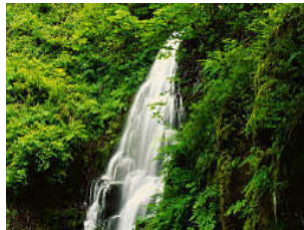
A total of 432 respondents in 5 cities were interviewed by student interviewers recruited from the final year marketing course. Subjects were selected by quota and convenience sampling. The composition of the sample was 51% female, 49% male, 44% aged between 20 and 30, 44% aged 30-50 and 12% aged 40-64. The quota by sex and age approximated the characteristics of the target group of the green energy brand in the study.



“Forest”



“Coast”



“Waterfall”

Figure 2: Visual indicators for the assessment of the imagery dimension of emotional nature experiences

6 Results

The comparison of the associations of the brands with the statement “Brand X cares about the environment” in this study with results obtained in previous research (Hartmann et al. 2002) shows that the Iberdrola Green Energy brand is perceived as significantly more environmentally committed ($p < 0.000$) than the former Iberdrola corporate brand and than any of the competing brands in the study (Figure 3).

Exploratory maximum likelihood factor analysis with varimax rotation was used to explore the structure of perceived green brand associations (Table 2). Five dimensions were identified, related to either functional product attributes (“environmental”) or emotional brand benefits, i. e. feelings of well being (“warm glow”), self-expressive benefits and nature experiences. The latter dimension was identified as a two-dimensional construct with individual factors assessing its semantic and visual components. Together, both factors of the nature experiences construct explain 33% of the total variance of green brand associations.

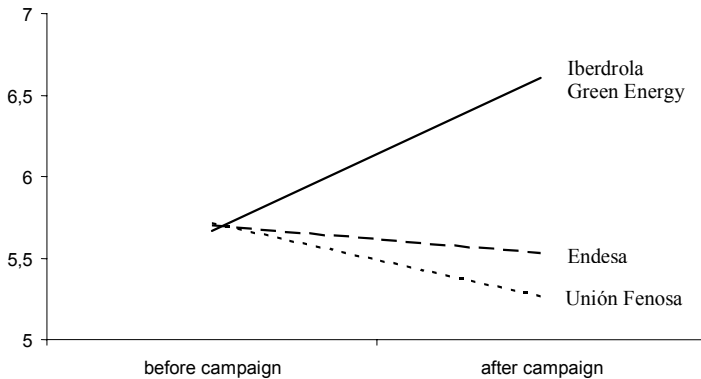


Figure 3: Perceived environmental commitment of competing energy brands before and after the Iberdrola Green Energy branding campaign

Exploratory results were tested by confirmatory factor analysis. The latent dimensions of green brand associations were formed by the items with high factor loadings in the exploratory factor analysis. One indicator of the self-expressive construct was subsequently eliminated due to a low factor loading. The nature experiences construct was measured as a second order factor build upon two factors, assessing its semantic and visual associations (Table 3).

Criteria for model adjustment (Hu, and Bentler 1995; Jöreskog, and Sörbom 1984; Bentler 1990; Steiger, and Lind 1980; Kaplan 2000; Byrne 2001) indicate adequate fit. The dimensionality of the constructs was established following Anderson and Gerbing (1988). Factor loadings of all indicators are significant ($p < 0,000$) and exceeding minimum recommended values of 0,5. Furthermore, the variance extracted measures exceed the square of the correlation estimate in most cases. For factors which did not fulfil this condition, Anderson and Gerbing's (1988) recommended additional analysis was carried out, restricting the correlation between factors to 1,0 and re-estimating the model. In all cases, the resulting model had a significantly lower fit ($p < 0,000$), suggesting adequate discrimination and distinct factors. Also, variance extracted and construct reliability exceed recommended thresholds (Fornell, and Larcker, 1981; Bagozzi, and Yi 1994; Hair et al. 1999). Subsequently to the validation of the measurement model, a structural equation analysis was conducted to assess the effect of the extracted dimensions on the attitude construct.

Table 2: Exploratory maximum likelihood factor analysis

<i>Indicator</i>	<i>Factor</i>	<i>Nature visual</i>	<i>Nature semantic</i>	<i>Environmental</i>	<i>Self-expressive</i>	<i>"Warm glow"</i>
Renewable energy		0,199	0,125	0,596	0,164	0,228
Reduced emissions		0,146	0,151	0,756	0,148	0,131
Helps avoid global warming		0,211	0,186	0,563	0,197	0,241
Feel good helping environment		0,168	0,171	0,469	0,267	0,545
Help nature and humans		0,187	0,282	0,368	0,351	0,611
Feel good not harming Environment		0,193	0,267	0,402	0,329	0,629
Show environmental Consciousness		0,198	0,299	0,365	0,527	0,388
Care about conservation		0,164	0,257	0,256	0,864	0,212
Friends perceive concern		0,191	0,314	0,205	0,739	0,252
Imagine nature		0,283	0,751	0,224	0,209	0,175
Evokes sensation of being In nature		0,253	0,855	0,166	0,242	0,156
Feeling close to nature		0,303	0,671	0,193	0,311	0,218
Forest (Image)		0,823	0,242	0,206	0,123	0,136
Coast (Image)		0,823	0,224	0,157	0,132	0,144
Waterfall (Image)		0,805	0,203	0,202	0,160	0,093
Variance explained		0,17	0,16	0,15	0,15	0,11

Table 3: Confirmatory factor analysis: regression coefficients (standardized, unstandardized), correlations, variance extracted, construct reliability, model fit ($p < 0,000$ in all regression coefficients)

<i>Indicator</i>	Factor						
	<i>Environmental</i>	<i>“Warm glow”</i>	<i>Self-expressive</i>	<i>Nature semantic</i>	<i>Nature Visual</i>	<i>Nature Experience</i>	<i>Brand Attitude</i>
Renewable energy	0,73; 0,48						
Reduced emissions	0,76; 0,47						
Helps avoid global Warming	0,70; 0,41						
Feel good helping environment		0,80; 0,50					
Help nature and humans		0,86; 0,57					
Feel good not harming environment		0,88; 0,59					
Show environmental consciousness			0,90; 0,60				
Friends perceive concern			0,83; 0,56				
Imagine nature				0,89; 0,32			
Evokes sensation of being in nature				0,92; 0,32			
Feeling close to nature				0,85; 0,29			
Forest (Image)					0,90; 0,47		
Coast (Image)					0,89; 0,46		
Waterfall (Image)					0,87; 0,46		
Nature semantic						0,86; 1,68	
Nature visual						0,72; 1,03	
Overall evaluation							0,79; 1,44
Positive feeling							0,84; 1,52
Behaviour intention							0,50; 1,00
Correlations							
“Warm glow”	0,80 (*)			-	-		
Self-expressive	0,69	0,86 (*)		-	-		
Nature experience	0,70	0,77	0,80	-	-		
Brand attitude	0,72	0,72	0,68	-	-	0,82 (*)	
Variance Extracted	0,53	0,72	0,74	0,79	0,79	0,63	0,52
Construct Reliability	0,77	0,88	0,85	0,92	0,92	0,77	0,76
Model Fit	RMR=0,01; GFI=0,96; AGFI=0,94; PGFI=0,67; NFI=0,97; CFI=0,98; RMSA=0,05						

(*) Chi-square difference with fixed correlation = 1: $gl=1$; $p < 0,000$

Since the model was developed modifying only latent variable correlations to regression coefficients, the fit of the structural model was nearly equal to that of the measurement model and can be considered as adequate. Results are depicted in Table 4. Results of the structural equation analysis indicate significant positive influences of both functional green brand attributes ($R=0,22$; $p=0,002$) and the “nature experiences” construct ($R=0,65$; $p<0,000$) with the highest overall influence in the case of the latter. The effects of “warm glow” feelings and self-expressive benefits are not significant in the scope of the proposed model. The squared multiple regression coefficient ($R^2=0,72$) indicates the amount of variance of the attitude construct explained by the brand associations analyzed in the scope of the model.

Table 4: Structural equation analysis: regression coefficients (standardized, unstandardized, p), multiple regression coefficient, model fit

<i>Factor</i>	<i>Brand attitude</i>
Environmental	0,22; 0,07; 002
“Warm glow”	0,17; 0,06; 0,075
Self-expressive	-0,14; -0,05; 0,120
Nature experiences	0,65; 0,22 ; 0,000
Multiple R²	0,72
Model fit	RMR=0,01; GFI=0,96; AGFI=0,94; PGFI=0,67; NFI=0,97; CFI=0,98; RMSA=0,05

7 Discussion

Results of the exploratory and confirmatory factor analysis conducted seem to support the hypothesis on the formation of the proposed distinct dimensions of green brand associations as a consequence of communicational brand implementation, i.e. functional environmentally sound product attributes, feelings of well being (“warm glow”) from acting in an altruistic way, self-expressive benefits and emotional nature experiences (H1). Furthermore, the structural equation analysis proved partially supportive of an overall positive effect of green brand associations on brand attitude (H2), since functional environmental brand associations and the emotional benefit “nature experiences” had a significant positive influence on the attitude construct. However “warm glow” feelings and self-expressive emotional benefits, although perceived by the respondents, had no significant positive attitude effects. Absence of attitude effects can be either due to the general absence of attitude effects of these dimensions of green

brand associations, or as a consequence of a weak implementation through advertising.

Regarding the controversy on the respective strength of either functional or emotional branding strategies in green branding, results suggest a stronger influence of the emotional benefit “nature experiences” in this specific case. Still, the conclusion that an exclusively emotional green branding would be the most effective branding strategy in green marketing cannot be supported, as all dimensions of green brand associations were highly correlated, being indicative of a high degree of interaction of cognitive and emotional processes in the formation of attitude towards green brands.

7.1 Managerial implications

Results of the study show that the adequate implementation of green brand associations through advertising can be an effective method for the improvement of brand attitude. In this specific case, the brand perceived as the least environmental responsible one of three competing brands could be repositioned as the greenest brand after only four month of advertising effort. However, while most researchers in green marketing postulate functional strategies delivering detailed information on environmentally sound product attributes, this study supports more significant attitude effects of emotional green brand benefits, specifically of the type “nature experiences”. An exclusively functional green branding may fall short of delivering individual benefits to customers (Belz, and Dyllik 1996), assumes rational decision processes and limits capacity for brand differentiation (Kroeber-Riel 1991; Aaker 1996). While emotional green branding has the potential to overcome these limitations, an exclusively emotional green branding could lead to weaker than possible attitude effects, caused presumably by a possible misinterpretation of vague green claims (Picket, Kangun, and Grove, 1995). Attitude formation most probably takes place through an intensive interaction of cognitive and emotional processes. Consequently, highest attitude effects would be achieved by a combined branding strategy centered in the implementation of emotional benefits that are sustained by information on environmentally sound product attributes.

While three distinct types of green emotional benefits were proposed and analyzed in this study, only nature experiences proved effective in enhancing brand attitude. The implementation of nature experiences through brand communication seems to be more feasible than to associate the feeling of well-being (“warm glow”) from acting in an altruistic way, i.e. “doing something good to society and nature”, or self-expressive benefits with the brand. In the specific case of an energy brand, self-expressive benefits might not be relevant as emo-

tional consumption experiences at all, as the brand is not consumed in a socially visible manner. On the other hand, the association of a brand with nature experiences is straightforward, applying the principles of transformational advertising or emotional conditioning techniques: embedding the brand in a coherent and consistent manner in pleasant nature imagery that evokes nature experiences in the target group.

7.2 Limitations and future research

The study has a number of limitations. First, the research has primarily been of an exploratory nature focusing on just one particular green brand in one specific product category. The findings need to be confirmed for other brands and product categories. Second, the measures used, while providing good reliability and validity, have their limitations, especially in the case of the emotional dimensions of green brand associations. Third, the sample consisted of subjects selected by convenience and quota. A representative sample would have strengthened the results obtained.

Future research on the subject should first concentrate on the further development of the constructs used in the study, particularly that of the emotional dimension of green brand associations. The method using visuals should be combined with additional measures, e.g. semantic differential scales, biometric measures, etc. This can in turn result in a better assessment of variables, after which the relationships between the considered constructs can be better understood. The study should then be replicated within different product categories and with a more representative sample.

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Part IV

Emotional, Social and Individual Factors and Communication

Effects of mood and argument strength on product evaluation in a personal sales conversation

1. Introduction
2. Theoretical background and prior research
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Abstract

In a personal sales conversation between a customer and a salesperson the salesperson usually presents arguments for purchase alternatives to the customer. In this article we analyse effects of customers' mood on their product evaluation in a personal sales conversation. In order to determine these effects, we simulated a sales conversation in a role-playing experiment. Other authors analysing mood effects often consider only direct mood effects on the evaluation of environmental stimuli but they do not examine indirect mood effects or moderator variables. The results of our study show that customers' mood has a direct effect and an indirect effect through the customers' perception of the strength of the arguments provided by the salesperson on product evaluation. The results also illustrate that the strength of both mood effects depends on customer involvement.

1 Introduction

In a personal sales conversation about product alternatives between a customer and a salesperson the salesperson's recommendation influences the customer's purchase decision. In this article, we analyse whether a customer's positive mood as well as the strength of the arguments provided by the salesperson affects the customer's willingness to accept the salesperson's recommendation. In the literature mood is defined as a person's current, subjectively experienced and non object-related emotion (Schwarz 1987, p. 2; Silberer 1999, p. 132) and there are three areas of research on mood: research on mentally processing formal media information depending on a customer's mood (Breckler 1993, p. 467; Silberer 1999), experiments on people's mood-dependent reaction to social appeals like demands for blood donation (O'Malley/Andrews 1983), and the question how people judge other people in different mood states in a direct personal contact situation and whether they are polite and willing to help (e.g. Forgas 1998, p. 566; Rusting 1998). The question discussed here belongs to the third area. To our knowledge, empirical studies on the question, under which conditions customers should be put into a positive mood before a personal sales conversation do not exist. Silberer/Jaekel (1996) only discuss this issue theoretically and manuals for practitioners provide suggestions on how to induce positive mood in customers without indicating different conditions under which the induction of positive mood might be beneficial. Marketing practice differs in inducing positive mood in customers. Most often customers experience mood induction at stores offering hedonistic upscale products, but not at stores offering utilitarian products.

In a real life setting positive mood can be induced in customers by offering drinks or snacks at the entrance of a shop, by playing enjoyable music in a shop or by giving the customers coupons or small gifts when they enter the shop.

2 Theoretical background and prior research

2.1 Direct mood effect on customer's product evaluation

A person's mood can directly affect the person's judgements without cognitive processing of product information, but through affective priming (Fazio et al. 1986). According to Klauer et al. (1997) an emotion caused by a context stimulus influences the evaluation of a subsequently perceived stimulus. This effect occurs even if a person does not spend any cognitive effort. In this way mood can be regarded as an affective reaction to mood induction procedures affecting the evaluation of subsequently presented stimuli (Bless et al. 1990, p. 332; Schwarz et al. 1991, p. 163; Clore et al. 1994; Forgas 1999, p. 851). Some authors assume that simple inference processes might cause the effect of mood on attitudes (Petty et al. 1993, p. 5), and other authors argue that individuals use their current mood state as a simple "how do I feel about it?" heuristic (Bless et al. 1990, p. 332; Schwarz 1990; Schwarz et al. 1991, p. 163; Wegener et al. 1994, p. 25). Moreover, a considerable body of research suggests that a particular mood state facilitates the retrieval of information from memory which corresponds to the mood state (Isen et al. 1978; Bower 1981; Clark/Isen 1982; Blaney 1986; Forgas/Bower 1988; Schwarz et al. 1991, p. 165; Mackie et al. 1992; Petty et al. 1993, p. 6; Wegener et al. 1994, p. 25; Petty/Wegener 1999, p. 60).

Transferred to the situation of a personal sales conversation between a customer and a salesperson, we assume that subsequent to a mood induction, a customer's mood-congruent memory material has an impact on his evaluation of the product recommended by the salesperson. In other words, customers are supposed to make direct inferences from their mood state to the product recommended by the salesperson. These considerations lead to:

H1: A customer's mood has a direct positive effect on his evaluation of the product recommended by the salesperson.

2.2 *Indirect mood effect on customer's product evaluation*

2.2.1 Effect of customer's mood on the evaluation of argument strength

The strength of the arguments provided by a source affects the extent to which a person accepts to be influenced by these arguments. Due to the mechanism of affective priming, a person's positive (negative) mood has a positive (negative) effect on the evaluation of argument strength. Considered more in detail, according to the 'change in criteria hypothesis', subjects' mood state affects the criteria they use to evaluate the strength of the provided arguments. As a consequence, subjects in a negative mood are supposed to use harsher criteria to evaluate the strength of the presented arguments and they also pay more attention to argument strength than subjects in a positive mood (Bless et al. 1990, p. 338; Schwarz et al. 1991, p. 165; Clore et al. 1994, Bohnet et al. 1995; Schwarz/Clore 1996, Bless/Schwarz 1999, p. 430). In contrast to subjects in a negative mood, subjects in a positive mood are supposed to have a considerable number of positive thoughts (Isen et al. 1982) which prevent them from thinking about the provided arguments in detail (Schwarz et al. 1991, p. 167). As people in a positive mood do not reflect thoroughly on the arguments, they are not able to detect flaws of the presented arguments (Petty et al. 1995, p. 96). Thus, people in a positive mood tend to judge argument strength as rather positive.

If we transfer these general theoretical considerations to the issue of our article we conclude that the extent to which a person accepts to be influenced by the arguments provided by a salesperson in a personal sales conversation depends on the strength of these arguments. In addition, a customer's positive (negative) mood has a positive (negative) effect on his evaluation of the strength of the arguments provided by the salesperson. As a customer's mood state is supposed to affect the criteria he uses to evaluate argument strength, customers in a positive mood are likely to use milder criteria to evaluate argument strength than customers in a negative mood. Thus, in a personal sales conversation, a customer's mood is supposed to have a positive effect on his evaluation of the purchase arguments presented by the salesperson:

H2: A customer's mood has a positive effect on his evaluation of the arguments presented by the salesperson.

2.2.2 Effect of argument strength on customer's product evaluation

If people judge the arguments of a message as cogent and compelling, they consequently have favourable thoughts which result in an attitude change in the

direction of the message, whereas, if people judge arguments as weak and specious, they are supposed to transfer this judgement to the object the arguments refer to (Petty/Cacioppo 1984, p. 70). In an investigation on the effects of argument strength, Petty/Cacioppo (1983, p. 17) found that people judged an advertised product significantly more positive if the ad contained strong rather than weak arguments.

With regard to the situation of a sales conversation between a customer and a salesperson we argue on the basis of these general considerations that if a customer judges the arguments provided by the salesperson as strong and convincing, he will consequently have positive thoughts which cause an attitude change in the direction of the salesperson's recommendation. On the contrary, if a customer judges the arguments presented by the salesperson as weak, he is supposed to make inferences from his perception of argument strength to the product the salesperson is talking about. Thus, a customer's judgement of the strength of the arguments provided by the salesperson during a personal sales conversation is supposed to have a positive effect on the customers' evaluation of the product recommended by the salesperson:

H3: A customers' perceived strength of the arguments provided by the salesperson has a positive effect on his evaluation of the product recommended by the salesperson.

2.3 *The moderating effect of customer's product involvement*

In addition to discussing direct and indirect mood effects, we consider customer involvement as a moderating variable because the concept of involvement has been acknowledged as an important moderator of the extent and type of information processing in the context of persuasive communication (Petty/Cacioppo 1981 and 1983, Petty et al. 1981, p. 848, Petty et al. 1983, p. 136). The type of involvement considered here can be referred to as the personal relevance of a persuasive message (Petty/Cacioppo 1981, p. 20) as well as the motivation to process issue-relevant arguments presented (Petty/Cacioppo 1986, p. 128). In low involvement situations, the message a person receives about a particular product has only little personal relevance for this person and the person rather focuses on non-content cues (Petty/Cacioppo 1981, p. 20). Under low involvement conditions, a person's mood has a direct positive effect on this person's attitudes, i.e. people make direct inferences from their mood to the object of interest without thinking about the message arguments (Petty et al. 1993, p. 8; Petty 1994, p. 241). Thus, in the case of low involvement, mood serves as a simple cue (Petty et al. 1993, p. 6; Wegener et al. 1994, p. 39,

Petty/Wegener 1999, p. 65). Thus, transferred to the issue considered here, we assume that in the case of low involvement, customers make direct inferences from their mood to the product recommended by the salesperson.

However, in high involvement situations the message concerning the product of interest is highly relevant to the message recipient (Petty/Cacioppo 1981, p. 20). As a consequence, the recipient processes the message arguments carefully and he uses the result of argument processing in his formation of the attitude toward the product (Petty/Cacioppo 1981, p. 20). Under high involvement conditions, mood affects a person's attitude toward a product through the person's processing of the presented arguments (Petty et al. 1993, p. 8; Petty 1994, p. 241; Wegener et al. 1994, p. 39) and the person's evaluation of the strength of the arguments has a direct effect on this person's attitudes (Petty/Cacioppo 1983, p. 13). Thus, with regard to our issue, we argue that, in the case of high involvement, customers' mood has a comparatively strong indirect effect through their perception of the strength of the arguments provided by the salesperson on their evaluation of the product recommended by the salesperson. Consequently we assume:

H4: The direct mood effect compared to the relevance of arguments decreases with increasing customer involvement.

2.4 *Research model*

The theoretical considerations presented in the preceding chapters are summarized in figure 1. The derived hypotheses are assigned to the model paths.

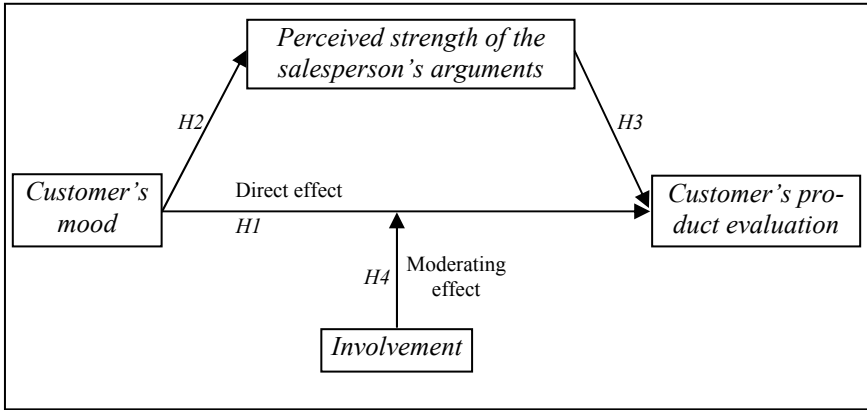


Figure 1: Research model

In the following chapter we test our hypotheses in an empirical study. We first explain the experimental design of our study. Then we present the results of the analyses we conducted.

3 Empirical study

3.1 Experimental design

In our study in October 2002, we used a 2 (strength of arguments) x 2 (induced mood) between-subjects design. 120 German university students (56 women and 64 men) played the role of customers and eight professional salespeople took over the part of the salespeople in a role-playing laboratory experiment. The average age of the participants playing the customer role was 24.0 years and there were no age or gender differences between the four experimental groups.

Manipulation of argument strength. In one half of the simulated sales conversations the salespeople used strong arguments supporting the recommended option. In the other half of the sales conversations the salespeople provided weak arguments. Argument lists containing weak and strong arguments were handed out to the salespeople before the experiment started.

Mood induction. Subjects stayed in a waiting room for 15 minutes. One waiting room was huge and comfortable and was furnished with carpet, comfortable seats and plants. In addition, sunlight came through the windows. In this room, we ran a television channel showing a funny Mr. Bean episode and staff offered orange juice, champagne and cookies. This room was used for the induction of positive mood. The other waiting room was small and did not have any seats, plants, or windows. In this room we did not offer snacks or drinks and we ran a television channel showing scenes of a movie against war. This room was used for the induction of negative mood. The manipulation check shows that the mood manipulation was successful because the experimental groups differed significantly in mood (the measures for experienced mood are listed in table 2). The mean values of the customers' perceived mood were 4.98 in the case of the induction of positive mood and 3.11 in the case of the induction of negative mood ($t=9.011$, $p<.0001$).

Manipulation of involvement. In order to compare a low involvement situation to a high involvement situation, we created two different scenarios. In the low involvement scenario we advised the participants to imagine that they intended to book a four days trip to Paris for their parents which was not meant to be a present and which therefore was of a low personal relevance for the participants. In the high involvement scenario, the participants had to assume that they wanted to replace their old computer by a new notebook. Each subject took part in two sales conversations. One sales conversation was about the trip to Paris and the other was about notebooks. One part of the subjects first had the sales conversation on the trip to Paris and the other part of the participants was first advised on notebooks to control for order effects.

Procedure. Each participant had to wait fifteen minutes in one of the two waiting rooms, then had the sales conversation on the first product and completed a questionnaire which contained statements on 7-point scales. Afterwards each participant had to wait another 15 minutes for the second sales conversation with another salesperson in the same waiting room as before. After the second sales conversation subjects filled in the next questionnaire and were then informed about the purpose of the experiment.

The experimental rooms were decorated with typical travel agency or a computer retailing store materials. Some computers were physically at hand. The fact that we tested our model in a laboratory experiment instead of using a real life setting might be a limitation of the results of our study but irrelevant parameters are easier to control in a laboratory experiment than in a real life setting.

3.2 *Effects of induced mood and manipulated argument strength*

In order to analyse effects of customers' mood on their evaluation of the recommended product, we applied a two step approach following the procedure suggested by Petty et al. (1993, p. 11). In the first step of analysis, we used the dichotomous mood induction (negative/positive mood) and the manipulated argument strength (weak/strong arguments) as independent ANOVA variables. In addition we split the sample into two sub samples according to the involvement manipulation. In the second step we analysed the effects of the subjects' experienced mood and perceived argument strength using a LISREL model. We again conducted separate analyses for the two situations of involvement.

The eight mean values of customers' product evaluation resulting from the design described above are summarized in table 1.

Table 1: ANOVA results for induced mood and manipulated argument strength

<i>Induced mood</i>	<i>Involvement</i>			
	<i>high (notebook)</i>		<i>low (trip to Paris)</i>	
	<i>manipulated strength of arguments</i>			
	<i>low</i>	<i>high</i>	<i>low</i>	<i>high</i>
negative	3.32	4.23	2.53	3.91
positive	3.93 ←	4.67 ↑	4.41 ←	5.08 ↑

The results show that there is a significant main effect of induced mood on customers' product evaluation ($F=44.17$, $p<.001$) supporting hypothesis H1. If we compare the differences of the customers' product evaluation in the high and in the low involvement situation, we find that the effect of argument strength exceeds the mood effect in the high involvement situation ($4.67-3.93>4.67-4.23$, $t=1.324$, $p<.1$), whereas the mood effect is stronger in the low involvement situation ($5.08-3.91>5.08-4.41$, $t=1.382$, $p<.1$).

3.3 Effects of experienced mood and perceived argument strength

In addition we analysed the effects of the participants' experienced mood and the perceived argument strength, which were measured on seven point scales, using a LISREL model. To test our hypotheses we transformed the research model shown in figure 1 which we derived from the theoretical considerations discussed above into the LISREL model presented in figure 2. The path coefficients γ_{AM} , γ_{EM} and β_{EA} reflect the relations between the independent and the dependent model variables.

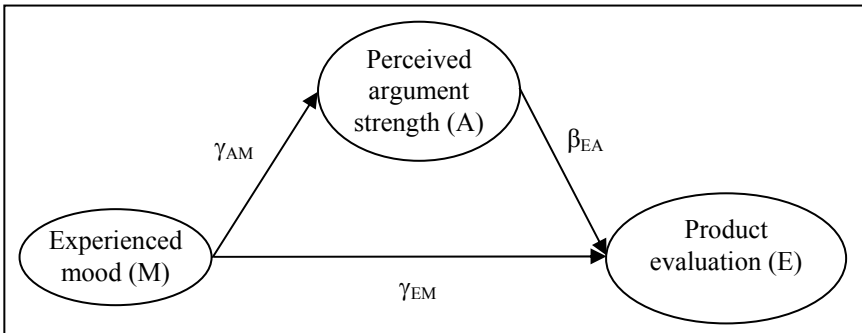


Figure 2: LISREL Model

We first conducted a confirmatory factor analysis to prove reliability as well as convergent and discriminant validity for the measures used in the LISREL model. As we considered only one dependent variable, we analysed all model variables in one confirmatory factor analysis. The items we used to measure the model variables and the results of the confirmatory factor analysis are summarized in table 2. The goodness-of-fit measures of the confirmatory factor analysis show that this model provides an acceptable fit to the data. The GFI value is higher than the often required value of 0.9 (Homburg/Giering 1996, p. 13) and the AGFI value is only slightly below this value.

As even the lowest t-value of the factor loadings is highly significant, all factor loadings are statistically significant proving the existence of convergent validity (Bagozzi et al. 1991, p. 434). The item reliability values exceed the value of 0.5 (Bagozzi/Yi 1991) and the factor reliability of each construct is around 0.9. In addition to proving item and factor reliability as well as convergent validity we also have to prove the discriminant validity of our model variables. Table 3 gives an overview of the squared factor correlations as well as of each factor's average variance extracted to test discriminant validity according

to the suggestions of Fornell/Larcker (1981, p. 46). It is obvious that all values of the average variance extracted are higher than the squared factor correlations proving discriminant validity.

Table 2: Confirmatory analysis of the four model variables

Factor	Item	Factor loadings		Item reliability	Factor reliability	Average variance extracted
		λ value	t value			
Experienced mood (M)	In this moment I was not at all fine/really fine.	0.87	16.80	0.76	0.93	0.77
	I was very unhappy/very happy.	0.90	17.69	0.81		
	I felt very uncomfortable/very comfortable.	0.86	16.51	0.75		
	I perceived my situation as oppressing/enjoyable.	0.87	16.82	0.76		
Perceived argument strength (A)	The salesperson's arguments are convincing.	0.86	16.22	0.73	0.89	0.76
	The arguments provide useful information to me.	0.89	17.17	0.79		
	I would consider these arguments in my buying decision.	0.60	10.03	0.56		
	The provided arguments are helpful.	0.89	17.37	0.80		
Product evaluation (E)	Compared to my opinion before the sales conversation I can imagine booking this trip (buying this notebook) less than before/more than before.	0.83	15.53	0.68	0.93	0.74
	After the sales conversation I have got the impression that booking the recommended trip (buying the recommended notebook) is a wrong decision less than before/more than before (re-coded scale).	0.72	12.69	0.52		
	My aptitude to consider this trip (this notebook) as a preferable purchase option now is less distinctive/more distinctive.	0.89	17.44	0.79		
	After the sales conversation I assess this trip (this notebook) as an attractive offer less than before/more than before.	0.92	18.65	0.85		
	My willingness to recommend this trip to Paris (this notebook) to my friends now is less distinctive/more distinctive.	0.92	18.38	0.84		

Goodness-of-fit measures: $\chi^2=126.38$ ($p<.001$), $df=62$

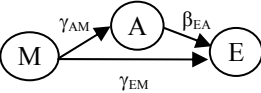
GFI=0.920, AGFI=0.890, CFI=0.980, RMR=0.033, RMSEA=0.066

Table 3: Test of discriminant validity

Construct	Average variance extracted	Squared factor correlation	
		M	A
Experienced mood	0.77		
Perceived argument strength	0.76	0.42	
Product evaluation	0.74	0.48	0.72

Subsequent to the confirmatory factor analysis, we estimated the path coefficients of the structural equation model shown in Figure 2, using the generalized least squares LISREL procedure (Jöreskog/Sörbom 1997). The path coefficients were estimated for the pooled sample as well as for both sub samples representing the situations of low and high involvement. According to Ping (1995, p. 337) dividing a sample into sub samples is adequate for testing the effect of a moderating variable. The LISREL results are summarised in table 4.

Table 4: Path coefficients of the LISREL model in the pooled sample and in the sub samples

Structural equation model	Coefficient	Pooled sample (N=240)	Sub samples	
			high involvement (n=120)	low involvement (n=120)
 <p>M: Experienced mood A: Perceived argument strength E: Product evaluation</p>	γ_{AM}	0.854 (t=5.913)	0.617 (t=3.510)	0.789 (t=7.383)
	γ_{EM}	0.547 (t=4.528)	0.542 (t=3.966)	0.923 (t=3.172)
	β_{EA}	0.469 (t=3.425)	0.413 (t=2.734)	0.076 (t=1.270)
Goodness-of-fit measures				
	χ^2 , df (p)	166.136, 63 (p<.001)	108.471, 63 (p<.001)	86.752, 62 (p<.05)
	GFI	0.893	0.860	0.888
	AGFI	0.846	0.897	0.835
	CFI	0.995	0.992	0.999
	RMSEA	0.073	0.078	0.058

Before we interpret the estimated values of the path coefficients, we have to assess the quality of the model fit. The GFI, AGFI and CFI values are around the often required value of 0.9. The RMSEA is below 0.08 indicating an acceptable model fit (Browne/Cudeck 1993). We consequently consider this model as appropriate to the data allowing for the interpretation of the path coefficients.

We first analyse the direct effect of a customer's experienced mood on his evaluation of the product recommended by the salesperson during the sales conversation. Using the pooled sample, we estimated the path coefficient $\gamma_{EM}=0.547$ ($p<.001$) supporting H1. We also expected a positive effect of a customer's experienced mood on his evaluation of the strength of the arguments provided by the salesperson. In the pooled sample the path coefficient is significantly positive ($\gamma_{AM}=0.854$, $p<.001$) supporting hypothesis H2. The coefficient β_{EA} reflecting the strength of the relation between a customer's perceived argument strength and his evaluation of the recommended product also has a positive sign and is statistically significant in the pooled sample ($\beta_{EA}=0.469$, $p<.001$) as well as in the high involvement sub sample ($\beta_{EA}=0.413$, $p<.01$) confirming hypothesis H3. However the data of the low involvement sub sample did not provide support for H3.

In hypothesis H4 we assumed that the direct effect of a customer's mood on his product evaluation compared to the relevance of the arguments provided in the sales conversation decreases with a higher customer involvement. Thus we compare the relation between $\gamma_{AM}\cdot\beta_{EA}$ and γ_{EM} in the sub samples. According to H4 $\gamma_{EM}-\gamma_{AM}\cdot\beta_{EA}$ should be higher in the low involvement sub sample than in the high involvement sub sample. In the low involvement situation we obtained $0.923-0.789\cdot0.076=0.863$ compared to $0.542-0.617\cdot0.413=0.287$ in the high involvement situation which is consistent with H4. In order to test the difference we compare the strength of the direct mood effect γ_{EM} in the sub samples (0.923 to 0.542, $t=3.687$, $p<.001$) and the strength of the indirect total effect of mood $\gamma_{AM}\cdot\beta_{EA}$ in the sub samples ($0.789\cdot0.076=0.060$ to $0.617\cdot0.413=0.255$, $t=2.260$, $p<.05$). The direct mood effect on product evaluation is significantly stronger in the low involvement situation compared to the situation of high involvement and the indirect total effect of mood through perceived argument strength on product evaluation is significantly stronger in the high involvement situation thus supporting H4.

4 Implications

As some authors argue that people make direct positive inferences from their mood to the evaluation of environmental stimuli and of other people, and as

other authors assume that mood effects depend on customer involvement, the question arose, under which conditions it might be advantageous to induce positive mood in customers before a personal sales conversation. In this context it is also important to have insights in effects of the strength of the arguments provided by a salesperson in a personal sales conversation. We chose the situation of a sales conversation in a retail store to analyse these aspects in detail. The theoretical considerations presented above suggested that a customer's mood can have a direct effect on his product evaluation as well as an indirect effect through his perception of the strength of the arguments provided by the salesperson in a personal sales conversation. We also derived from literature that the strength of the direct and the indirect mood effects depends on the customer's involvement.

Based on the results of our empirical study, we showed that in a personal sales conversation the induction of positive mood is advantageous in low involvement situations. Under this condition customers are less willing to process purchase arguments, but they rely on cues like their mood to judge recommended product alternatives. In the case of high involvement, it is also beneficial to induce positive mood in customers before a personal sales conversation although in this situation customers intensively process arguments provided by the salesperson. This effect is due to the fact that a customer's positive mood has an indirect effect through his perception of the strength of the arguments provided by the salesperson on his product evaluation. In addition the results of our study indicate that the induction of positive mood is advantageous even if customers intend to buy expensive utilitarian products to increase the salesperson's ability to influence them during the sales conversation.

In our study we simulated involvement by using different products, but for further research it might be interesting to analyse the moderating role of involvement using only one product (i.e., analysing the effects of mood on product evaluation among high and low involved customers with regard to the same product). Moreover further product categories should be used to test mood effects in personal sales conversations and respondents other than students should participate in experiments to be able to generalise our findings.

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How do people react to mixed emotions in an ad/medium context setting? The moderating role of discomfort with ambiguity

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Abstract

The moderating role of the personality trait Discomfort With Ambiguity (DWA) on the processing of mixed emotions in advertising is studied. In our experiment, the emotions between the medium context and the embedded advertisement were mixed. Results indicate that discomfort with ambiguity, which can be seen as a proxy for how well people are able to deal with mixed emotions, has a moderating effect on advertising processing. Individuals having a high discomfort with ambiguity respond less positively to mixed emotions in advertisements and contexts. Further analysis shows that high DWA people respond better when a joyful ad is embedded in a joyful medium context compared to a sad context. For low DWA people, as expected, no significant differences were found.

1 Introduction

Research into the effect of emotional appeals in advertising is substantial (e.g., Aaker & Williams, 1998; Burke & Edell, 1986; Edell & Burke, 1987; Holbrook & Batra, 1987). As indicated by Williams and Aaker (2002), little research exists on the effect of the use of mixed emotions in persuasion appeals in a consumer behavior context. A typical example of this kind of persuasion appeals are fear appeals with a recommendation. For example, a TV ad in which a widow and children are shown, grieving over the loss of their husband and father, yet also simultaneously expressing a sense of comfort and security thanks to the deceased's life insurance policy (actual ad, circa 2001 as described in Williams & Aaker, 2002). The term 'simultaneous emotions' must be used with care. As Plutchick (1980) notices, it may be impossible to experience two bipolar (opposite) emotions at exactly the same time. Moreover, Lazarus (1991) and Ortony, Clore & Collins (1988) argue that emotions are presumably tied to different cognitive appraisals of a situation. Because these cognitive appraisals cannot be experienced simultaneously, the emotions they elicit cannot be experienced simultaneously either. In that sense, experiencing mixed emotions 'simultaneously' must rather be interpreted as experiencing emotions in close temporal proximity. However, there is also an opposite perspective. Following Cacioppo, Gardner and Berntson (1997) and Larsen, Mc Graw, and Cacioppo (2001), Williams and Aaker (2002, p. 636) argue that "[...] emotional valence is represented by two independent dimensions. Thus not only can one simultaneously experience conflicting emotions, such joint experience may be natural and frequently occurring." Hence, dependent of the perspective the concept 'mixed' must be seen as 'in close temporal proximity' or as 'simultaneous'. It must also be noted that for instance Williams and Aaker (2002) use the term mixed emotions, although it might be a mix of affective meanings rather than a mix of

emotions. However, following Williams and Aaker (2002) we will use the term 'mixed emotions' in the remainder of this paper. The mixing of emotions may not be solely embedded in the ad itself. The combination of the medium context with an embedded ad can also result in a mixed emotion. For example, there is a combination of emotions when a fund-raising ad is showing a poor child, and this ad is embedded in a story about the happiness of a family. The extent to which mixed emotions in a context/ad situation lead to specific consumer responses may depend on specific consumer characteristics. The purpose of this paper is to extend previous research on the response to mixed emotions by analyzing mixed emotions in a context/ad setting. Additionally, the moderating role of the personality trait Discomfort With Ambiguity (DWA) is tested. The study is applied to an advertisement for a fictitious nonprofit organization.

2 Mixed emotions in a medium context/ad setting and discomfort with ambiguity

2.1 Mixed emotions in a medium context/ad setting

Media context can be defined as the characteristics of the content of the medium in which an ad is inserted. According to the priming principle, a specific context can serve as a primer. Being primed, a consumer can become more susceptible to a subsequent ad and process it more intensively (Herr, 1989; Yi, 1990, 1993). Much attention has been devoted to affective priming resulting in mood effects. Mood can be defined as a feeling state, but less intense and attention-getting than emotions (Gardner, 1985). A first line of research focuses on the effect of a positive mood-eliciting context on subsequent ad effectiveness. Goldberg and Gorn (1987) stated that an ad placed in a television program eliciting a positive mood generated better ad responses compared with a situation where the ad was embedded in a negative mood-eliciting television program. As indicated by De Pelsmacker, Geuens and Anckaert (2002), a number of theories are put forward to explain this effect. The excitation or affect transfer hypothesis (Cantor, Zillman & Bryant, 1975) states that the positive effect of the context is transferred to the ad, leading to a more positive evaluation of the ad. Another theory is the hedonic contingency theory (e.g., Lee & Sternthal 1999), which states that people who are in a positive mood engage in a more profound elaboration of extra information because they expect that the outcome will be favorable. Aylesworth and McKenzie (1998) stipulate that when people are in a good mood, they will process an ad more centrally, whereas, in a bad mood, they continue to process the program that elicited the bad mood more centrally, leaving no room to process the subsequent ad centrally.

A second line of research focuses on the congruency between the medium context and the embedded ad. Instead of stating that an ad performs better when embedded in a positive mood context, these theories postulate that an ad must be placed in a mood-congruent context (implying for instance that a sad ad placed in a sad context can perform better than when placed in a joyful context). In his research based on the semantic network theory, Bower (1980, p. 147) points out that "people attend to and learn more about events that match their emotional state". Lord, Burnkrant, and Unnava (2001, p. 3) state that the mood congruency hypothesis:

"[...] holds that the greater availability of mood-consistent information in memory facilitates the encoding of information that is affectively consistent with the prevailing mood state. It does this by making available more concepts in memory that can be linked to the incoming information. Consequently, this leads to greater elaboration of mood-congruent information, and this facilitates subsequent retrieval of that information."

Kamins, Marks, and Skinner (1991) call this process the Consistency Effects Model. They compare it with the (confusingly termed) Mood Congruency Model (Goldberg & Gorn, 1987), which indicates that commercials in a happy program context were seen as more effective compared with ads embedded in a sad program context. However, in this case (and also in other studies, e.g., Axelrod, 1963; Edell & Burke, 1987; Srull, 1983), the focus was on the effect of a happy or sad mood context on ad responses without taking the affective valence of the commercial itself into account. Kamins, Marks, and Skinner (1991) found that the Consistency Effects Model outperformed the Mood Congruency Model, indicating that context and ad should match to achieve the most positive ad responses. Hence, the recommendation was to embed a happy ad in a happy context and a sad ad in a sad context.

Results of studies on mood congruency are mixed. Many studies offer support for the mood congruency hypothesis (e.g., Gardner & Wilhelm, 1987; Kamins, Marks & Skinner, 1991; Perry et al., 1997; Lord, Burnkrant & Unnava, 2001). However, some authors find partial or no effects, and some authors recommend even placing an ad in a contrasting context (e.g., Isen et al., 1978; Hasher et al., 1985; Cantor & Venus, 1980; Murphy, Cunningham & Wilcox, 1979; Derks and Arora, 1993). A possible explanation for the effectiveness of this contrast strategy lies in the unexpectedness of the information (e.g., an ad) given its context, consequently leading to increased attention (Goodstein, 1992; Juntunen, 1995). In terms of catching the attention of consumers, the contrast idea may be extended towards a mood contrast: a mood-breaking ad can be more remarkable, hence leading to more ad attention and more positive ad responses.

Some researchers have tried to identify factors that moderate the responses to ads in congruent or contrasting contexts. For instance, De Pelsmacker,

Geuens, and Anckaert (2002) found that low-involvement individuals perceived that ads embedded in a congruent context resulted in more positive responses. Hence, the extent to which an (in)congruent context is 'suitable' may depend upon certain individual differences. With respect to ad effectiveness, when mixed emotions are used in an ad/contextsetting, the personality trait 'discomfort with ambiguity' can be expected to play a moderating role.

2.2 *Discomfort with ambiguity*

A study about mixed emotions was done by Williams and Aaker (2002), who found that the processing of mixed emotions depended among other factors on culture. They found that Asian people could deal more easily with mixed emotions than Western people. This was attributed to the fact that Western cultures are more influenced by Enlightenment and Christianity as well as by Aristotelian logic. Because of its principles, Aristotelian logic is responsible for a tendency to experience difficulty in engaging in dialectical processing. In addition, the law of identity (things are what they are and nothing else) especially the law of the excluded middle (a statement is either true or false), and the law of noncontradiction (no statement can be true and false at the same time) focus on a strongly dualistic way of thinking. On the other hand, Asian cultures are often based on Confucian and Buddhist philosophies, in which the ideas of a constantly changing environment and of holism are key elements, implying that contradictions are perceived as natural and common.

Age also appears to be a relevant variable in dividing people into low and high acceptors of duality. The more mature and wiser a person becomes (normally increasing with age), the greater his/her ability to harmonize contradictions (Basseches, 1980; Baltes & Staudinger, 1993). In other words, some groups of people are more dualistic than others, and dualism is defined as the extent to which one sees things in a bipolar way (e.g., good versus bad, and strong versus weak).

Williams and Aaker (2002) operationalize groups accepting duality in two ways. On the one hand, they focus on the intercultural differences affecting the acceptance of duality (Anglo-Americans versus Asian Americans, low versus high propensity to accept duality, respectively). On the other hand, they define duality groups by age (the older the person, the higher the propensity to accept duality). Although measuring duality in this way makes results more operational, this procedure may be biased; for instance, as a result of potential confounds due to socioeconomic background. Western countries may have a focus on Aristotelian ideas and in a later phase on Enlightenment, but these ideas are not reflective of the whole of Western philosophy. For instance, Arthur Schopenhauer (1788-1860) was the first important Western philosopher to incorporate Eastern philosophical ideas into Western philosophy. Moreover, in a

period where movements such as the New Age movement gain attraction and Western people are more open to holism, proclivity to accept duality will also be greater for certain people in Western culture. With respect to age, it is clear that certain personal life experiences may make people wiser or more mature as compared to their contemporaries.

An appropriate personality trait to measure duality at the personal level is Discomfort With Ambiguity (DWA). DWA is a subconstruct of the Need for Closure Scale (NFCL). Need for closure reflects a person's desire for clear, definite, or unambiguous knowledge that will guide perception and action, as opposed to the undesirable alternative of ambiguity and confusion. Need for closure is a motivation to draw a conclusion quickly and to terminate cognitive information processing related to the issue (Webster & Kruglanski, 1994). For instance, in a study by Klein and Webster (2000) on the influence of need for closure on information processing of a persuasive message containing both heuristic cues and systematic arguments, high-NFCL people tended to use the peripheral or heuristic route (providing quick, easy closure), while low NFCL-people used the central or systematic route. The DWA subscale measures the discomfort produced by ambiguity. Individuals who score high on this construct are expected to have a low proclivity to accept duality in messages, and individuals who have a low score are able to process mixed emotions and messages more easily. The DWA scale has affective as well as cognitive oriented items and some items are a mixture of both. For example, the statement 'I feel uncomfortable when someone's meaning or intentions are unclear to me' stresses the feelings aspect (feeling uncomfortable). Also the cognitive characteristics of the DWA scale are appropriate given the above-mentioned cognitive appraisal mechanism with respect to experiencing emotions, indicating that emotions are seen as being tied to the different cognitive appraisals of a situation. (Lazarus, 1991; Ortony, Clore & Collins, 1988). Moreover, in cognitive psychology, subjective feelings such as moods and emotions are conceptualized in terms of encoding, storage, and retrieval processes (Bower, 1981). In addition, research (Schwarz, 1990, Schwarz & Clore, 1983, 1988) indicates that affect can also be seen as information when making evaluative judgments. In this 'affect-as-information' model, people evaluate their feelings while imagining a target situation and use this information in their judgment. This "How-do-I-feel-about-it" heuristic posits that positive or negative feelings about the target's representation will lead to a positive or negative evaluation of the target itself, respectively. Therefore, DWA, containing a mixture of cognitively and affectively oriented items is an appropriate variable for measuring the proclivity to accept emotional duality in stimuli, i.e. a higher score on DWA reflects a higher level of dualism. Individuals with a low DWA do not necessarily like ambiguity. Low DWA scores simply means not having any problems with ambiguity. Individuals with a higher DWA are less comfortable with ambiguity.

The personality trait Discomfort with ambiguity (DWA) can be expected to have a moderating effect on the processing of mixed emotions in a context/ad situation. On the basis of the foregoing, the following hypotheses can be developed.

H1a: Individuals scoring low on DWA generate equal responses (attitude towards the ad, attitude towards the organization, and behavioral intention) in case the emotions in the ad and medium context are mixed or not mixed.

H1b: Individuals scoring high on DWA, as opposed to individuals scoring low on DWA, generate more positive responses in the case of non-mixed emotions in the ad and medium context than in the case of mixed emotions.

In the next section, the selection of an appropriate set of emotions to be mixed is discussed. Based on this set of two emotions, the effect of mixed emotions in an ad-medium context setting are examined.

3 Determining an appropriate set of opposite emotions

Although Plutchik's theory of emotions may be criticized for its strong basis in evolutionary psychology and for its lack of cognitive elements (Cafferata & Tybout, 1989), it remains a popular and frequently cited theory. In his 'wheel of emotions', Plutchik (1980) distinguishes eight primary emotions. These emotions can be split into four bipolar couples, Acceptance-Disgust, Fear-Anger, Anticipation-Surprise, and Joy-Sadness. Although Plutchik indicates that people can experience a blend of emotions (first, second and third dyad), he postulates that opposite emotions cannot be experienced at the same time. He further categorizes these eight emotions into positive (joy, acceptance anticipation, and surprise) and negative emotions (anger, fear, disgust, and sadness). For the purpose of our study, we want to mix the most opposite two emotions, thus inducing the strongest emotional tension. The four emotional bipolarities were presented to a sample of 30 persons. They were asked to indicate for each couple the extent to which they experienced the stated emotions as opposite. Answers were given on a five point Likert type scale ranging from 1 (totally not opposite) to 5 (strongly opposite). Mean scores and standard deviations are reported in Table 1. Repeated measures analysis of variance indicated that the null hypothesis of equal means was rejected (Wilk's $\lambda(3,27) = .163, p < .001$). The Joy-Sadness couple was seen as the most opposite ($M = 4.17, SD = .87$). Pairwise comparisons indicated significant differences at the $p < .001$ level except for the comparison between Joy-Sadness and Acceptance-Disgust (still significant at $p = .007$) and the comparison between Acceptance-Disgust and Anticipation-Surprise ($p = .156$). From this analysis, it appeared that the emo-

tions Joy and Sadness were seen as the most opposite. Hence, the development of stimuli was based on these two emotions.

Table 1: Indicated extent of oppositeness between emotions

<i>Opposite emotions</i>	<i>M</i> ¹	<i>SD</i>
Joy-Sadness	4.17	.87
Acceptance-Disgust	3.40	.77
Anticipation-Surprise	2.90	1.03
Fear-Anger	2.20	.81

¹score on five point Likert type scale (1 = totally not opposite to 5 = strongly opposite)

4 Experimental design

Stimuli. Two experimental ads (which later had to be embedded in contexts) were created. We created an advertisement for a fictitious fundraising organization ‘Children in need’ to exclude effects of prior knowledge that could bias attitudes and intentions. The ad was A5 sized with the left half consisting of a picture. A short text was written on the right half (centered, surrounded by white space). A message was written at the bottom of the right part (the same for all ads): Support ‘Children in need’ (www.cin.be). An account number was added, and it was mentioned that gifts were tax deductible. A jury of two collected 10 joyful and 10 sad pictures. These pictures were randomized and all presented to 30 respondents who had to indicate on a seven-category semantic joyful/sad differential how joyful/sad they experienced each picture. A repeated measures analysis indicated that the null hypothesis of equal means was rejected (Wilk’s $\lambda(19,11) = .004, p < .001$). A jury of three selected a pair of pictures from the top four of the sad and joyful pictures that differed the least in terms of picture layout and concept (two pictures of a child were chosen), but that still showed a significant difference on the semantic differential (joyful picture ($M = 6.43, SD = 1.01$), sad picture ($M = 2.53, SD = .86$), $t(29) = 18.03, p < .001$). For the selection of the texts, a similar procedure was followed. Again, the null hypothesis of equal means was rejected (Wilk’s $\lambda(19,11) = .004, p < .001$). The happiest and saddest texts that were acceptable in terms of matching with the pictures were withheld (joyful text ($M = 6.37, SD = .85$), sad text ($M = 1.37, SD = .49$), $t(29) = 28.92, p < .001$). The joyful text was ‘If every person would make one other person joyful, then the whole world would be joyful’; the sad text was ‘In Africa, every ten seconds a child dies from hunger’. Hence a joyful

ad (joyful text and picture) as well as a sad ad (sad text and picture) were created. In a second step, these ads were embedded in an emotional context. For each emotional combination (joyful/sad ad and joyful/sad newspaper content), a double mock newspaper page was created, each page with 85% context (articles) and 15% ad space. For the newspaper content, joyful and sad articles were gathered from newspapers and from the Internet that were published during the months before the experiment took place. A jury of two persons made a selection from these articles, taking into account that the newspaper as a whole should look realistic (e.g., no articles with a specific date included or referring to a specific period as 'last week').

Independent variables. Three independent variables were used: emotion type of the context (joyful/sad), emotion type of the advertisement (joyful/sad), and DWA. The emotion type of the context and the ad were checked by means of a self-reported seven category semantic differential scale (1 = very sad, 7 = very joyful). There was a significant difference between the contexts indicating successful manipulation of the sad context ($M = 2.02$, $SD = .96$) and the joyful context ($M = 5.51$, $SD = 1.00$), $t(189) = 24.54$, $p < .001$). There was also a significant difference between the two advertisement types indicating successful manipulation of the sad ad ($M = 2.23$, $SD = 1.02$) and the joyful ad ($M = 4.33$, $SD = .94$), $t(189) = 14.64$, $p < .001$). DWA was measured by means of a five-item seven-point scale (Vermeir, 2003; Webster & Kruglanski, 1994) at the end of the survey. As shown in Table 2, Cronbach's alfa indicated an acceptable reliability (.69) (Hair et al, 1998).

Dependent variables. Three dependent variables were measured: attitude towards the ad, attitude towards the organization, and behavioral intention. Table 2 shows the three dependent variables with their reliability and corresponding items. Cronbach's alpha indicates acceptable reliability for each of the constructs.

Participants and procedure. The sample consisted of 191 undergraduate students, and the study was conducted during class time. Each respondent received one of the four newspaper versions with an embedded ad. Participants were told that the research was about a test for a new newspaper. It was stressed that the focus of the test was on the evaluation of the newspaper, and that they should look at the full context of the newspaper as they would normally do. After two minutes, they were instructed to turn over the double-sided newspaper, which was then collected. Persons who needed less than two minutes were instructed to turn over the newspaper and wait until the two minutes were over. Finally, they were instructed to open an envelope containing the questionnaire. They were allowed as much time as they needed to complete it.

Analytical method. A common approach to analyzing experiments of this kind is by means of an ANOVA $2 \times 2 \times 2$ full factorial design (emotion in ad \times emotion in context \times level of DWA). As discussed, in our study, DWA was

measured by means of a five-item seven-point scale (Vermeir, 2003; Webster & Kruglanski, 1994). The score of a scale variable is often transformed into a categorical variable, for example, by means of a median split. However, Irwin and McClelland (2001) indicate that this approach can influence the statistical significance of the interaction and that it can decrease the statistical power to detect interaction. McClelland (1997) points out that dichotomizing a variable with a median split can be equivalent to discarding about half of the data. Hence, they recommend using moderated regression analysis. They also indicate that, in contrast to additive regression analysis, it is important to include all components of the product terms in the regression model. It is important to include all terms, even if these terms are nonsignificant or meaningless, to enable proper partialling of the product. In regression analysis, multicollinearity can inflate the standard errors of the regression coefficients (Jaccard, Turrisi & Wan, 1990). Cronbach (1987) suggests centering the scale variables before forming the multiplicative term because multiplicative terms in moderated regression analysis can cause high levels of multicollinearity. "This transformation will tend to yield low correlations between the product term and the component parts of the term." (Jaccard et al., 1990, p. 31).

Table 2: Reliability of attitudes and intentions with corresponding items

Attitude towards the ad [Aad] (Cronbach's $\alpha = .80$)*This ad is well made.**This ad attracts attention.**This ad is remarkable.**This ad appeals to me.***Attitude towards the organization** (Cronbach's $\alpha = .80$)*I think this is a good organization.**This organization looks to me as better than other similar organizations.**This organization arouses trust in me.**This organization appeals to me.**This organization knows what it stands for.***Behavioral intention** (Cronbach's $\alpha = .80$)*After watching this ad, I consider making a deposit to this organization.**I would rather deposit money to this organization than to another similar organization.**After watching this ad, I'm going to inform myself better about the operations and targets of this organization.**By watching this ad, I'm prompted to make an effort to help this organization.***Discomfort with ambiguity** (Cronbach's $\alpha = .69$)*I feel uncomfortable when someone's meaning or intentions are unclear to me.**I don't like it if I don't understand why someone makes a particular statement.**I always want to know why certain people make certain decisions.**I don't like it when people make statements that can be interpreted in different ways.**I always like to know immediately what people mean when they say something.*

Mixing of emotions was manipulated by combining the emotion (joyful/sad) in the newspaper content and the emotion in the ad (joyful/sad). Two types of

analysis were carried out. Analysis 1 was a parsimonious one in which the combination of emotions was taken together, i.e., emotions were mixed (joyful ad/sad context or sad ad/joyful context) or not mixed (joyful ad/joyful context or sad ad/sad context). Hence, the first analysis for Experiment 1 is as follows (a separate regression analysis was carried out for each dependent variable: attitude towards the ad, attitude towards the organization and behavioral intention):

$$Y = a + b \times \text{mixed_emotions} + c \times \text{DWA} + d \times [\text{mixed_emotions} \times \text{DWA}] + \text{error}, \quad [\text{Eq. 1}]$$

where Y = three variables measuring ad effectiveness; mixed_emotions a dichotomous variable (mixed emotions or no mixed emotions, -1/1 coded); and DWA , a mean centered interval variable.

We expected the coefficient of the second-order interaction term to be significant, indicating a moderating effect of DWA on the processing of mixed emotions. Analysis 2 was a more extended analysis where the emotions reflected in ad and context were treated as separate variables:

$$Y = a + b \times \text{emotion_ad} + c \times \text{emotion_context} + d \times \text{DWA} + e \times [\text{emotion_ad} \times \text{emotion_context}] + d \times [\text{emotion_ad} \times \text{DWA}] + e \times [\text{emotion_context} \times \text{DWA}] + f \times [\text{emotion_ad} \times \text{emotion_context} \times \text{DWA}] + \text{error}, \quad [\text{Eq. 2}]$$

where Y = three variables measuring ad effectiveness; emotion_ad and emotion_context dichotomous variables (sad or joyful, -1/1 coded); and DWA , a mean centered interval variable.

We expected the coefficient of the third-order interaction effect to be significant, indicating a moderating effect of DWA on the combination of emotions presented. Analysis 1 is nested in analysis 2, i.e., the results of Analysis 2 are more nuanced and go beyond the results of Analysis 1, although the latter is more parsimonious.

5 Results

For each of the dependent variables in Experiment 1 (shown in Table 2), a moderated regression analysis was conducted for Analysis 1 (Eq. 1) as well as for Analysis 2 (Eq. 2). The results for Analysis 1 (Eq.1) are shown in Table 3. We found partial support for Hypothesis 1a and Hypothesis 1b. For behavioral intention, a moderately significant second-order interaction effect was found

($t(187) = 1.74, p = .084$). The graphical representation (Figure 1) shows that individuals with a high DWA show a significantly more positive behavioral intention as a result of non-mixed emotions compared to mixed emotions. The confidence interval for the difference shows that this difference is significant for mean corrected DWA values higher than .5 standard deviation. In other words, the scores for individuals with low DWA are not significantly different in case of mixed and non-mixed stimuli. Hypothesis 1a and Hypothesis 1b were therefore supported.

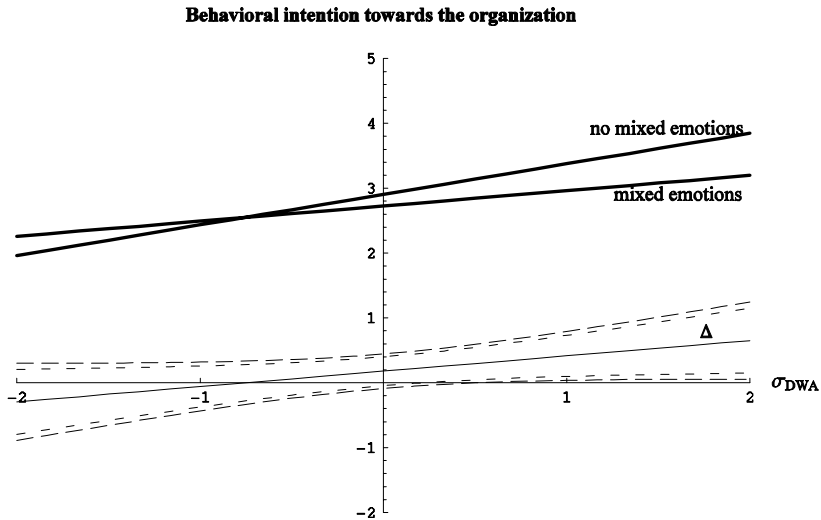
Table 3: Summaries of moderated regression analysis, Analysis 1, Eq. 1

	<i>Attitude towards the Ad</i>	<i>Attitude towards the organization</i>	<i>Behavioral intention</i>
Model	3.094**	2.956**	10.437***
Intercept	3.885***	4.135***	2.817***
	<i>(.079)</i>	<i>(.055)</i>	<i>(.068)</i>
Mixed emotions	.048	.042	.089
	<i>(.079)</i>	<i>(.055)</i>	<i>(.068)</i>
DWA	.297***	.184**	.444***
	<i>(.100)</i>	<i>(.069)</i>	<i>(.086)</i>
Mixed emotions x DWA	.002	-.059	.149*
	<i>(.100)</i>	<i>(.069)</i>	<i>(.086)</i>

Note. Numbers in columns represent unstandardized regression coefficients (standard errors are in italic between parentheses) for a moderated regression analysis employing the dependent variable at the top of the column and the independent variables in the far left column. For the model, the F value is reported.

All tests of main effects and interactions are based on $t(187)$. The test for the corrected model is based on $F(3, 187)$.

* $p < .10$. ** $p < .05$. *** $p < .01$.



Scores are shown in bold line, lines with small and large dashes represent confidence intervals for difference at 90% and 95% confidence, respectively.

Figure 1: Graphical representation of the interaction effect of mixed emotion (newspaper) x DWA, Experiment 1.

In Table 4, the regression results for Analysis 2 (eq. 2) are presented. For behavioral intention, a significant third order interaction effect was found ($t(183) = 1.74, p = .030$), again supporting Hypothesis 1. Inspection of the graphical representation in Figure 2 shows cross-over interaction effects in case of a joyful as well as a sad context. Scores for individuals with low DWA are not significantly different for mixed and non-mixed emotions. The confidence intervals for the differences also show that the interaction effect was only significant in the case of a joyful context. In case of a joyful context, people having difficulties with ambiguity prefer a joyful ad. Hence, Hypothesis 1a was supported and Hypothesis 1b was partially supported. No significant interaction effects for attitude towards the ad and attitude towards the organization were found. A significant main effect of DWA was also detected for all three dependent variables.

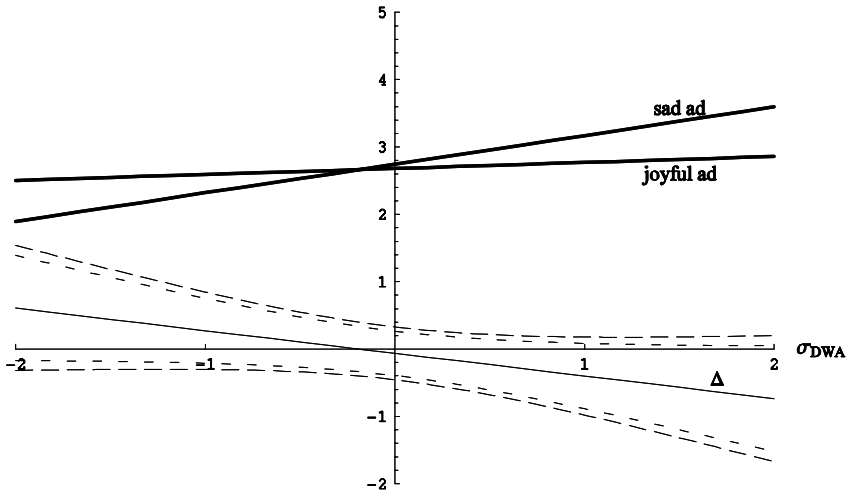
Table 4: Summaries of moderated regression analysis, Analysis 2, Eq. 2

	Attitude towards the Ad	Attitude towards the organization	Behavioral intention
Model	2.572**	2.576**	5.228***
Intercept	3.890*** (.079)	4.139*** (.054)	2.817*** (.068)
Ad	-.099 (.079)	-.073 (.054)	.068 (.068)
Context	-.161** (.079)	-.096* (.054)	.104 (.068)
DWA	.258** (.105)	.163** (.072)	.439*** (.091)
Ad x Context	.051 (.079)	.049 (.054)	.100 (.068)
Ad x DWA	-.006 (.105)	.025 (.072)	-.013 (.091)
Context x DWA	.166 (.105)	.138* (.072)	.115 (.091)
Ad x Context x DWA	.030 (.105)	-.035 (.072)	.199** (.091)

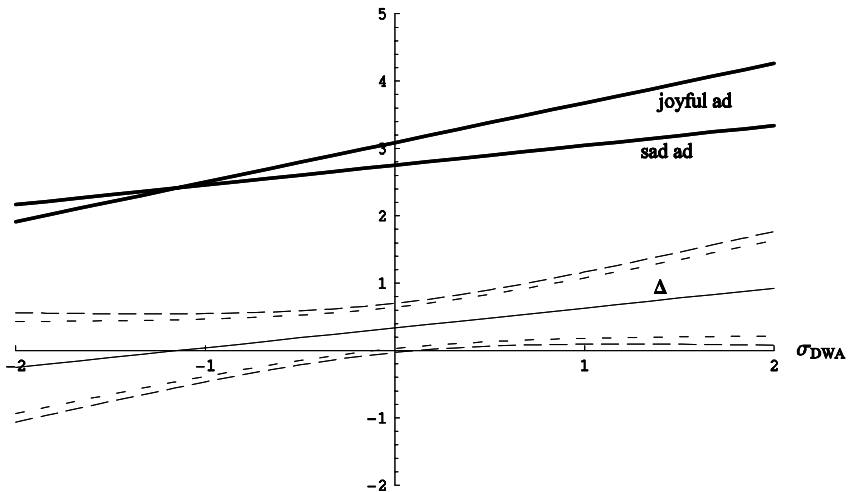
Note. Numbers in columns represent unstandardized regression coefficients (standard errors are in italic between parentheses) for a moderated regression analysis employing the dependent variable at the top of the column and the independent variables in the far left column. For the model, the F value is reported. All tests of main effects and interactions are based on $t(183)$. The test for the corrected model is based on $F(7, 183)$.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Behavioral intention towards the organization if context = sad



Behavioral intention towards the organization if context = joyful



Scores are shown in bold line, lines with small and large dashes represent confidence intervals for difference at 90% and 95% confidence, respectively.

Figure 2: Graphical representation of interaction effect ad (emotion 1) x context (emotion 2) x DWA, Experiment 1.

6 Discussion

Partial support was found for the hypothesis that DWA plays a moderating role in the processing of mixed emotions, when emotions are mixed between ad and medium context. The moderating effect of cultural and age differences on the processing of mixed emotions (Williams & Aaker, 2002) can be extended to the individual difference DWA. Our findings extend present knowledge on contrast or congruency effects in media context effects by indicating that the extent to which people feel comfortable with ambiguity determines which of the two theories applies. The analysis of the ad-context setting indicated that congruency outperforms incongruency for high DWA people, but that this effect was only significant in a joyful context, i.e., when placed in a joyful context, a joyful ad outperforms a sad ad. For a sad context a similar pattern was found, but was not significant. Another interesting finding is that the cross-over interaction effects are mostly attributable to the moderating effect of DWA in the case of context-congruent ads rather than in the case of opposite-valenced ads. Hence, when a joyful ad is placed in a sad context or a sad ad is placed in a joyful context, the level of DWA has little influence on responses. However, when a sad ad is placed in a sad context or when a joyful ad is placed in a joyful context, ad responses are very different for people scoring low and high on DWA. This means that the moderating effect of DWA on the use of mixed emotions is more apparent when using the same valence, than when using mixed emotions. Moreover, it appears from the results that the moderating effect of DWA leads to significant differences, only when DWA scores are above average (i.e., for high DWA individuals).

Assuming that the context is processed before the ad, our results mitigate the findings of Aaker, Stayman, and Hagerty (1986), who stipulated that when an emotional ad with a positive valence is placed after an ad of the same emotion, it elicits more negative evaluations compared with when it is placed after an ad of a different emotion. Of course, in our study, the ad is not placed after another ad but is placed after an affect-eliciting context. We find that two succeeding affective stimuli of the same valence (especially in the joyful-joyful condition) outperform mixed-emotion combinations for people scoring high on DWA. Previous research (e.g., Loewenstein & Prelec, 1993) pointed out that consumers prefer a positive affect to occur after a negative affect (final trend improvement). Our findings (sad context setting) show no significant support for this proposition. There are, however, indications for such a support, but only for people scoring low on DWA. People scoring high on DWA apparently do not need the affect improvement to report more positive responses.

In this experiment, only behavioural intention was significantly affected. It might be possible that due to the context, less attention was paid to the ad so that rather than putting focus on the organization, focus was more on the es-

sence of the ad message (giving money for children suffering from starvation), leading to more significant effects for behavioral intention and not for attitude towards the ad and attitude towards the organization.

Although no hypotheses were formulated for the main effect of DWA, a possible explanation can be the following one. Compared to the misery of the topic in the ad (children suffering from starvation), all respondents live in a relatively luxurious world. It might very well be the case that high DWA people are more sensitive to the ambiguity that may arise from these two perspectives (misery and luxury). This may result in a more positive attitude towards the problem, and subsequently in more favorable ad responses.

7 Conclusions, limitations and suggestions for further research

DWA appears to play a moderating role in the processing of mixed emotions between medium context and embedded ad. This finding refines the discussion about contrast or congruency medium context effects in advertising, as it shows that they appear to be moderated by the proclivity to accept duality, measured by DWA. The affective priming principle and similar frameworks such as the affect transfer hypothesis and the hedonic contingency theory mainly focus on the positive effect of context-elicited positive mood on ad responses. Our results indicate that this seems the case but only when a joyful ad is used for individuals scoring high on DWA. Thus, it seems that a joyful context will not always have a positive effect on ad effectiveness. The cross-over interaction effects suggest that high DWA people prefer congruent emotions. This is significantly true for the joyful-joyful condition, although some non-significant indications are also found for a sad-sad setting. This might suggest that people who prefer to have nondualistic cognitive and affective information prefer to hold a well-specified affective tone of information. An implication of these results may be that the kind of combination of emotions to be used in ad/context combinations has to depend on the profile of the target group. Rather than focusing solely on specific sociodemographics, it might be better to gain insight into more specific and relevant personality profiles. This information can then be linked to socio-demographic profiles.

Only the joy-sadness emotion couple set was used in this study. Further research could concentrate on other emotional sets, less opposite yet bipolar and less bipolar. One could expect that by taking lesser opposite emotions, the stimulus ambiguity would diminish. The expected effect on the moderating role of DWA in this situation is unclear. On the one hand, it may be expected that DWA will have a weaker moderating effect as the extent of having to deal with mixed emotions diminishes. However, the strongest bipolar emotional combination is possibly so opposite that dealing with mixed emotions in this way may

be even hard for people with a low DWA; hence the moderating influence of DWA could be stronger with less opposite emotional couples.

Another limitation of this study is that it only took into account the valence of emotions. Future research could also examine the role of arousal. The potential influence of the arousal level on the moderating role of DWA is not straightforward. A high-arousal combination of mixed emotions might increase the moderating role of DWA because of the higher perceived ambiguity, but at the same time, higher arousal could elevate the ambiguity in such a way that it may even impair low-DWA people's ability to deal with the mixed emotions. Moreover, it is not clear how the addition of arousal must be handled. Is it the arousal levels of the distinct emotions or the resulting arousal of the emotional combination that is important? In any case, the impact of arousal levels should be further explored.

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Sandra Diehl and Ralf Terlutter

Media-based and non media-based factors influencing purchase behavior and differences due to consumers' personality

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 - 4.3. Results regarding the influence of personality on factors that influence purchase behavior
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Abstract

This paper aims to conduct a classification of influence factors on purchase behavior of customers regarding consumption goods. This classification is empirically tested by means of a factor analysis. Data is surveyed using event-contingent protocols, one form of the diary method. Over a couple of weeks, 86 test-subjects evaluated their purchases in terms of relevant influence factors. Altogether, the classification is based on 3,458 purchase evaluations. Particular attention is paid to the comparison between non media-based and media-based influence factors. 12 factors are extracted using Principal Component Analysis (PCA), 9 non media-based and 3 media-based influence factors. Among the media-based influence factors, *neutral information transmitted through the media* exerts the highest influence on purchase behavior, followed by *TV and print advertising*. Among the non media-based influence factors, the factor *positive brand experience* exerts the highest influence on purchase decisions, followed by the situational factor *convenience purchase with low cognitive control*.

The paper further aims to test if personality influences the extracted factors affecting purchase behavior of consumers. Personality is analyzed on the basis of the NEO-FFI (five-factor model) by Costa and McCrae (1992). The five factors of the NEO-FFI are replicated. Cluster-analysis reveals four distinct consumer groups that differ with regard to their personality. The four personality groups show significant differences in all 12 factors. Results suggest that personality may well be suited for explaining which factors influence consumers' purchase decisions.

1 Introduction

“Virtually all thought and behavior is multiply caused, the resultant of numerous co acting factors” (Anderson 1981, 361). This article pursues multiple goals. Based on literature and an empirical study carried out using a form of diary questioning of consumers, important influence factors on purchase behavior of consumers are extracted. In particular, the strength of the influence of non media-based and media-based factors on purchase decision behavior is analyzed. Kotler et al. (2003, p. 326) ask that the marketing department be informed about the information sources of potential buyers and on the factors that influence consumers' decision. The present article seeks to contribute to the body of knowledge regarding this demand.

Further it is analyzed if personality traits influence the factors affecting the purchase behavior of consumers. Personality is a variable that influences different aspects of consumer behavior (e.g., Solomon, 2002; Blackwell et al., 2001; Schiffman and Kanuk, 1997; Kroeber-Riel and Weinberg, 2003). It char-

acterizes individuals for a longer period of time and is a stable predisposition. This means that it refers to stable characteristics within the individual that account for consistent patterns of behavior. Stable predispositions are of major importance for market segmentation due to their long-term validity.

Results on the usefulness of personality as an explanation of consumer behavior are ambiguous. Although personality can be ascertained in quite a consistent manner (McCrae, 1982, 300), the behavior that persons show in different situations has not been highly consistent (e.g., Wright and Mischel, 1987). This phenomenon is often referred to as a consistency paradox (e.g. Mischel, 1990, 128f.). Research on the person-situation debate (Kenrick and Funder, 1988) shows that personality is more suitable for predicting human behavior on a general level, but that personality is less suitable for predicting behavior in specific situations. This paper aims to contribute to our knowledge regarding the applicability of personality characteristics to the explanation of consumption behavior.

2 Theory

2.1 Factors influencing purchase behavior

There are many theories that offer insight into the analysis of influence factors on purchase decision. Behavioral decision theory (e.g., Bamberg and Coenberg 2004; Einhorn and Hogart 1981), for example, has the goal of describing and explaining the procedure and results of decisions. It is interdisciplinary and draws on psychological, sociological and social-psychological theories as well as on information processing theory. Self- and motivation theories help to explain social influences on consumer behavior, for instance, Festinger's (1954) theory of social comparison, Bandura's (1979) social learning theory as well as Kelley's (1973) attribution theory. Social exchange theories (Homans, e.g. 1993; Thibaut and Kelley, 1959) provide a framework for social interaction within the family, but also with regard to the interaction of customer and sales personnel. Environmental psychology (e.g., the emotional environmental psychology model by Mehrabian and Russell (1974)) puts the focus on influencing factors of the physical and social surrounding of the customer in a given environment. With regard to media-based effects, advertising effects theories (e.g., Vakratsas and Ambler, 1999), media effects theories (e.g., Mangold, Vorderer and Bente, 2004), the Agenda-Setting theory (McCombs and Shaw, 1972) and persuasion research (e.g., Hovland, Janis and Kelley, 1953) provide a basis for analysis. The integrated-information-response-model (Smith and Swinyard, 1982) offers clues to the interaction of media-based and non media-based experiences. Research on information processing helps to

explain the effects of neutral information, for instance, quality seals by independent institutes (e.g., the German Stiftung Warentest), editorial information or effects by information chunks (e.g., price, brands) (e.g., Kroeber-Riel and Weinberg, 2003). Information on the effects and importance of situational factors can be derived from trends in consumer behavior (e.g., convenience-orientation (Berry, Seiders and Grewal, 2002)) as well as from research on different types of purchase decisions (e.g., Weinberg, 1981).

There are many different factors influencing human purchase behavior mentioned in literature. However, there is no consensus on how to classify these factors. Kotler et al. (2003, 303ff.) differentiate between marketing mix factors, socio-cultural factors, personal factors, psychological factors and situational factors. We suggest differentiation between external and internal factors (for a similar classification, see Assael, 1998). External factors affect an individual from the outside (i.e. the influence of other individuals, of the purchasing situation, influence from ads, etc.). Internal factors refer to the inner processes of the individual (i.e. own experiences, needs, attitudes).

The external factors can be further divided into media-based and non media-based factors. Media-based factors include influence through different kinds of media, such as TV, print, direct mailing etc. Non media-based factors include all influences not conveyed by media, for instance, influences from family members, friends, sales personnel or the store atmosphere. The internal factors are differentiated further into current factors and individual predispositions. Individual predispositions are long-term influence factors, for instance, personality traits. Current factors are less stable than individual predispositions, for instance, brand experience or mood, which can change more quickly.

The focus of the paper lies on the analysis of the external factors. As outlined in the beginning of the paper, external media-based and external non media-based factors will be the focus of the analysis. Regarding media-based factors, the focus lies on influences through mass-media.

Figure 1 displays the proposed classification of the factors that influence purchase behavior.¹

¹ In addition to the literature cited above, further references provide information as well: e.g., Hilger, 1981; Hefner, 1981; Raffée and Silberer, 1981; Raffée, 1981; Blackwell, Miniard and Engel, 2001; Schiffman and Kanuk, 1997; Solomon et al., 1999; Beales et al. 1981; Peter and Olson, 1996.

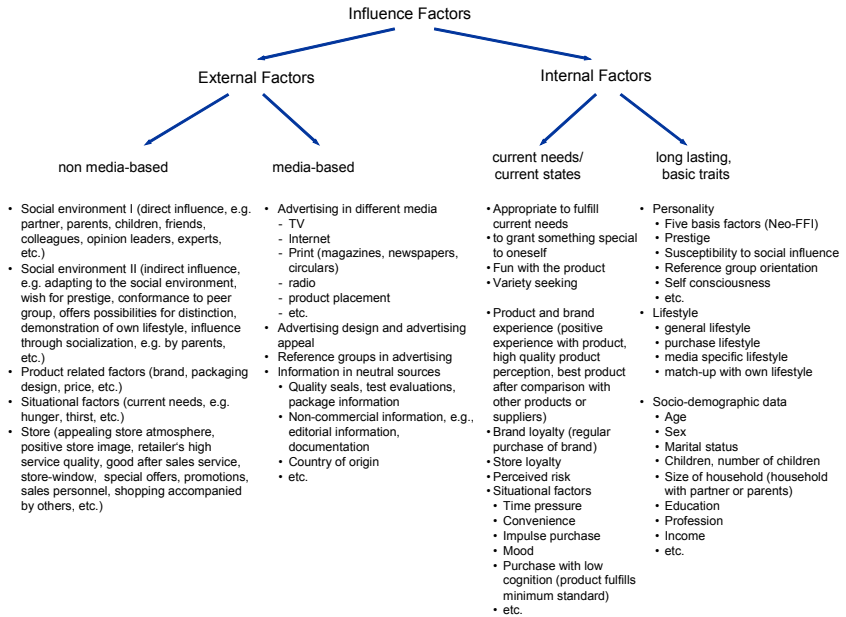


Figure 1: Proposed factors influencing purchase decisions

The second part of this manuscript analyzes whether the variable of personality is useful in explaining differences in purchase behavior.

2.2 Personality

There are several different personality theories (for overviews see e.g. Engler, 2002; Fisseni, 2003; Laux, 2003). One important approach to personality are the trait theories. Trait theories seek to identify the stable characteristics (personality traits) of individuals. There are approaches to trait theory in which one specific and isolated trait is analyzed, whereas other approaches aim to analyze personality in its entirety.

The research on one isolated personality trait has analyzed *extroversion/introversion* (Jung, 1921/1967), *innovativeness* (Price and Ridgway, 1983), *self-monitoring* (Snyder, 1974, 1979), *self-consciousness* (Duval and Wicklund, 1972; Fenigstein et al., 1975; Fenigstein, 1979), *need for cognition* (Venkatraman et al., 1990; Haugtvedt et al., 1992), just to name a few. In advertising research, *susceptibility to advertising* (Barr and Kellaris 2000), *affinity to advertising* (Smit and Neijens 2000) and *differences in temperaments* (Moore and Homer 2000) have been empirically analyzed.

The approach to trait theory which strives to analyze personality in its entirety presupposes that personality has an underlying core of fundamental personality traits which can be identified. The idea is that all individuals share the same personality traits and that individual differences are due to differences in the identified traits. The question is whether or not the approaches to personality research that try to analyze personality as an entirety are suitable to explain differences in consumer behavior, especially differences in the factors determining the purchase behavior of consumers.

Cattell et al. (1970) differentiate between 16 personality traits to describe the personality of a person. According to Eysenck (1970, 1990), there are three basic and broad personality traits (introversion-extraversion, neuroticism, psychosis). In recent research, numerous researchers assume a five trait structure of personality (for an overview see Digman, 1990; Wiggins and Pincus, 1992; Wiggins, 1996; De Raad, 2000; for criticism see Eysenck, 1992). Within this five factor tradition, there are two directions of research, (1) the lexical approach to the five factor structure (e.g. Norman, 1963; Tupes and Christal, 1992) and (2) the approach by Costa and McCrae (e.g. 1985, 1992). The lexical approach to the five factor structure is often referred to as the „Big Five“. The approach of Costa and McCrae is often referred to as the Five-Factor Model (FFM). Despite different histories of the „Big Five“ and the FFM, both approaches have many similarities in the trait structure, but also some deviations.

Until today, it has not been possible to decide which of the different approaches the „true“ one is. The measurement tool for the FFM, the NEO-PI-R or its shorter version the NEO-FFI, however, is the most frequently used personality questionnaire to assess a five factor structure of personality traits (De Raad, 2000). Therefore, the empirical study on personality in this research is based on the FFM with the NEO-FFI as well. The five personality traits of the FFM by Costa and McCrae (1992) can be briefly described as:

Neuroticism: Persons with high scores in this factor are characterized by anxiety, anger hostility, depression, self-consciousness², impulsiveness³ and vulnerability.

Extraversion: Persons with high scores in this factor are characterized by warmth, gregariousness, assertiveness, activity, excitement-seeking and positive emotions.

Openness to Experience: Persons with high scores in this factor are characterized by fantasy, aesthetics, feelings, actions, ideas and values.

² Self-conscious individuals feel uncomfortable around others. They are sensitive to ridicule and prone to feelings of inferiority (Costa and McCrae, 1992, 16).

³ In the FFM, impulsiveness refers to the inability of individuals to control cravings and urges (Costa and McCrae, 1992, 16).

Agreeableness: Persons with high scores in this factor are characterized by trust, straightforwardness, altruism, compliance, modesty and sensibility.

Conscientiousness: Persons with high scores in this factor are characterized by competence, order, dutifulness, striving for achievement, self-discipline and deliberation.

These five dimensions of personality are the basis for a segmentation of consumers. The question is raised, whether or not the resulting personality groups differ with regard to the strength of factors influencing their purchase behavior. It is analyzed, whether personality is a valuable basis for segmentation due to its universality, or if it is too broad a concept for the way in which consumers come to their purchase decision.

3 Method

In addition to the literature review, an empirical study was carried out. The empirical study served to shed more light on the dimensionality of the factors influencing purchase decision behavior regarding different products. Furthermore, the importance of media-based and non media-based influence factors was tested and the personality of the subjects was assessed. The study was carried out using event-contingent protocols, one category of the diary method (Wheeler and Reis, 1991). Subjects were 30 non-students and 56 students from a large university in Southwest Germany.

Process of the study: The test subjects were asked to keep a diary of their purchases and to evaluate 10 branded products per week, among them a maximum of 5 food products. Branded goods could be both manufacturer brands and store brands. Subjects were instructed to evaluate each purchase directly after the shopping using a standardized questionnaire. The questionnaire was to be filled out directly after the purchase, as more exact data with higher reliability and validity could be expected that way (Bolger, Davis and Rafaeli, 2003; Searles, Helzer and Walter, 2000; Scollon, Kim-Prieto and Diener 2003). By this, diary research explicitly seeks to minimize the risk of biased retrospection. In order to assure that the evaluated purchases were based on real purchases, the subjects were required to staple the receipt of the purchase and the questionnaire together.

The goal of the survey was to incorporate many different product categories. One aim of the study is to be able to draw conclusions about purchase behavior regarding products which are not restricted to only one specific product category, but which possess potential for a higher level of generalization. The diary method has the advantage that the researcher sees not only a snapshot of a day and purchase, but rather gets a record of daily purchase decisions over a longer

period of time under relatively natural conditions (real-life settings). Scollon, Kim-Prieto and Diener (2003, 5) point out "its ability to delve beyond single-time self-report measurement to answer complex questions about lives" as a central advantage of the diary method⁴ (see also Kubey, Larson and Csik-szentmihalyi, 1996).

The study with the student subjects was carried out between May and June 2004 (5 weeks). Altogether, 2,798 product purchases were evaluated at an average of about 50 products per subject. Paper and pencil was the technology selected to be used for the diary (P&P, see Bolger, Davis and Rafaeli 2003, 593ff. for other technologies), since the evaluation needed to occur directly after the purchase and the subjects could not be expected to always have a laptop readily available. The survey of non-students was carried out between September and October 2004. The process was the same as the student sampling. Subjects were required to evaluate around 20 purchases. Within the non-student survey, 660 products were evaluated, with an average of 22 products per subject. Altogether, 3,458 product evaluations resulted from both studies combined. The average amount of time required for filling out the questionnaire was around 10 minutes per purchase.

There is no established scale regarding the influence factors of purchase behavior and their dimensionality. Therefore, an explorative factor analysis using Principal Component Analysis was calculated in order to see whether the classification described in the theoretical part of the paper could be verified.⁵ Only items which clearly loaded on one factor and with a factor loading exceeding 0.4 were considered for factor interpretation. The Kaiser-Meyer-Olkin-Criterion (Measure of Sampling Adequacy (MSA)) was used to test the adequacy of the correlation matrix for a factor analysis.⁶

To assess the influence of the consumers' personality, the same subjects were in addition questioned with regard to their personality, based on the NEO-FFI. The German translation by Borkenau and Ostendorf (1993) was applied, which has already been validated in the German speaking area. Every factor

⁴ Scollon, Kim-Prieto and Diener (2003, 8) summarize five important advantages of the diary method (here referred to as Experience Sampling Method - ESM): "First, ESM allows researchers to better understand the contingencies of behavior. Second, ESM takes psychology out of the laboratory and into real-life situations, thus increasing its ecological validity. Third, ESM allows for the investigation of within-person processes. Fourth, researchers can avoid some of the pitfalls associated with traditional self-reports, such as memory biases and the use of global heuristics. Fifth, ESM answers the call for the greater use of multiple methods to study psychological phenomena."

⁵ The optimal number of factors was extracted using the Kaiser-Criterion. The solution was Varimax rotated.

⁶ The MSA-Criterion is considered to be the best method to test the correlation matrix (see Backhaus et al., 2003, 276; Stewart, 1981, 57f.; Dziuban and Shirkey, 1974, 360f.).

was measured with three items. From the original battery of items, which was comprised of 12 items, the 3 items with the highest factor loadings were used for each factor. Subjects answered on a 5 point rating scale.

Subjects: The age of the 86 subjects (30 non-students and 56 students) ranged from 16 to 72 years with an average age of 32.8 years. 31.5% of the subjects were male, 68.4% female.

Variables: The external influence factors and selected current internal variables were tested based upon the classification described above⁷: The subjects were required to report whether the respective influence factor had a large or small influence on a 5 point rating scale.

4 Results

4.1 Results regarding factors influencing purchase behavior

Table 1 displays the 12 factors that PCA has extracted, 9 non media-based and 3 media-based factors.

Four factors are related to the social environment. The factor (1) *adaptation to the social environment* is a factor demonstrating an indirect influence of the social environment on the purchase decision. The other three factors refer to a direct influence: (2) *children/partner* as closest family members, (3) *parents/family* as further family members and (4) the *non-family social environment* (friends, acquaintances, etc.). The results, which show that factors of the social environment exist that have a direct influence on the individual and factors that have an indirect influence meet the expectations as outlined in the theoretical part of the paper. The empirical analysis revealed that the direct influence of the social environment splits up into three different factors.

Two situational factors were extracted. One factor was labeled *convenience purchase with low cognitive control*, the other one *impulse purchase*.⁸

One factor was extracted that points to *positive brand experience*. This factor included the item *own experience* and the emotional item *happiness with the product*. Against our expectations, there was no single factor representing

⁷ The other internal factors shown in Figure 1 have been captured in the survey as well. In a separate questionnaire which had to be filled out only once, socio demographical data, as well as data relating to subjects' personality and lifestyle have been surveyed. In this paper, only the external factors and selected internal factors such as brand experience, joy with the product etc. are included. From these internal factors, a direct influence on product choice is expected.

⁸ Time pressure is a variable which is often considered as a situational factor (e.g., Solomon, Marshall and Stuart, 2005, 152). Time pressure has been measured in this study as well, but is not included in the factor analysis. It is considered as a variable which influences the kind of factors determining the purchase decision and the strength of the factors. It is considered as a variable that influences the other factors (see also Kuss and Tomczak 2000, 214f.; Knappe, 1981).

product-related features. Instead, a price factor arose with the items *favorable price of the product* and *special offers*. The price factor was labeled *low-priced product*. The item *appealing packaging and design* loaded on the factor *impulse purchase*, being one of the two situational factors.

Table 1: Factors influencing purchase decisions, results of the PCA

<i>Factor</i>	<i>Number of items in factor</i>	<i>Cronbach Alpha</i>	<i>Mean value of factor</i>	<i>Rank¹</i>
Adaptation to the social environment	7	0.887	1.54	8
Positive brand experience	7	0.788	3.03	1
Advertising in radio, Internet, product placement and celebrity endorser or media peer groups	4	0.813	1.10	12
Store attributes	5	0.799	1.67	6
Neutral Information transmitted through media	5	0.678	1.48	9
TV and print advertising	3	0.765	1.43	11
Non-family social environment	4	0.680	1.47	9
Low-priced product	3	0.602 ^a	2.10	4
Parents/family	3	0,559	1.65	6
Convenience purchase with low cognitive control	3	0,466	2.78 ^b	2
Impulse purchase	2	0,359	2.36 ^c	3
Children/partner	2	0,315	1.77 ^d	5

Notes:

¹ Factors received the same rank when mean values of the factors did not differ significantly.

^a *advertising in circulars* excluded from analysis, 0.534 when *advertising in circulars* is included

^b only the item *convenience*: 2.94

^c only the item *saw the product and bought it spontaneously*: 2.36

^d only the item *children*: 1.42; only the item *partner*: 1.81

Another factor that occurred was labeled *store attributes*. It contained items such as *store atmosphere*, *store image*, *store service* and *sales personnel*. This

means that sales personnel were assigned to the store, rather than to the social environment.

There was no separate emotional influence factor. The emotionally aligned items loaded on different factors.

PCA extracted three media-based factors, (1) neutral information transmitted through media, (2) TV and print advertising and (3) advertising in radio, Internet, product placement and celebrity endorser or media peer groups. The general liking of the commercial appeal of a product loaded on the factor TV and print advertising, indicating that TV and print mainly determine the likeability of the commercial appeal.

Overall, the classification developed in the theoretical part of the paper was largely confirmed.

Quality of the data:

With an MSA value of 0.871, the correlation matrix can be classified as very good or "meritorious" (Kaiser and Rice, 1974, 111ff.). The convergence and discriminant validity is acceptable. With few exceptions, each indicator loads satisfactorily high (> 0.4) on one single factor without overlap to other factors.

Table 1 shows the Cronbach Alpha values of the factors (Cronbach, 1951). 5 factors are higher than 0.7, 4 are between 0.5 and 0.7. These factors show reliable values (Nunally, 1967, 1978). However, Cronbach Alpha values for the factors *convenience purchase with low cognitive control*, *impulse purchase* and *children/partner* range only between 0.335 and 0.5. An aggregation of the three factors is questionable and results regarding the factors should be treated with caution.

Table 1 also shows the factor means of the respective factors and the ranking of the strength of the influences. Among the factors, the non media-based factor positive brand experience has the largest effect on the purchase decision. Regarding the media-based factors, neutral information transmitted through media was attributed the highest influence.

4.2 Results regarding personality

Personality: Principal Component Analysis (PCA) revealed that the five factors, i.e. personality traits, of the NEO-FFI were found in our study as well. Table 2 displays the results of the PCA. The Kaiser-Meyer-Olkin-Criterion (Measure of Sampling Adequacy (MSA)), which can be used to test the adequacy of the correlation matrix for a factor analysis, had a value of 0.623 and can be described as "mediocre" (Kaiser and Rice, 1974, 111ff.). 68.3% of the initial variance of the items was explained by the five factors. Table 2 also shows the reliability values of Cronbach Alpha (Cronbach, 1951) for each factor.

Table 2: Results of the PCA of personality

Factor / Personality trait (Cronbach Alpha)	Personality item (German version according to Borkenau and Ostendorf (1993))	Factor				
		1	2	3	4	5
Conscientiousness (0.817)	Ich bin eine gewissenhafte Person, die ihre Arbeit immer erledigt.	.856				
	Ich versuche, alle mir übertragenen Aufgaben sehr gewissenhaft zu erledigen.	.842				
	Ich arbeite hart, um meine Ziele zu erreichen.	.828				
Neuroticism (0.813)	Ich zweifle sehr oft an mir und meinen Fähigkeiten.		.854			
	Mit starken Stresssituationen kann ich nicht gut umgehen.		.824			
	Zu häufig bin ich entmutigt und will aufgeben, wenn etwas schief geht.		.821			
Extraversion (0.713)	Ich habe gerne viele Leute um mich herum.			.854		
	Ich bin gerne im Zentrum des Geschehens.			.818		
	Ich bin ein fröhlicher, gut gelaunter Mensch.			.586		
Openness to Experience (0.667)	Ich finde philosophische Diskussionen nicht langweilig.				.860	
	Ich habe Interesse, über die Natur des Universums oder die Lage der Menschheit zu spekulieren.				.712	
	Poesie beeindruckt mich wenig oder gar nicht (reverse coded).				.710	
Non-Agreeableness ¹ (0.609)	Manche Leute halten mich für kühl und berechnend.					.839
	Manche Leute halten mich für selbstsüchtig und egoistisch.					.738
	Falls notwendig, bin ich bereit, Menschen zu beeinflussen, um zu bekommen, was ich will.			.458		.556

Note: ¹The items used in this study to assess agreeableness all measured the negative dimension (non-agreeableness). Therefore, the factor is labeled non-agreeableness.

Based on the five personality factors, subjects were clustered. A hierarchical cluster analysis with the Ward algorithm was carried out. The elbow criterion suggested a four cluster solution. The mean factor scores of the five personality traits per group are depicted in Table 3

Table 3: Mean value of personality traits, by group

Personality Trait	Mean Value of Group				F-Value
	1	2	3	4	
Conscientiousness	0.8	-0.7	0.9	-0.9	2.3
Neuroticism	0.3	-0.4	-0.9	0.4	2.99*
Extraversion	0.7	0.0	-0.6	-0.6	2.6
Openness to Experience	0.8	0.0	-0.8	-0.0	2.3
Non-agreeableness	-0.45	-0.25	0.6	-0.0	3.8

* p < .05

The four personality types can be characterized as follows:

Group 1 (n = 20): The extraverts: They have by far the highest value for extraversion. They are further designated by having the highest openness for experience and are also conscientious. They are not disagreeable and do not want to pursue their interests when dealing with others at any price. They can, however, be designated as neurotic.

Group 2 (n = 23): The non-conscientious subjects: They show the highest negative value in the factor conscientiousness. Like the extraverts, they are open to experiences and are agreeable. This also means that they have little interest in forcing their will on others. They are extraverted on average, but not neurotic. They can possibly be described as having fun with new experiences, being poorly organized and having few concrete goals; they also have confidence in the course of things, since they are not neurotic and do not have any interest in influencing others. Thus, they can be characterized as an "easy going" group.

Group 3 (n = 26): The non-agreeable or assertive types: They show by far the highest value for the factor "non-agreeability" (assertiveness) and are more diligent than average. This means that they pursue their goals "without regard for losses." They are not extraverted, which indicates that dealing with

others is less important for them. They also possess a high amount of self-confidence, since they are not neurotic.

Group 4 (n = 17): The neurotics: Subjects in this group clearly exhibit the highest value for the factor neuroticism. They are not extraverted (as could be expected for neurotic people). They are not open to new experiences and are not conscientious or determined. They show a slightly below-average value for the factor "non-agreeableness (assertiveness)".

4.3 Results regarding the influence of personality on factors that influence purchase behavior

ANOVAS were carried out in order to test whether the factors that influence purchase behavior differ between the personality groups (Table 4).

Table 4: Mean value of influence factor, by personality group

Influence Factor	Mean Value of Personality Group				F-Value
	.1	2	3	4	
Adaptation to the social environment	0.10	0.12	-0.43	-0.24	17.651***
Positive brand experience	0.05	0.08	0.01	-0.24	12.990***
Advertising in radio, Internet, product placement and celebrity endorser or media peer groups	0.12	-0.06	-0.09	0.10	10.149***
Store attributes	0.26	-0.16	-0.19	0.14	47.290***
Neutral information transmitted through media	0.06	0.01	-0.09	0.08	5.754***
TV and print advertising	0.06	0.06	-0.10	0.01	6.126***
Non-family social environment	-0.05	0.02	0.09	-0.14	8.137***
Low-priced product	0.03	-0.08	0.02	0.01	2.098*
Parents/family	-0.04	-0.03	0.18	-0.24	24.044***
Convenience purchase with low cognitive control	0.11	0.14	-0.12	-0.11	17.159***
Impulse purchase	0.14	0.06	-0.09	-0.13	13.135***
Children/partner	-0.11	-0.06	0.09	0.11	9.807***

*** p < 0.01; ** p < 0.05; * p < 0.10

The results show significant differences for every factor. Based on the results displayed in Table 4, the four personality types can be characterized in terms of the twelve factors that influence purchase behavior.

The extraverts (Group 1): They place value on the store, on good service, on a comfortable atmosphere, etc. when purchasing products. The factor of impulse purchases also plays a large role for them. Convenience is important as well. Good brand experience has a slightly positive role too, and good prices possess an average importance. They classify outside influences and adaptation to the social environment as important. The indirect influence of the social environment thus plays a large role for them. Contrastingly, direct social influence from parents, family, children, partners, friends, acquaintances and the business environment has less impact than average. This could point to the extraverts seeing themselves as opinion leaders and therefore attributing less of a role to direct influences. The extraverts are influenced more by the media than any of the other three groups. Internet/radio ads and product placement play a prominent role for them. Advertising on television and in print, as well as the third media factor "neutral information" also have an above average importance. The extraverts are thus susceptible to the media and allow these factors to have a strong influence on their purchase behavior.

The non-conscientious subjects (Group 2) can be described by a relatively high need for outside influences. Regarding the direct influence of the social environment, only the non-familial social environment, including friends and acquaintances, plays a role in their purchase decisions; the family (parents, children, partners, other family) possesses only a below average importance. Convenience and good brand experience also play large roles. In contrast to the other groups, good prices play the smallest role by far, underlining a certain carelessness. Their above average value for impulse purchases also fits this carelessness. The store is of a lower importance for the purchase decisions of this personality group. Of the media factors, ads on TV and print media have the highest importance, which fits their high need for outside influences. This pattern can also be seen with the extraverts. Ads on the internet/radio and product placement receive only a below average importance, neutral information an average one.

The assertive types (Group 3) rate all three media factors with a clearly lower, always below-average influence than the other groups. They appear to be less influenced by the media. Outside effects from products they purchase also play only a below average-role. However, of all the groups, they are the most open to influence from the near social environment (parent, family, children, and partners) and non-family social environment (friends, acquaintances, etc.). The consequent pursuit of their goals appears to limit itself more to the professional environment, as family and friends take a very important influence.

The factors store and convenience are less important than in any other group. Good prices and previous good experiences with the products play an average role. They are not open to impulse purchases, which points to their stronger cognitive orientation and fits in with their behavior of being focused on clear goals.

The neurotics (Group 4) place the least amount of value of all groups by far on the outside effect of products purchased by them. The same applies to the familial and non-familial social environments, which only have a strongly below average role, with the exception of children and partners, who are attributed the highest influence of all four groups. It could be, that neurotically disposed people only interact to a small amount with others, either because they have little social acquaintances or because they have little interest in the interactions. Therefore only the smallest of circles of contacts (their core family) plays a role in their purchase decisions. The store also has an above-average importance. Perhaps good service serves as a risk-reduction and the place of purchase serves as a replacement for the lack of interaction with others. Convenience possesses a strongly below-average importance for the purchase decision; the same goes for impulse purchases. The latter can possibly be due to the fact that neurotic people are more careful than other people. Good prices possess only an average influence for purchase decisions. Good brand experiences are shown as very strongly below-average. This is a surprising result at first glance, as brand loyalty can be a method of risk reduction. However, it is possible that neurotically disposed persons judge products very critically again and again. In addition, they might feel unsure or unable to judge whether a product or brand is good or not. Perhaps also out of safety reasons they always purchase new products when they are unsure about their judgments. All media factors have an above average influence on purchase decisions. Radio and internet advertisements, as well as neutral information, are attributed a particularly large influence. The influence of television and print advertising is also positive, but only averagely so. Apparently, the media that is more strongly oriented towards information has a higher importance for the neurotic group.

5 Discussion and limitations

This study empirically analyzed a classification of influence factors on purchase decisions. Based on a literature review, a classification of relevant factors influencing consumers' purchase decisions could be developed and largely empirically confirmed. There are media-based and non media-based factors that affect purchase behavior. According to the results of the study, in the perception of the customers, the non media-based factors have a higher importance than the media-based factors on the purchase behavior.

Using the diary method, we used a research tool that is not often applied to consumer behavior. It provides us with a record of individuals' purchase decisions over a longer period of time. The diary method proved to be an adequate means of assessing the influence factors on purchase behavior.

Clearly, there are several limitations to the study. First of all, we chose a broad approach to the assessment of the influence factors on purchase behavior. The results therefore allow implications to be seen mainly on an aggregate, i.e. general level, rather than for one specific purchase. Further analysis will analyze whether there are differences between various product categories (for instance, food vs. non-food, between products with search, experience or credence attributes, with high and low prices, etc.) or between consumer types using other variables than personality. Furthermore, due to the multitude of prompted criteria which can have an influence on purchase decisions, it was not possible to sample all of them or to sample details. This means that there might be influence factors on purchase decisions in certain product categories that could not be considered in detail in this study.

In addition, as the influence of the factors was measured by a self-estimation of the consumers, consumers might have over- or underestimated the impact of some factors. We measured the perceived influence on purchase behavior and we are aware that this might differ from the real influence in some cases. Therefore, the results of this study have to be compared to and supplemented by research carried out by other means of data collection.

Furthermore, the study tested the strength of the social influence of different groups of people on individuals' purchase behavior. However, we did not test where this influence came from, e.g., whether the social influence was based on, for instance, the believability or the power of the social group.

Regarding the personality of the consumers, the study showed that differences exist in the influence factors of purchase behavior which can be attributed to personality. The Five-Factor model of personality by Costa and McCrae (1992) was found to be useful in explaining differences in purchase behavior. In reference to the media factors, the following implications for marketing can be derived: For their purchase behavior, the extraverts attributed a high importance to media and advertisements and are especially open to influences from the media. The non-conscientious group can be influenced by advertisement in television and print media in particular. For individuals who place importance on outside effects of products and conformance to the social environment, advertisements in television and print media are critical. The neurotic group is influenced more through informative media such as the internet, radio and neutral information. All three media factors play only a relatively small role for the assertive types. If advertisers know the personality of their target group, they can plan their media selection in accordance.

Further studies can test if the assertive types, for whom media influence seem to have less impact, are more susceptible to ads which place the family and social environment in the foreground.

Implications can also be derived regarding the other influence factors. For example, when considering the sales conversation, extraverts and non-conscientious individuals are more open to impulse purchases and thus perhaps also more "seducible" to them. Moreover, it is interesting for retailers, that the non-conscientious types are not very price sensitive. Furthermore, extraverts and neurotics can be influenced especially through the store, including a good service and a comfortable store atmosphere.

Personality proved to be useful in pointing out differences in purchase behavior. However, it is also possible that other variables, for example, lifestyle (e.g. Diehl and Terlutter, 2003) and involvement, can give meaningful results as well. This will be tested in further studies. In a next step the non-student sample will be enlarged, in order to have about the same sample size for the students and non-students sample.

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Fred Bronner

Increasing family democracy and the implications for advertising

1. History of family decision studies
2. Increasing family democracy
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4. The family study: method, design and results (study 1)
5. The expert study: method, design and results (study 2)
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Abstract

Democracy in families is growing fast. Consequently there is a strong movement from individual to joint decisions, which has serious implications for advertising. In the first study described in this paper we try to understand the intricacies of the family decision-making process. A quantitative study was carried out among roughly 300 families, involving several members of individual families. Four choice processes were studied, relating to: savings account, shampoo, car, soft drink. The data show that there is a lot of disagreement in the decision process, especially as regards the weights assigned to the relevant choice criteria. Different influence and conflict-resolution strategies are used in the family. In a second study, group discussions were held with members of the advertising world concerning the implications of these findings. The project is an example of fruitful co-operation between the academic and commercial communication world.

woman, age 38:

“I think that women are better able to see whether it is a good product for a good price. A man simply wants that lovely silver vacuum cleaner”.

1 History of family decision studies

Interest in family influence and family decision-making dates back to the 'seventies (Davis and Rigaux 1974; Ferber and Lee 1974; Granbois and Summers 1975). Davis and Rigaux, for example, studied the roles played by husbands and wives in Belgian households in 25 decisions. Based on role specialisation, they discerned wife-dominated and husband-dominated decisions. Not only in this study but in all family studies in this period, the focus was on the relative influence of husbands and wives. The main interest then was in 'who decides' within the family, not yet in the bargaining process between husbands and wives. Researchers were more interested in role specialisation within the family than in interaction. About 10 years later, Schiffman and Kanuk (1983) isolated a number of trends that could affect the future of the family. The fact of more married women working would lead to increased joint husband/wife decision-making. And in their eyes, traditional sex stereotyping would continue to decline: some products that have been aimed either at males or at females will increasingly be aimed at both sexes.

In the 'eighties, attention in family decision-making research shifted from task-division and roles to incongruent preferences held by spouses, conflict-resolution and interaction. The idea grew that emphasis on relative influence had delayed our understanding of how the decisions themselves are made. And high levels of disagreement between couples were found. Spiro (1983) found that 88% of the couples had disagreed over a recent purchase of a major durable.

So research on family decision processes started to investigate how spouses behave in terms of exerting influence in spousal conflict resolution during a decision (Corfman and Lehmann 1987). Follow-up studies in the 'nineties studied the joint decision-making process in greater detail and the focus was on how partners discuss the matter and which influence tactics are used (Kirchler, 1995).

Diagram 1: History of family decision studies

<i>Changing focus in family decision studies</i>		
<i>1970s</i>	<i>1980s</i>	<i>1990s</i>
- who decides - task division - role specialisation	- disagreement - incongruence - conflict-resolving behavior	- discussion topics - influence tactics - dynamics of decision-making

Another trend in the history of family decision studies is that in the first phase attention was limited to husband-wife relations, and later the role of children in the decision-making process was added. Several studies brought to light the growing influence of children in family decision-making and interviewed children as well as parents about the children's influence (Labrecque and Ricard 2001). Palan and Wilkes (1997) provided a categorisation of influence strategies used by adolescents to influence the outcome of family purchasing decisions.

So a broad range of studies enhances our understanding of spousal decision dynamics. But in spite of this insight we agree with Su, Fern and Ye (2003) that knowledge about family decision processes and dynamics has not yet evolved to the extent that coherent marketing communications have been developed. In our view, the role of marketing communication and more specific advertising in relation to family decision-making has received relatively insufficient attention

from scholars in this area. So in this paper the focus will be upon the increasing family democracy and the implications for advertising. But first we will answer the question 'is there increasing family democracy?'

2 Increasing family democracy

The family has evolved into what business research calls a DMU, a decision-making unit. Decisions taken in the business world are the result of a complicated process of interaction between influential individuals in the company. A similar process is evolving within families. "Marriages are like firms" (Grossbard-Shechtman 2003, p.610). Among the principal values current in modern families are understanding, equality and compromise (Valkenburg 1998). This applies in the wider sense but is certainly valid as regards consumer decisions within a family. Prior research has examined aspects of marital roles and family decision-making. It is noted that the organisation of the family has been affected by:

- a) a shift from the command to the negotiation method for family decision-making (Clulow 1993).
- b) the presence of two incomes, which has increased the status and options for women. The accelerated pace at which women have entered the labour force is one of the dominant cultural shifts of modern times. Belch and Willis (2002, p.114) say: "as women became more educated and provided more income to the family on a relative basis, the more egalitarian the decision-making process became".
- c) men are doing more household chores and taking more domestic responsibilities. As Hupfer (2002, p.5) states: ".....men are starting to behave more like female shoppers. They are doing more grocery shopping than ever before and have become as brand-conscious as women".

Recent studies show that there is still a movement toward more joint decision-making (Belch and Willis 2002). The role of husbands and wives is still changing. Husbands are exerting greater influence in decisions in which the wife was historically dominant and wives are exerting greater influence in areas that were traditionally the husband's domain. In addition to this American study, a European study also confirms this trend.

In 1985 the study the Dutch Man was carried out. The project posed questions about opinions, attitudes and types of behaviour. In a number of decision fields, the question was posed as to who was the most important decision maker in the family. In 2002 a similar study was performed. The question about decisions was repeated. The decision-making process can be compared in fifteen

extremely varied areas (appliances, in/around the house, clothing, beverages, care products). In all fifteen decision fields, the 'both equal influence' percentage is significantly higher for 2002 than for 1985 (Bronner 2004b). A specific example, the purchase decision concerning a camera, is given in figure 1.

In 1985 the man was the main decision maker in 50% of the households; that has now dropped to 35%. In 38% of households consisting of more than one individual, negotiations over the purchase of a camera were equally shared by husband and wife in 1985, while by 2002 this percentage of households had risen to 59%.

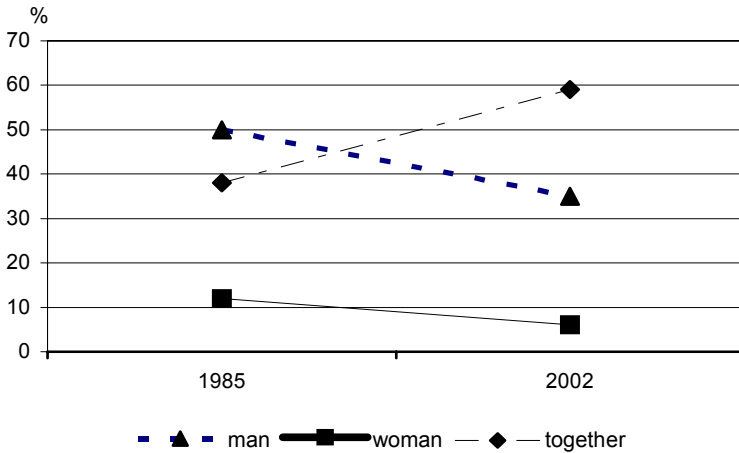


Figure 1: Who takes the purchase decision relating to cameras (1985 compared with 2002).

We have no longitudinal data available as regards the influence of children upon the family decision-making process.

But recently, data were collected about the influence of children in a study for the Dutch JIC Television Audience Research Foundation (SKO). Results are available for 12 product choices (Bronner, Kalfs and van Niekerk 2005).

Table 1: Influence on product choices exerted by children aged 6-12 years and 13 years and older living at home

<i>Product choices</i>	<i>% some influence and large influence 6 – 12 years old</i>	<i>% some influence and large influence 13 years and older</i>
Adventure park	97	80
Snacks	81	65
Soft drinks	75	66
Body care	46	53
Furniture	45	26
Internet	32	57
DVD player, camera, TV set	30	54
Car	25	32
Coffee, tea	13	19
Baking/frying products	9	9
Cleaning products	7	6
Savings account	6	13

In table 1, children's influence on the purchase of different products is represented. Children have a lot of influence upon family decisions, even very young children of 6-12 years old. What is interesting is the difference between younger and older children. Both categories have a lot of influence on the choice of adventure parks, snacks and soft drinks.

But compared to the youngest group, older children have more influence when the decision concerns the choice of an internet provider or DVD player/recorder. The choice of digital equipment is strongly influenced by older children.

So the question "is there a growing family democracy?" can be answered in the affirmative. But consequences for advertising have been neglected. And it will be clear that there are consequences.

Let us illustrate this with an example from a qualitative study (Bronner 2003). A family is planning to buy a camera. He wants a Nikon with lots of gadgets, priced at about € 1000. His wife wants a simple, easy-to-operate camera that can be carried in her handbag, priced at around € 500. An advertising strategy directed at the man, which reinforces the idea that Nikon is a good brand and has high quality products, will not influence the outcome. Strengthening the brand image at an individual level is in this case not the right advertising

strategy. Providing arguments that he or she can use in the process of negotiation and discussion might be a better one. Advertisers and agencies should use their creativity in order to influence the negotiation process. In the research described in this paper we will focus on the relation between the increasing family democracy during the last 20 years and the consequences for advertising.

3 Research questions

Advertising is a tool for influencing consumer decision *outcomes*. But to be effective we need to understand the intricacies of the family decision making *process*. From previous research we know that there is a lot of disagreement (Spiro 1983; Nelson 1988). Family members can have different opinions concerning the perception of the existing choice alternatives (e.g. the husband perceives brand x as very reliable, while the wife thinks brand x is not reliable), the ideal alternatives can differ or the weights assigned to the choice criteria can diverge. During the period when various alternatives are being considered, several influence strategies are used in an attempt to influence the other towards his or her preferred decision (Kirchler 1990,1995; Palan and Wilkes 1997; Bronner 2004a,b; Bronner et al. 2005).

In particular, there is a lot of disagreement about the weights assigned to the different choice criteria which influence the desirability of the various alternatives (Bronner, 2003).

So we made this the central point of our paper. Based on the literature and preliminary qualitative studies, we developed the hypothesis that in the choice process, women assign more importance to the more functional, practical attributes, while men assign more importance to the more non-functional, more emotional attributes.

In preliminary qualitative studies, we found that many women regard men as being more preoccupied with the non-functional elements of a product (see as an example the quote at the beginning of this paper), rather than reflecting on whether something is needed or useful. An explanation may be that women are more risk-avoiding than men. In a qualitative study about financial decisions it was confirmed that women have a keener eye than men for any risks they might run. In addition, findings from evolutionary psychology like male 'love of ostentation' may provide explanations. Furthermore, several findings in the literature seem to support this hypothesis.

White (2003, p.12) concludes a literature overview by saying: "men are more likely to take emotional buying decisions based on partially digested evidence than women and have relatively less patience with long copy". Meyers-Levy and Maheswaran (1991, p.68) concluded with the same line of thought: "females' processing often entails substantial, detailed elaboration of message content, sometimes resulting in females' heightened sensitivity to the particulars

of message claims..... males' processing is more likely to be driven by overall message themes or schemes.”

Based on the literature and extensive qualitative research we ourselves carried out, we can formulate a general question and four specific research questions.

Our *general* research question is: if the family has developed during the last twenty years into a DMU, what are the characteristics of the family decision-making process and do these characteristics have implications for advertising? And more *specifically*:

- RQ 1: is there disagreement in the family consumer choice process?
- RQ 2: do weights assigned to choice criteria differ between family members?
- RQ 3: do women assign a greater weight to the more practical and functional attributes and men to the more non-functional, emotional attributes? And does this differ according to product choice and buying situation?
- RQ 4: what are the implications of these findings for advertising?

The project consists of two studies. In study 1, a large representative sample of Dutch families was interviewed about different aspects of family democracy. The emphasis in the questionnaire is on the decision process and *not* on the outcome. For advertising purposes, it is in our opinion necessary to know more about disagreements and the attempts of family members to accommodate and resolve them. In line with this idea, study 2 was more a qualitative study, with 6 expert groups. Each group consists of advertisers, creative people from advertising agencies, and representatives of the media and media planners. The discussions concentrated on the implications for the practice of advertising of the recent findings about increasing family democracy. The project was financed by Sanoma Publishers and is a good example of co-operation between academic and commercial researchers.

4 The family study: method, design and results (study 1)

In June 2004, 300 families representative of the Dutch population were involved in this study. We did not follow the usual procedure of random selection of one member of the household; rather, several interviews were held in a single household: with husband, wife and one child (15+) if there were children living at home.

In consumer research, the problem of not gathering data from all members of the family, as already noted in the 'seventies (Davis and Rigaux 1974), continues to persist. Research has continued to focus on collecting data from only one family member and then projecting it to make generalisations about the

entire family. Commuri and Gentry (2000, p.19) underline that the family should be the unit of analysis: “the biggest block to understanding families is a mindset that attempts to understand them from a perspective that has been developed for understanding individual behavior”.

Respondents were interviewed independently of each other on different days. The first respondent was instructed not to discuss his/her answers with the other family members. The University of Amsterdam designed the questionnaire and TNS NIPO, the largest Dutch research agency, carried out the fieldwork. Respondents were drawn from an access pool of 150,000 potential respondents and the method of data collection was CASI (Computer Assisted Self Interviewing). The population definition was: ‘household in which a man and woman live together with or without children’. So persons living alone were excluded, as were single-parent families.

To gain deeper insight into the family decision process one cannot stick to just one product. So a limited variation in product choices was introduced. Inspired by the ideas of the RP Grid (Rossiter, Percy and Donovan 1991), FCB-Grid (Vaughn 1986) and Product Color Matrix (Weinberger et al. 1995), a selection was made. Two high-involvement products (savings account and car) and two low-involvement products (shampoo and soft drink) were selected. Savings account and shampoo are more rational choices, while cars involve a combination of rationality and emotion, and soft drinks are to be found on the more emotional side of the Grids. Cars and soft drinks represent product choices based on transformational motives, savings account and shampoo, the more informational ones.

Each respondent was questioned about each product and some general questions were incorporated. The average interview duration was 35-40 minutes. All respondents in one family were posed the same questions, so a full comparison can be made.

First of all, the data confirm prior findings:

1. respondents agree that there is much more deliberation and interaction concerning consumer choices in comparison with the situation several years ago, and they expect growth in this in the near future.
2. all family members play a role: even children between 6 and 15 years old.
3. the most frequently-used strategy for reaching a joint decision is the ‘golden mean’ strategy, which implies that everyone gives something up and the golden mean is maintained; the second most frequently-used strategy is the ‘internal expert’ strategy, which means that one family member gathers very detailed information to ‘prove’ his or her expertise.

Regarding our specific RQs, the first one can be answered in the affirmative: there is disagreement. As regards cars, shampoo and soft drinks, opinions differ during the choice process in about 60% of the families. The decision about a savings account is less controversial: in about 40% of the families there is disagreement. Also RQ2 can be confirmed in two ways: at a more general level and at a product-specific level. At a general level, and independent of a product-specific choice, we posed the question: “do you agree or disagree with the statement that men and women pay attention to different criteria in buying products?”. 88% of the male respondents agreed (fully), as did 85% of the female respondents. So there is a very general feeling that there *is* a difference, and this corresponds well with our findings in the preliminary qualitative studies. At a product-specific level, for the four products we asked about the personal importance of 7–9 attributes for each domain (7 point scale). All mean importance ratings and standard deviations are represented in the appendix (for four product choices, and split for wives, husbands and children). Significant differences between husbands and wives are shown in diagram 2 (t-test, significant at 5% level, two-sided).

Diagram 2: Differences between husbands and wives

Savings account	wives stress more: service (t = 2.12), ease (t = 2.03), location / distance of bank (t = 3.18)
Car	husbands stress more: design (t = 3.00), accessories (t = 4.68), brand reputation (t = 2.65)
Shampoo	wives assign more importance to all attributes
Soft drinks	wives assign more importance to price (t = 5.13), availability (t = 3.27), ease of use (t = 3.30), quality (t = 2.91)

We can conclude that wives stress more the functional attributes like service, location, ease of access, ease of use, availability, price, while men stress more the non-functional aspects like design, accessories and brand reputation.

As compared with their parents (average of husbands and wives), children assign more importance (sign. at 5 % level) to accessories (cars, t=2.49), design (cars, t=2.10), design of bottle (shampoo, t=3.93), design of bottle (soft drinks, t=3.54), brand reputation (soft drinks, t=2.16) We can conclude that the outward appearance of products and the reputation of the brand are more important choice criteria for children than for parents.

So within a family there are differences in importance assigned to choice criteria and this indirectly generates a lot of discussion about the pros and cons

of choice alternatives. In the preliminary qualitative studies we found that many women regard men as being more preoccupied with the non-functional elements of a product, rather than reflecting on whether something is needed or useful. An explanation is that women are more risk-avoiding than men. In addition, with regard to financial products it turned out that the women pay more attention than the men to whether it is easy to organise everything and whether the product is customer-friendly. So we developed the hypothesis that in the choice process women assign more importance to the more functional, practical attributes and men to the more non-functional, more emotional attributes. The results of our quantitative study confirm this hypothesis (see diagram 2).

In summary: the data show that there is disagreement in the family (RQ1), that weights assigned to choice criteria differ (RQ2), and that women assign more importance to practical and functional attributes (RQ3).

5 The expert study: method, design and results (study 2)

We organised 6 group discussions with a variety of experts about the practical implications for advertising of the increasing family democracy. On two days in December 2004, there were three group discussions each day, chaired by a professional moderator. In a plenary meeting, one representative of a group delivered a short report on the main points brought up by his/her group. Based on these three reports the conclusions common to the three groups were drawn up in a plenary session.

In general, the presentation of the results of increasing family democracy had a consciousness-raising affect upon the advertising people. “We assume too much a homogeneity in families and should look more to the differences” (media strategist BBDO). Also, the advertising world seems to realise that paying attention to the changing role structure is not enough. For example: portraying the husband in advertisements in roles that were traditionally more feminine, including children and grocery selection. Hupfer (2002) reports that car manufacturers have created ‘role reversal’ commercials to target the female consumer. But ‘role reversal’ is not enough. Based on the results, the main implications for the advertising world were formulated (RQ4) and they concern creation as well as media choice.

Three important implications for *creation* are:

1. use topics of disagreement in advertising
the common practice of measuring the importance of attributes via research and using the most important attributes in advertising is considered not to be in line with the new family democracy. A better way is to trace the dif-

ferences of opinion and discussion topics and to focus in advertising on these topics of disagreement .

2. present arguments with which a consumer can persuade other family members
don't always try to influence the individual directly via advertising, but use ads to present arguments with which somebody can persuade his/her partner (e.g. BMW not only needs to convince a man that it is a well-designed high-quality car, but should also provide arguments with which he can persuade his wife).
3. use different choice criteria in advertisements for men and women
there seem to be choice attributes which are more masculine and others which are more feminine. All advertising people agree that it is not a good idea to make ads with a mix of these attributes. It is considered a better strategy to make two versions of an ad. For example: one with masculine choice criteria (e.g. gimmicks, extra's, design) in magazines for men, and one with feminine criteria (price, comfort, ease of use) in magazines for women. So the advertising experts in our study prefer a multi-advertising strategy within a multimedia strategy.

In the eyes of the experts, the difference between more masculine/emotional/non-functional and more feminine/rational/functional attributes has also serious implications for *media choice*. And this conclusion is in line with earlier research findings. Vincent and Vincent (1996), for example, in a study directed at media mix and synergy, conclude that: "...while TV campaigns generally perform very well on overall brand image and on rather emotional brand attributes, magazine campaigns seem to do well on the more rational attributes". Also Leong et al. (1998) conclude that media are differentiated as regards attributes that have more emotional content as opposed to those with more rational content. In their research, TV, radio and outdoor are more on the emotional side, while direct mail and websites are on the rational side, and print is somewhere in-between.

Also, the implications for advertising of the different influence and conflict-resolution strategies were discussed in the group discussions with advertising experts. Bronner (2004b) discerns ten possible strategies. And each strategy leads to different advertising implications. In families that follow 'a golden mean' strategy of give-and-take-and-reach-a-compromise, the advertiser should provide logical, reasonable arguments which can be used in the discussion. In the case where family member A attempts to convince family member B so that A's choice wins, the persuasion strategy is followed. The advertiser should provide the persuader with USPs and outstanding performance. If the internal expert strategy is followed in a family, a family member attempts to persuade

the other family members that s/he knows more about a particular field in which a choice has to be made. Usually this person advances very detailed information in the course of the decision-making process in order to 'prove' his or her expertise. The advertiser should feed the expert with ideas and detailed information and reach the expert in the family by optimal media planning. A segmentation of families according to influence strategy may provide a future tool for advertisers. Concrete examples were collected of advertising which fits well or, by contrast, does not fit into the new family democracy and they added something to the "lessons learned".

6 Discussion and implications

There is always discussion about a cleavage between the academic and the commercial communication worlds. In this project we have tried to bridge the gap. There are implications for both worlds. A main lesson for the academic research world is: to gain insight into advertising effects it is necessary to involve more members of a family in one survey. Furthermore, the topic of choice research should shift from agreement to disagreement. And the main lesson for the advertising world is that it is necessary to change the focus from the individual level to the more collective level. Most advertising still seems to focus on persuading an individual consumer: to reinforce again and again the idea that the brand is very sympathetic, has very interesting features and is something worth having. But in addition, advertising should present this consumer with tools for persuading other family members. Tools for use in the interaction process.

Clearly, there is a need to validate these findings with follow-up studies and we are working on that: for example, in a longitudinal study to obtain insight into the family dynamics involved in holiday choice. More measurements for the same individuals and more persons in one household are to be involved in the study. The use of advertising constructs directed at the family level should in the future be conceptualised on a more detailed level. For example, it can be made specific to particular media vehicles, different product classes, situational factors and family role structure.

These are intriguing questions for future research in this area.

Family decision-making has changed a lot during the last twenty years; it's high time that advertising researchers and the advertising world consider the implications.

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Appendix 1

Mean importance scores (7 point scale, 1= very unimportant....7= very important) assigned to choice criteria, four product choices.

- wives n=297

- husbands n=297

- children n=132

savings account

	wives		husbands		children	
	mean	sd	mean	sd	mean	sd
extras	4.95	1.46	4.74	1.34	4.92	1.50
reputation	5.64	1.49	5.49	1.44	5.12	1.51
price	5.48	1.48	5.33	1.43	5.30	1.44
service	5.84	1.36	5.60	1.43	5.44	1.36
location	5.51	1.66	5.14	1.64	5.24	1.70
ease of use	5.82	1.43	5.59	1.38	5.34	1.52
information	5.10	1.51	4.91	1.49	4.83	1.52

car

	wives		husbands		children	
	mean	sd	mean	sd	mean	sd
accessories	4.63	1.56	5.17	1.44	5.28	1.69
design	5.10	1.63	5.44	1.43	5.59	1.67
quality	6.16	1.38	6.21	1.36	5.86	1.62
reputation	4.98	1.73	5.28	1.59	5.25	1.67
price	6.09	1.35	5.98	1.43	5.52	1.70
service	6.10	1.45	6.11	1.43	5.61	1.64
availability	4.98	1.59	5.22	1.54	4.68	1.56
information	4.79	1.65	5.02	1.49	4.68	1.55

shampoo

	wives		husbands		children	
	mean	sd	mean	sd	mean	sd
extras	4.40	1.50	3.79	1.56	4.16	1.72
design	3.46	1.57	3.09	1.57	3.87	1.78
quality	5.91	1.39	5.35	1.57	5.66	1.60
reputation	4.52	1.63	4.12	1.67	4.54	1.69
price	5.81	1.45	5.28	1.61	5.13	1.72
service	3.78	1.62	3.39	1.51	3.75	1.60
availability	5.29	1.38	4.68	1.48	4.92	1.61
practical use	5.28	1.38	4.85	1.44	5.10	1.58
information	4.06	1.52	3.49	1.50	3.65	1.64

soft drinks

	wives		husbands		children	
	mean	sd	mean	sd	mean	sd
extras	4.13	1.57	3.98	1.50	4.13	1.55
design	3.28	1.64	3.36	1.50	3.86	1.57
quality	5.87	1.34	5.52	1.52	5.74	1.60
reputation	4.32	1.73	4.36	1.64	4.67	1.67
price	6.07	1.34	5.47	1.49	5.27	1.71
service	3.81	1.56	3.51	1.49	3.81	1.49
availability	5.30	1.47	4.92	1.47	5.14	1.44
ease of use	4.88	1.52	4.51	1.46	4.75	1.37
information	3.89	1.58	3.62	1.57	3.66	1.60

Krystie Wong and Kara Chan

A gender portrayal of children's television commercials in mainland China

1. Introduction
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Abstract

This study examined gender-role and gender-trait portrayal of television commercials in children's programs in China using content analysis. Altogether 139 unduplicated commercials broadcast on the Central China Television (CCTV) channel and three regional television channels in 2002 were coded. Results show that males dominated the voice-overs. Males were more likely to be portrayed in independent roles while females were more likely to be portrayed in relationship roles. Males were more often featured in active, aggressive and anti-social activities while females were more often featured in inactive, dependent, and caring/sharing activities. Commercials targeted at both children and adults were more gender stereotyped than those only targeted at adults. Gender stereotypes in children's television commercials were attributed to traditional paternal cultural values and higher moral expectation for females.

1 Introduction

All cultures harbor gender stereotypes—beliefs about how males and females differ in personality traits, interests and behaviors (Kail, 1998). Williams and Best (1990) attribute stereotypes to a belief system containing generalizations about the characteristics of groups of persons. Gender stereotypes, then, represent general beliefs about men and women. They can be categorized in two dimensions. The first involves gender-role stereotypes, consisting of beliefs concerning the appropriateness of various roles and activities for men and women. The second is about gender-trait stereotypes, referring to the psychological characteristics or behavioral traits that are believed to characterize men and women. According to Best et al. (1977), children begin to learn their culture's stereotypes for males and females at the start of their elementary school years. By the time of completing elementary school, children tend to form solid perceptions about gender identity from what they have observed about real people, and from what they have seen in the mass media (Berryman-Fink, Ballard-Reisch, and Newman, 1993).

Today, television is the strongest media source from which children stem gender images. With limited ability to read, one may argue, television becomes their windows to the world. A survey conducted by Nielson (1990) indicated that school-age children in the United States spend 25 hours watching television on an average week. Young children are particularly receptive to television messages because they often assume that they are watching real people and events, and they tend to take character's actions at face value (Bryant and Anderson, 1983; Greenfield, 1984). It's found that gender-bound stereotypes occurred more frequently in children's programs and commercials than those targeted at adults (Feldstein and Feldstein, 1982). Television commercials and

print advertisements construct a significant element of a television program as they take up about 12 to 14 minutes of each program hour in the US. Beal (1994) even claimed that the gender-role is more stereotyped in commercials than in the television program itself. Gender stereotypes are believed to have impact on how children view themselves and other people (Bandura, 1986). Gender stereotype will discourage and forestall understanding between males and females. Thus, stereotypes in advertising on children's television programs raise a social problem that should be examined.

Two theories of media effects attempt to explain the potential influence of media images on the gender socialization of children. The first one is the social learning theory proposed by Bandura (1977), asserting that media offer many models and depicted behaviors for audience to imitate. Geen (1994) later modified this theory by suggesting that children might not imitate the behaviors shown in media immediately, but would store the information in memory and retrieved it in real life situation when needed. Social learning theorists argued that observational learning was a primary mean through which children learnt "appropriate" gender-role behaviors (Bandura, 1977; Mischel, 1970). Children were more likely to imitate behaviors performed by the same-sex rather than by the opposite-sex individuals. Children were also more likely to model behaviors, culturally defined as "gender appropriate" for the child (Bandura, Ross and Ross, 1961; Bussey and Perry, 1982; Perry and Bussey, 1979).

The second is the cultivation theory. Gerbner et al. (1994) claimed that our perceptions of social reality are heavily influenced by media and portrayals. Studies over the few decades showed a link between the amount of television viewing and the degree of gender-role stereotyping perception among viewers. Heavy television viewers tend to believe that the real world is like the television world (Wober and Gunter, 1988). When children are exposed to gender-stereotyped television portrayal, they will store these distorted images in their mind and develop a central belief that the stereotyped television world is as real as the real life. Children will believe that gender stereotype is normal and there is nothing wrong to act in that way. As a result, their beliefs about gender roles and gender traits are systematically influenced (Wober and Gunter, 1988). In this sense, the phenomenon of gender stereotyping can be seen as a reflection of societal norms, and also a fueling force to maintain them. In order to promote egalitarian gender perception among children, it is of essential importance to monitor existing gender images of television contents that children watch.

2 Background of study

2.1 *The need to study media contents in China*

China is a nation with the largest children population in the world. In 2004, there were almost 290 million children under age 15 in China (Population Reference Bureau, 2005). Chinese advertising had its business volume increase at an average rate of about 40 percent every year during the period 1981 to 1995 (Advertising Reference Materials, 1996). Television has become the major advertising medium in China. Television audience reached one billion in 1997 (Journalism Publishing News, 1998). In China, however, there is no restriction on the amount of advertising on children's television programs, and little regulation of television advertising specifically target at children. A recent survey of 1,758 urban children in China has indicated that a majority of respondents believe that a half of the television commercials were true (Chan and McNeal, 2002). Children residing in a city with more sophisticated advertising in place were more likely to perceive television commercials to be true. Though the percentage of children perceiving that all commercials were true declined consistently with age, it is still worthy to investigate the effect of television stereotype portrayal on children's cognitive development.

Although China has such a big children population and a fast growing advertising market, little effort has been devoted to gender portrayal via television advertisements on children. Most of the cross-cultural studies of gender stereotyping of television commercial were conducted in the West. For example, Gilly (1988) had done a comparative study on sex roles in television advertising that examined television commercials of Australia, Mexico and the United States. Bartsch, Burnett, Diller and Rankin-Williams (2000) replicated previous studies of O'Donnell and O'Donnell (1978) and Lovdal (1989) to analyze the trends in gender representation in US television commercials. Milner and Collins (2000) adopted Hofstede's cultural dimensions as the theoretical framework to study television commercials of Japan, US, Sweden and Russia. It is more interesting to note that there is not much research specifically targeted on children's television commercials, even for those studies conducted in the West. Thus, an analysis of gender portal through television advertisement on children will shed new insights on the existing debate.

Chinese culture has been collective and paternal oriented. The traditional ideology of submissive females did not indicate significant improvement in modern Chinese society (Cheung, 1996). In the past twenty years, China's economy has been developing in a rapid pace. One may wonder whether the economic development in China would bring about modernization. One of the indicators in modernity is the adoption of egalitarian values of both genders

(Yang, 1988). A study of children's television programs in China concluded that media contents reflected selected modernity values of high educational motivation and retained traditional values of collectivism and high power distance (Chan and Chan, 2004). The research literature recorded only one study that examined the characteristics of children's television commercials (Ji and McNeal, 2001). It measured the proportion of commercials with male models, male spokespersons, and male voice-overs. It did not examine gender roles or gender traits. The current study attempts to enhance our understanding of gender portrayal of children's television commercials in China. The research question is: What are the gender-role and gender trait portrayals in children's television commercials in China?

2.2 Previous studies on gender portrayal in adults' advertisements

Furnham and Mak (1999) conducted a meta-analysis of fourteen studies in eleven countries on five continents over 25 years (1975-1999) on the issue of gender-role stereotyping of television commercials. It showed that gender-role stereotyping of television commercials was consistent across different countries during the 25 years time. In nine out of the eleven studies, males were more likely to be the voice-overs of a commercial with females more often visually portrayed. The meta-analysis concluded that a majority of the studies showed gender stereotypes. It was characterized by the following patterns:

1. Males were frequently shown as the authoritative central figures, with female frequently shown as product users.
2. Male always played the roles as interviewers or professionals whereas females were confined as dependent roles.
3. Females were consistently shown as younger than males.
4. Females were more often portrayed at home while males were more often portrayed in outdoor settings.
5. Males were shown to be associated with pleasurable rewards, while females were more likely to be associated with social approval and self-enhancement.
6. Males were shown selling automobiles and sports products while females were always related with home and body products.
7. When there were end comments in the commercials, it was more likely that male characters offered such end comments.

Furnham and Mak (1999) also found that gender stereotyping in television commercials in the West appeared to have declined in the past 25 years. They attributed it to the increasing awareness of gender equality which was popular in the developed countries. However, this trend has not yet been observed in the

Asian countries. Gender stereotypes in television commercials have become even more profound in Europe in recent years.

Many studies over the past decades supported the above generalizations. There were more ads featuring only males than solely females in the number of single-gender ads (Doolittle and Pepper, 1975; Macklin and Kolbe, 1984; Riffe, Goldson, Saxton, and Yu, 1989; Smith, 1994). Researches also found that the types of interaction portrayed were also gender stereotyped. Males were often shown to display authority, exhibit high activity levels, be dominant and play to win (Doolittle and Pepper, 1975; Macklin and Kolbe, 1984; Smith, 1994; Browne, 1998; Welch, Huston-Stein, Wright and Plehal, 1979).

Although gender stereotyping in television commercials seemed to be a universal phenomenon, the degree of gender stereotypes changed over time. A study to analyze trends in gender representation in television commercials in the US, which replicated that of O'Donnell and O'Donnell in 1978, and Lovdal in 1989, found that there were more women as product representatives in 1998 (59%) than in 1988 (51%) or in 1976 (50%) (Bartsch, Burnett, Diller and Rankin-Williams, 2000). The gender bias in voice-overs also showed significant decrease in which the percentage of female voice-over had a treble increase from 8% in 1976 to 29% in 1998. The findings indicated the continuous existence of unequal gender representation in television commercials. The situation, however, was improved slowly but surely.

Cheng's (1997) comparison of gender role portrayals in Chinese and US television commercials found similar patterns of gender stereotypes in U.S. as well as Chinese television commercials. Among the Chinese samples, more men were portrayed than women. Men dominated the voice-overs. Men were depicted more often in high-level business/professional roles. Females occurred mainly in the commercials selling home appliances, clothes and cleaning products in China. Cheng suggested that the male-dominant stereotype could be attributed to the lack of gender awareness among advertising professionals in China.

The same result was also found in a study of television commercials in China and Singapore by Siu and Au (1997). Female characters appeared in 28.7 percent of the commercials for women's products, and only two percent of those men's products. Also, 69.3 percent and 83.3 percent of women and men appeared in the commercials of products targeted at both sex respectively. Similar pattern of male-dominance also occurred in Singapore.

A study of television commercials in Hong Kong showed that gender stereotyping existed in gender roles as well as gender traits (Furnham, Mak and Tanidjojo, 2000). Men were more frequently depicted as central figures in Hong Kong's commercials (68.3%). Males were more likely to be voiceovers (67.1%) and to be authoritative endorsers (76.4%). Females were more frequently portrayed visually (75.4%) and as product users (78.5%).

2.3 *Studies on gender portrayal in children's advertisements*

The only study on gender portrayal in children's commercials in China was conducted by Ji and McNeal (Ji and McNeal, 2001). They compared children's television commercials shown in China and the United States over a period of eighteen months (1997-1999). They found that Chinese television commercials were more gender biased than their U.S. counterparts. In China, males were more often used as models in the commercials (China = 67.4%, US = 52.5%), more often featured as the spokesperson in the commercials (China = 28.8%, US = 11.0%), and more likely to be the voice-overs in the commercials (China = 24.2%, US = 10.0%). They concluded that the stronger gender stereotypes portrayed in Chinese commercials reflect the characteristics of a traditionally male-dominate society.

In a study of Hong Kong and Korean's children television commercials, it was found that the gender portrayal of central characters and the level of gender stereotyping in Hong Kong commercials was similar to those in Korea (Moon and Chan, 2002). Males dominated the voice-over in both samples. There were significant differences in the gender activities in the Korean samples. Males were more likely to be active (M = 42%, F = 23%), while females were more likely to be inactive (M = 47%, F = 59%).

A content analysis of 137 children commercials in Hong Kong indicated that Hong Kong children commercials were less gender stereotyped than U.S. in terms of sex composition, frequencies of female and male central characters and activities of central characters (Chan and Yik, 2001). However, voice-overs were male-dominated even for products targeting both boys and girls. Gender stereotypes mainly occurred in commercials for toys and character toys. Commercials for male gender-typed products more often used male characters only or no human characters. Commercials for female gender-typed products often used female characters only and indoor settings. Aggressive behaviors were rarely seen, but performed by boys only. The authors attributed the lack of gender stereotypes to the types of product being advertised, low level of market segmentation and a general aspiration for modernization and westernization in Hong Kong's advertising industry.

A qualitative study of toy commercials in Hong Kong indicated presence of stereotypes in gender roles (Wong, 1997). Most toy commercials for boys used a high proportion of "cut" camera editing techniques and at much fast pace. Expressions of aggressiveness and the image of masculinity was demonstrated by the use of active phrases such as "attack", "challenge" and "fight". Most toy commercials for girls often used soft color scheme and a high proportion of "fade in" and "zoom in" camera techniques. Girls were featured to be caring, responsible for housework and highly concerned with beauty.

To conclude, previous studies of television commercials in Western countries and greater China have found consistent under-representation of women and gender stereotypes in television commercials. The degree of gender stereotypes corresponds with the degree of economic and social development of the society. There, however, is a lack of study specifically on gender portrayal in children's television commercials in China. This study attempts to fill the gap.

3 Research hypotheses

Nearly all previous studies found male dominance in the voice-overs in the commercials. In a study of adults' television commercials in the United States, Mexico and Australia, male voice-overs were dominant to approximately the same extent. More than two-thirds of the voice-overs were males. Female voice-overs appeared in 13 percent in the sample (Gilly, 1988). In a study of adults' commercials in China and US, male voice-overs appeared in 85 percent of the Chinese sample and 83 percent of the US sample (Cheng, 1997). Moon and Chan's study of children's commercial (2002) found that male voice-overs were most frequently used in both Hong Kong and Korea samples. Thus, we hypothesize that,

H1: Males will be shown more often as the voice-overs.

Previous studies concluded that gender-role bias is still a problem in television commercials. Gilly's (1988) study found that males were more often found in employment roles in commercials in the United States (M=52%, F=25%) and Mexico (M=44%, F=18%). Males were also more likely to be portrayed in independent roles in all three countries – the United States (M=58%, F=30%), Mexico (M=51%, F=23%) and Australia (M=53%, F=31%). In Cheng's (1997) study, male dominated the occupational role in the China sample. The number of males in occupational roles (18%) was significantly more than number of females in occupational roles (5%). Thus, we hypothesize that

H2: Males will more likely be portrayed in employment roles and females will less likely be portrayed in employment roles.

H3: Males will be shown more often in independent roles, while females will be shown more often in relationship roles.

Previous studies showed existence of gender-trait stereotyping in television commercials. Evident in the meta-analysis done by Furnham and Mak (1999) indicated that females were more likely to be shown to possess dependent traits. In the Hong Kong sample, women were more likely to be featured as dependent (55%) than men (19%). In the comparison of television commercials in China and Singapore, Siu and Au (1997) found that males participated in active

activities while female participated in inactive activities. In Singapore, commercials showing males in active activities (24%) were almost doubled that of females (14%). In China, commercials showing males in active activities (15%) were seven times more than that of females (2%). Thus, we hypothesize that

H4: Females will more likely be shown in inactive, dependent, caring and sharing activities.

H5: Males will more likely be shown in active and aggressive activities.

4 Methods

Content analysis has been employed as the standard analytical tool for advertising studies. Content analysis was used in this study to examine gender portrayal of the children's commercials in China. Television commercials broadcast during children's program hours on the Central China Television (CCTV) channel and three regional television channels were recorded in China during the period May to June 2002.

There were two levels of coding and analysis. The unit of analysis for the first level of coding was an individual commercial. The variables coded were product category, the sex of target product user, the age group of target product user, voice-over, reward type and the presence/absence of central characters. If the commercial featured at least one central character, referring to a child, an adult, or a human cartoon character appearing the longest time or talking the most in the ad and there could be none or more than one central character, we would proceed to the second level of coding. The unit of analysis for the second level of coding was each central character. For each central character, six variables related with gender roles and activities were coded: sex, age group, spokesperson, employment status, role and activity. Roles were later recoded into relationship and independent roles. A maximum of two central characters were coded for each commercial. Table 1 showed the description of variables.

The sample was obtained through taping of commercials of children's programming broadcast on four free-to-air channels, including CCTV-1, Beijing TV-1, Nanjing TV-1 and Chengdu TV-1, with first three conducted on May 15 to May 21, 2002 and the last on May 27 to June 1, 2002. CCTV was selected as it is the only national channel in China. Beijing, Nanjing, and Chengdu channels were selected to represent regions with high, medium and low levels of advertising development based on their provincial per capita advertising expenditures. The time slot for children's program varied. CCTV had the longest children's program hour. It started at 5:30 p.m. and ended at 7 p.m. from Monday through Saturday. It started from 6 p.m. and last until 7p.m. on Sunday. Beijing channel had altogether 45 minutes of children's program

from 4:45 to 5:30 p.m., Monday through Saturday. Children's programs at Nanjing were from 5 p.m. to 6 p.m. Children's programs at Chengdu had the shortest duration, lasting only half an hour from 6 p.m. to 6:30 p.m., Monday through Friday. China carried fewer children's programs when compared with other Asian countries. For example, children's programs in Hong Kong and Korea were broadcast on Saturday and Sunday mornings and weekday afternoons. Children's program mostly lasted for three to four hours per day in these two societies (Moon and Chan, 2002).

Duplicated commercials were excluded in the study in order to eliminate the bias from broadcast frequency of commercials. Station identification and promotional messages were also excluded. Public service announcements (PSA) and the commercials of products targeted at adults were, however, included in the study. This is because these two types of commercials contributed a high proportion of the commercials broadcast in children's program. As children are exposed to advertisements targeted at both children and adults, they are subjected to the gender portrayal in both adults' and children's ads. Therefore, we think that it is appropriate to include them in the study.

There were altogether 112, 16, 10 and 5 unduplicated commercials coded for CCTV, Beijing, Nanjing and Chengdu channels respectively. The final sample consisted of a total of 139 unduplicated commercials. Two product categories need special attention: corporate advertisements and public service advertisements (PSA). Out of the ones targeted at the general public, the sex and the age group of product user were coded as both males and females, and children and adults respectively. The reward type for corporate advertising was coded as none and the reward type for PSA were coded as practical (practical here means to arouse civic responsibility and community participation).

Table 1: Description of variables and inter-coder reliability

<i>For characteristics of commercials</i>		
<i>Variable</i>	<i>Values</i>	<i>Reliability*</i>
Product category	Food, drink, etc. (see Table 2)	1.00
Product user (sex)	Male (e.g. male costume), female (e.g. make-up remover), both (instant noodle)	1.00
Product user (age)	Child (e.g. children-formulated vitamin supplement), adult (credit card), both (soft drink)	1.00
Voice-over	Male, female, both, none	0.88
Reward type	Self enhancement, social enhancement, practical, pleasure, none	0.88
Presence of central characters	Yes, no	0.94
<i>For characteristics of central characters (up to two for each commercial)</i>		
<i>Variable</i>	<i>Values</i>	<i>Reliability*</i>
Sex	Male, female	1.00
Age group	Child, adult	1.00
Spokesperson	Yes, no	0.82
Employment	Yes, no	1.00
Role	Relationship (friend, son/daughter, brother/sister, parent, couple, teacher/student)	0.88
Activity	Independent (worker, celebrity, narrator, typical user/no particular role)	0.82
	Active (e.g. intensively doing something), inactive,	
	aggressive (e.g. fighting, competing with others), dependent (e.g. needs other's help), caring/sharing with others, bad behavior, others	

* Perreault and Leigh's (1988) measure of inter-coder reliability

All the commercials that aired right before, during, or right after children programming were videotaped and then analyzed. Two coders, one of the authors and a female graduate student analyzed the whole sample. Both of them were fluent in Putonghua. They were trained to grasp the operational definitions of the variables. The coding was based on Moon and Chan's (2002) study on Hong Kong and Korean children's commercials. The commercials of Nanjing and Chengdu channels were coded first as a pilot test. The coding scheme and the coding form were revised. The commercials appearing in all four channels were coded again. The two coders also recorded the television channel where a commercial was broadcast, the length of the commercial, and the name of the product being advertised. Reliability test was conducted by having a female postgraduate student to code one-tenth of the sample. In the cases where the coders disagreed, they examined the commercials, discussed the disagreement, and came to a consensus. As shown in Table 1, inter-coder reliability of all variables was close to the minimum level of 0.85 suggested by Kassirjian (1977). One-tail t-test and cross-tabulation analysis was used to test the hypotheses.

5 Results

Table 2 shows the profile of the sample and the results of the first-level coding. The sample mostly contained commercials for household and personal goods, pharmaceuticals and tonics, drinks, and foods. These four product categories accounted for over 80 percent. There was only one toy commercial in the sample. It was a commercial for toy car shown in the Nanjing channel. The sample did not contain any fast food and restaurants commercials like McDonald's or KFC. All the commercials in the food category were for snack food. There were altogether twelve public services advertisements (PSA) in the sample. Ten of them were found in Beijing channel and the remaining in CCTV. As there were only sixteen unduplicated commercials in the Beijing sub-sample, PSA therefore accounted for 63 percent of the commercials studied for Beijing.

Table 2: Characteristics of the commercials (N=139)

<i>Characteristics</i>	<i>No.</i>	<i>%</i>	<i>Characteristics</i>	<i>No.</i>	<i>%</i>
<i>Product category</i>			<i>Duration in seconds</i>		
Household & personal items	35	25.2	5	47	33.8
Medicine	25	18.0	10	3	2.2
Drink	21	15.1	15	69	49.6
Food	17	12.2	30	20	14.4
PSA	12	8.6	<i>Voice-over</i>		
Automotives	10	7.2	Male	105	75.5
Clothing	5	3.6	Female	5	3.6
Business & retailing	4	2.9	Both	11	7.9
Corporate advertising	4	2.9	None	18	12.9
Computer & telecom	2	1.4	<i>Reward type</i>		
Entertainment	1	0.7	Practical	35	25.2
Toys	1	0.7	Self enhancement	32	23.0
Others	2	1.4	Pleasure	20	14.4
<i>Product user (sex)</i>			Social enhancement	13	9.4
Male	2	1.4	None	39	28.1
Female	6	4.3	<i>Any central character</i>		
Both	131	94.2	Yes	78	56.1
<i>Product user (age group)</i>			No	61	43.9
Child	6	4.3			
Adult	50	36.0			
Both	83	59.7			

About sixty percent of the commercials were targeted at both children and adults. Over one third of the sampled were targeted at adults only and 4 percent at children solely. Most of the commercials were targeted at both males and females. Commercials targeting females included ones for cosmetics and skincare products. Two commercials that targeted at males were commercials for men's fashion and toy racing cars. Specifically sex-targeted commercials accounted for 40 percent of the sample. There were many short commercials, including only five-second ones. All of them occurred in CCTV channel. About 40 percent of these five-second commercials were featuring household and personal items. These five-second commercials could hardly show any reward because they were too short. They served only as reminders for brand names. Half of the thirty-second commercials were found in Beijing channel. All of them were PSA.

The sex of the voice-overs showed a significant gender bias. More than three-quarters of all the sampled commercials used male voice-overs. Only five commercials used female voice-overs. Commercials using male voice-over was 20 times more often than commercials using female voice-over. For the 121 commercials with voice-over, the percentages of male voice only, female voice only, and both sexes were 86.8%, 4%, and 9% respectively. If men and women have equal chance to be used in voice-over, the percentages for each of the three categories should be 33.33%. We recoded the male voice-over variable into a dummy variable (1=male voice over and 0=otherwise). The one-sample t-test of mean value of 0.33 was found significant at 0.001 level ($t=17.28$, $df=120$). In other words, the current percentage of male voice over (i.e. 86.8%) was significantly higher than that due to chance factor. As a result, H1 was supported.

As for commercials showing reward, most emphasized practical and self enhancement rewards. Over a half of the commercials featured at least one central character. Out of these 78 of the commercials with central characters, a total of 114 central characters were coded. The characteristics of the central characters in the commercials are shown in Table 3. The relative percentages for male and female characters were 58 percent and 42 percent respectively. Only one quarter of the central characters were children. Out of the 29 children characters, the number of boys almost doubled the number of girls. The central characters in the commercials were not more likely to be the spokesperson of the product, with only less than 15 percent of the characters being the spokespersons. Also, there was no significant difference between sex of the central character and the role as a spokesperson. Most of the central characters were not shown in work situation or appeared to be employed. About 20 percent of males and 10 percent of females appeared in work situation. Pearson chi-square value did not show any significance. That means male and female central

characters were equally likely to be featured in work situation. As a result, H2 was not supported.

One-third of the central characters were typical users. Male central characters were portrayed frequently as typical users, friends and celebrities. Female central characters were portrayed frequently as typical users, friends, son/daughters, and parents. When roles were recoded into relationship roles and independent roles, 62 percent of male characters were shown in independent roles. On the other hand, 40 percent of female characters were shown in relationship role. Chi-square statistic was significant at 0.05 level. Males were shown more often in independent role than females. Females were shown more often in relationship roles than males. Therefore, H3 was supported.

The most frequent activity for the central characters was engagement in inactive activities. The least frequent activity for the central characters was participation in a bad behavior. All the central characters behaving badly were male and all were found in the PSA. The two most frequent activities for male characters were their engagement in active (32%) and aggressive activities (26%). The two most frequent activities for female characters were inactive ones (42%) and caring/sharing with others (27%). Only one female character demonstrated aggressive behavior. It was a commercial for snack food, featuring a boy and a girl in a fight for the food. Chi-square test indicated a significant difference between activities of male and female central characters. Females were more likely to engage in inactive, dependent, caring and sharing activities, and males more likely in active and aggressive activities. As a result, H4 and H5 were supported.

Table 3: Characteristics of the central characters

Characteristics	Total (N=114)		Male (N=66)		Female (N=48)	
	F	%	F	%	F	%
<i>Age group</i>						
Child (real or cartoon)	29	25.4	19	28.8	10	20.8
Adult (real or cartoon)	85	74.6	47	71.2	38	79.2
					Chi-square=0.9 n.s.	
<i>Spokesperson</i>						
Yes	15	13.2	7	10.6	8	16.7
No	99	86.8	59	89.4	40	83.3
					Chi-square=0.9 n.s.	
<i>Employment</i>						
Working	19	16.7	14	21.2	5	10.4
Not working	95	83.3	52	78.8	43	89.6
					Chi-square=2.3 n.s.	
<i>Role</i>						
Friend	20	17.5	11	16.7	9	18.8
Son/ daughter	10	8.8	2	3.0	8	16.7
Parent	10	8.8	2	3.0	8	16.7
Student	6	5.3	5	7.6	1	2.1
Couple	5	4.4	2	3.0	3	6.3
Teacher	2	1.8	2	3.0	0	0.0
Brother/ sister	1	0.9	1	1.5	0	0.0
Typical user	36	31.6	25	37.9	11	22.9
Celebrity	12	10.5	8	12.1	4	8.3
Worker	8	7.0	5	7.6	3	0.3
Narrator	4	3.5	3	4.5	1	2.1
					Chi-square=19.2*	
<i>Role (recoded)</i>						
Relationship	54	47.4	25	37.9	29	60.4
Independent	60	52.6	41	62.1	19	39.6
					Chi-square=5.7*	

<i>Activity</i>	<i>Total (N=114)</i>		<i>Male (N=66)</i>		<i>Female (N=48)</i>	
Inactive	32	28.1	12	18.2	20	41.7
Active	25	21.9	21	31.8	4	8.3
Caring/sharing with others	19	16.7	6	9.1	13	27.1
Aggressive	18	15.8	17	25.8	1	2.1
Dependent	11	9.6	1	1.2	10	20.8
Bad behavior	7	6.1	7	10.6	0	0.0
Others	2	1.8	2	3.0	0	0.0
						Chi-square=45.0***

* $p < 0.05$, *** $p < 0.001$

6 Discussion and conclusion

The objective of this study was to examine the gender stereotype portrayals in Chinese commercials during the children television program time and to compare the results with previous studies in greater China. Four out of the five hypotheses on gender stereotypes were supported by the results. As expected, gender stereotyping phenomenon was found in children's commercials in mainland China. Both gender-role stereotype and gender-trait stereotype were identified. The only exception was the portrayal of characters in work situation. Male and female central characters were equally likely to appear in work environment. As a majority of the characters was featured in non-work situation, the non-significant gender difference could be attributed to the small number of characters involved.

The current study, again, demonstrated male dominance in voice-over. The degree of male dominance in children's commercials in mainland China was higher than in Hong Kong and South Korea (Moon and Chan, 2002). Less than five percent of children's commercials in China used female voice-overs. It was far less than that in Hong Kong (20 percent) and in South Korea (36 percent). The absence of female voice-overs in children's commercials seems to communicate that females are seen, but not heard. China is a traditional paternal country that males have the power to rule and control the family, and even the society. The finding supported Hong's (1976) observation that given the "survival of the patrilineal kinship system", "ancestral cult", and the "inadequacy of the socialist revolution", women in China were deprived of equality at work and home. Although gender egalitarian was stated in the

national constitution in China, the right of women was set aside in practice (Cheung, 1996; Siu and Au, 1997). This showed that traditional cultural values were deeply embedded in this rapidly developing country. Even though mainland China is becoming more globalized and woman is now enjoying a higher social status than in the past, advertising professionals still perceive man to be more credible and authoritative than woman. Thus, male is still always used as voice-overs in the Chinese commercials.

The current study found gender stereotypes in gender roles and gender traits. Males were more likely in independent roles with females more likely in relationship roles. Males exercised active and aggressive activities with female exercising inactive, dependent and nurturing activities. In other words, men in children's commercials are strong and superior women in children's commercials are weak and inferior. The high percentage of boys depicted through aggressive behaviors was rather surprising since aggressive roles were rarely used in children's commercials in Hong Kong and South Korea (Chan and Yik, 2001; Moon and Chan, 2002). Most of these aggressive behaviors occurred in commercials for soft drinks and snack food. Some commercials showed boys competing in sports or games, such as wrestling and soccer matches. Some showed typical consumers competing with each other to win the food. Only one commercial showed a girl participating in these competitions. The high proportion of aggressive behaviors shown in television commercials were similar to the prominence of competitive behaviors found in children's television programs (Chan and Chan, 2004). It seems to promulgate that boys should fight for success and girls should be non-competitive. Ten percent of the male characters involved in bad behaviors including drinking and driving, and even vandalizing. All of them occurred in PSA. None of the female characters demonstrated bad behaviors. This suggests that Chinese people have higher moral expectation for females than for males.

According to the social learning theory, the gender-trait stereotyping portrayals in China's children television commercials will encourage boys to be active, aggressive and have the alternative to exhibit anti-social behaviors. It will also encourage girls to be inactive, dependent and caring. Such stereotypes will be considered by children to be socially acceptable. In traditional Chinese cultures, these gender-traits are the assumed characteristics for males and females. Cheung (1996) argued that the traditional gender concepts were maintained through the socialization practices of parents and the educational system. This study supports the assertion that unequal gender concepts are socialized through the mass media.

This study concludes that children's television commercials in China were gender biased. The gender stereotyping in terms of gender roles and gender traits was more profound than that of Hong Kong. Previous studies found that toy commercials were often gender biased. Chan and Yik (2001) proposed that

the low percentage of toy commercials in the Hong Kong sample accounted for the lack of gender stereotype in Hong Kong, when compared with the U.S. studies. In the current study, the sample contained only one toy commercial and about 60 percent of the sampled commercials were targeted at children and adults. In other words, gender biased images in commercials were targeted at both children and adults. Previous studies found that children were more likely to believe in television commercials in cities with the presence of public services advertisements (Chan and McNeal, 2004). So, public services advertisements carry a special authoritative position in children's mind. PSA in China has been used as an alternative for traditional propaganda for the promotion of dominant ideology in a subtle and symbolic way (Cheng and Chan, 2001). PSA is intended to help with the "social spiritual civilization" by advocating actions that serve the welfare of the majority or long-term benefits of the society (Wang, 1999) and offering correct courses of solution to current social problems (Song, 1997). In the current study, many of the sampled public services commercials were gender biased in gender roles and gender traits. They always showed that women were passive, non-aggressive, and caring. More importantly, it seems to suggest that gender stereotypes are reality in the children's arena as well as in the adults' arena.

In view of the gender biased images in the children's media, further research is needed to explore why the advertising professionals construct such messages. We think that there may be several explanations. First, the frontline gatekeepers of an advertising creative work are the advertising account management team and the clients. They are usually senior management of companies. Since higher management in Chinese corporations is male-dominated, they will select creative ideology and presentation from a masculine angle. Second, it is important to know how these gatekeepers perceive what is acceptable and what is not by the audience. We found that the sampled commercials were mainly for both males and females. There are very few commercials that specifically targeted at only one sex. In other words, market segmentation is low. As the level of gender awareness is low in China (Cheng, 1997), advertising message encoders will attempt to follow traditional paternal ideology in the society in order to play safe. Further research on the message encoders and their encoding practices will provide data to support or disapprove our assumptions.

To conclude, children in China are being exposed to gender stereotyped advertising messages. It worries us because we observe that these advertising messages are repetitive. CCTV had on average around 80 commercials in the one and a half hour children's program every day. A week's taping yields more than 500 commercials. However, there were only 118 unduplicated commercials. Therefore, the severity level of duplication of commercials is very high. Repetition of commercials is even more serious in regional channels. The amount of children's program in China is fewer than that in other Asian

countries. In that short period of time with programs that are targeted at children, there are gender biased commercials repeating over and over again.

The status of women in China is improving since women nowadays have more opportunity to receive higher education and are more likely to assume higher positions in the work environment. Thus, females are more independent and active than ever before. In a broader sense, gender equity is improving in society. However, mass media in China still endorse traditional gender stereotypes. Gender egalitarian is one of the indicators of a modernized society (Yang, 1988). The current study found that children's advertising is supporting a traditional paternal view of gender inequality, rather than an open view of gender equality. This prevailing ideology should be challenged when China migrates into a modern society.

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Young Sook Moon and Kara Chan

Gender portrayals and the gender of nations: an extended study in Asian cultures

1. Introduction
2. Background of study
 - 2.1. Hofstede's masculinity/femininity
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6. Discussion and conclusion

Abstract

This study examined gender portrayal in a sample of 780 television commercials broadcast in prime time programs in Korea and Hong Kong using content analysis. Cultural differences between Korea and Hong Kong suggest hypotheses about the gender portrayal in advertising. Literature suggests that Korean culture differs from Hong Kong culture on the dimension of Masculinity/Femininity proposed by Hofstede. The differences between the two societies provide a valid test of theory. The results of the study showed significant differences between the two countries in terms of product profile, presence of central characters, voice-over, setting and reward type. Contrary to expectations from Hofstede's framework, greater sex-role differences are reflected in occupation and credibility in Korea, a feminine society, not in Hong Kong, a masculine society. The study confirms that the difference on the masculinity dimension is not able to elucidate all differences in gender role portrayals in television advertising, thus, the concept of 'gender of nations' needs further examination.

1 Introduction

Advertising gender role stereotyping has been a prominent topic in the literature since the 1970s. This research interest follows a role changing movement when remarkable female employment gains occurred, linked to increasing rates of female obtaining college degrees, changing familial roles, and legal procedures (Fugate, Decker, and Brewer, 1998). Several studies suggest increasing gender bias and several other studies suggest gender role stereotyping does exist but seems to be decreasing over time. While gender stereotyping is considered to be a universal phenomenon, its intensity is expected to vary in degree from country to country (Huang, 1995). Psychological theories about gender (and sex) are often based on U.S. models and psychologists in other parts of the world often naively apply such theories to their countries' situations where they do not apply (Hofstede, 2001; Slater, 1976).

In an attempt to more fully understand gender and its relationship with advertising, some recent studies (e.g., Milner and Collins, 2000; Odekerken-Schroder, De Wulf and Hofstee, 2002) showed that gender role portrayal in advertisements could be an artifact of the cultures that frame the phenomenon being studied. Researchers, adopting Hofstede's masculinity dimension as a framework, examined whether the extent of gender stereotyping is related to a country's masculinity score, however, found mixed results on gender stereotyping in masculine countries. In addition, previous studies mainly focused on comparing the U.S. and some of European countries with a limited number of countries in the West or East (e.g., Gilly, 1988; Milner and Collins 2000; Sengupta, 1995; Wiles and Tjerlund, 1991; Wiles, Wiles and Tjerlund, 1995).

Review of literature indicates there is a lack of studies on the topic in Asian cultures. The emerging markets in Asia are increasingly affluent, and success in these countries is a priority for multinational corporations. In the last few decades, social norms for behavior, actual roles occupied by men and women, and media regulatory policies in Asian countries have changed. However, much of the research on gender portrayal in media is dated and particularly gender portrayal in advertising is one of the neglected areas and need further research (cf. Zinkan, 1994). In this vein, the objective of the study is to examine gender role portrayals in television advertising with a cross-cultural comparison between two major markets in the region, Hong Kong and South Korea. Both Hong Kong and Korea, in the beginning 1990s, progressed from the status of developing nations to newly industrialized countries and became major influences in trade and development in the economies of other countries (Javalgi, Cutler and White, 1994). Since Hong Kong and Korea have unique strategic positions in business and information in the region as well as in the world, more in-depth studies of advertising in these markets have appeared important and necessary.

The two countries show large difference in terms of Hofstede's masculinity dimension and the masculinity index (Hofstede, 1991) shows that Hong Kong is masculine (#16), while Korea is feminine (#41). One recent study (Moon and Chan, 2005), comparing television advertising between the two countries, has found that masculinity/femininity is an important variable for explaining differences in television commercials between the two countries and the advertising appeals related to the masculinity/femininity dimension show more differences than other dimensions. Therefore, this study attempts to investigate whether Hofstede's masculinity/femininity is also validated in differentiating gender role portrayals across Asian countries.

2 Background of study

2.1 Hofstede's masculinity/femininity

There have been research efforts to develop universal values that characterize and distinguish cultures over the past four decades (e.g., Kluckhohn and Strodtbeck, 1961; Rokeach, 1973; Hofstede, 1980, 1991; Schwartz, 1992) and among those, a widely accepted framework is Hofstede's (1980, 1983) typology of four cultural dimensions: individualism/collectivism, power distance, uncertainty avoidance, masculinity/femininity. The masculinity/femininity dimension distinguishes between cultures that emphasize stereotypical "masculine" traits, such as assertiveness, dominance and material success, and cultures that emphasize "feminine" traits, such as a concern for relationships, caring for the weak and the quality of life. Within cultures, men have more masculine values on

average and women have more feminine values, with the differences between the sexes being greater in masculine countries than in feminine countries (Hofstede, 1991).

The fundamental issue addressed by masculinity/femininity dimension is the way in which a society allocates social (as opposed to biological) roles to the sexes. The first essential element is the preference for masculine or feminine values in a culture. Masculine societies strive for material success, achievement and productivity whereas feminine societies value relationships with and caring others. The second element is gender differentiation. Masculine countries are more likely to embrace sharp distinction between the roles of men and women, whereas feminine ones are not, thus, there would be more significant sex-role differences between male and female characters in masculine countries than in feminine countries.

2.2 *Gender role portrayals in advertising*

Relatively few studies have investigated gender role portrayal in advertising in terms of Hofstede's cultural framework. One earlier study by Gilly (1988) compared gender portrayals in television commercials of Australia, Mexico and the U.S. The results of this study indicate that Australian commercials show somewhat fewer gender role differences and Mexican commercials show slightly more gender role differences than American commercials. Two following studies provided post-hoc explanations for Gilly's (1988) finding in terms of Hofstede's cultural dimension. Milner, Fodness and Speece (1993) suggested that the results were ordered as Hofstede's masculinity index would predict: Australian (#35), the U.S. (#36), and Mexico (#45). These countries are on the masculine end of Hofstede's spectrum, which may explain why the results among the countries Gilly (1988) studied were not dramatically different. In another study, Milner and Collins (1998) compared Gilly's data with data from Turkey, a feminine country in terms of Hofstede's taxonomy and found that, in contrast to the U.S., Australia and Mexico, Turkish advertisements were less likely to feature productivity themes and were more likely to feature relationship themes and portray minimal differences between male and female gender roles.

In a following study, Milner and Collins (2000) presented the first major systematic examination of television commercials from a range of countries that Hofstede designed as masculine and feminine - two masculine countries (Japan and United States) and two feminine countries (Sweden and Russia). They found that a country's gender as ranked on Hofstede's masculinity continuum could be linked to depictions of relationships for both male and female characters. The findings of the study supported Hofstede's claim that feminine societies exemplify a cultural preference for relationships for both genders, thus,

cross-cultural gender role portrayals of relationships can be predicted. Wiles, Wiles and Tjernlund (1995) also applied Hofstede's Masculinity Index to compare gender role portrayals in magazine advertisements in the U.S. (masculine country) and Sweden and the Netherlands (feminine countries). In this study, mixed results were found and all three countries tended to show men rather than women in working roles, however, these differences were less often encountered in Sweden and The Netherlands than in the U.S.

Meanwhile, Odekerken-Schroder, De Wulf and Hofstee (2002) found that magazine advertisements in the U.K. portrayed female characters less in a working role and more as sex objects than advertisements in the Netherlands, while all other hypotheses comparing female characters in feminine and masculine countries could not be supported. Based on the findings, researchers concluded that a country's masculinity index is hardly related to the use of gender stereotyping in printed advertising and suggested that future research should include a larger variety of countries and other media like electronic media.

3 Hypotheses

Hofstede's masculinity dimension provides a conceptual framework of the current study. Previous studies found that advertisements in feminine countries are predicted to feature more relationship themes for male and female characters (Milner and Collins, 1998, 2000), therefore, the following hypothesis are proposed:

H1: Characters in television commercials are more likely to be portrayed in relationship with others in Korea (a feminine society) than in Hong Kong (a masculine society).

Meanwhile, previous studies showed mixed results on productivity themes, gender role differentiation and stereotyping in masculine countries (Huang, 1995; Milner, Fodness and Speece, 1993; Milner and Collins, 1998, 2000; Odekerken-Schroder, De Wulf and Hofstee, 2002; Wiles, Wiles and Tjernlund, 1995), therefore, the following null hypotheses are proposed:

H2: There is no difference in the working role of characters between Hong Kong and Korea.

H3: There is no sex-role differences between Hong Kong and Korea.

H4: There is no difference in female stereotyping between Hong Kong and Korea.

4 Methods

The Hong Kong sample was obtained from taping of commercials of prime-time programming broadcast on the two free-to-air Chinese-language terrestrial channels (TVB-Jade, and ATV-home) in Hong Kong during three weeks in

June, July and August, two weeks in mid-November and two weeks in early December 2001. The Korean sample was obtained from the commercials of prime time broadcast on the three major television channels (KBS2, MBC, SBS) in June and during two weeks in mid- November in 2001. A total of unduplicated 1125 television commercials, 512 from Hong Kong and 613 from Korea, were collected.

No more than two central characters were selected in each commercial. Based upon the classification schemes used in previous studies (Gilly, 1988; Milner and Collins, 2000; Odekerken-Schroder et al., 2002), each central character was coded in terms of six variables: (1) gender of the central character(s) - male or female; (2) age of the central character(s) - under 13 years old, 13-19 years old, 20-35 years old, 36-49 years old, 50 years old and above; (3) type of role of the central character(s): relationship with others (friends, son/daughter, brother/sister, parent/grandparent, spouse/couple, teacher, student, and worker) or non-relationship role (celebrity, narrator, typical user and others); (4) productivity (Working/ non-working): working roles refer to characters being depicted in occupational settings, while non-working roles relate to home or outdoor settings; (5) type of occupation of the central character(s): professional, managers/administrators, sales/service workers, secretaries/clerks, factory workers, others; (6) credibility of the central character(s): product user, authority/endorser, none.

Two graduate students in each country coded each sample independently. The coders were carefully trained by the researchers and, after pretesting about 10% of the each sample commercials, worked independently on each other. Discrepancies among coders were settled by the decision of the researchers. The inter-coder reliability measure (cf. Perrault and Leigh, 1989) for the Hong Kong sample was 0.97 and that of the Korean sample was 0.96.

5 Results

The Korean sample showed a higher proportion of relationship roles than the Hong Kong sample (HK: 44.5%; Korea: 48.8%), however, the distribution of the relationship roles of the central characters showed no significant difference between the two samples ($\chi^2 = 2.18$, $p > .05$) (Table 1). In the Korean sample, female characters showed same proportions in relationship roles (50%) and non-relationship roles (50%), while male characters showed higher proportion of non-relationship roles (52.3%) than relationship roles (47.7%). In the Hong Kong sample, both male and female characters showed higher proportion of non-relationship roles (male: 53.3%, female: 57.8%) than relationship roles (male: 46.7%; female: 42.2%). However, the sex-differences in the relationship roles in both samples were not statistically significant ($p > .05$). As a result, commercial characters were as equally likely to be portrayed in relationship

with others in Hong Kong (a masculine society) and in Korea (a feminine society), therefore, H1 was rejected.

Table 1: Relationship role of central characters by society

Variables	Hong Kong (n=481)		Korea (n=725)	
	F	%	F	%
Role				
Friend	67	13.9	110	15.2
Child	31	6.4	59	8.1
Brother/ Sister	18	3.7	0	0.0
Parent/ Grandparent	32	6.7	85	11.7
Spouse/ Couple	49	10.2	60	8.3
Teacher	7	1.5	6	0.8
Student	10	2.1	34	4.7
Worker	56	11.6	21	2.9
Celebrity	71	14.8	160	22.1
Narrator	23	4.8	30	4.1
Typical user	84	17.5	121	16.7
Other	33	6.9	39	5.4
Role				
Relationship	214	44.5	354	48.8
Non-relationship	267	55.5	371	51.2
Role (male vs. female)	Male (n=227)	Female (n=249)	Male (n=367)	Female (n=358)
Relationship (%)	46.7	42.2	47.7	50.0
Non-relationship (%)	53.3	57.8	52.3	50.0

Most of the central characters were shown in non-working situation and only eleven to fifteen percent of the central characters were shown in working situation for both samples. There was no significant difference in the working/non-working roles of the central characters between the two samples (HK: 15.4%, Korea: 11.3%, $\chi^2 = 4.3$, $p > .05$), therefore, H2 was supported. As a result, it can be said that the masculinity score of the country is not related to the working role portrayal of commercial characters.

There were found significant differences in the age between the male and female characters in both samples (HK: $\chi^2 = 21.88$, $p < .01$; Korea: $\chi^2 = 27.61$, $p < .01$) (Table 2). Among the characters 13 years old and above, male characters had a higher proportion in the group of 36 years and above, while female characters had a higher proportion in the group between 20 and 35 years. In both samples, male characters were more likely to be depicted in the working roles than female characters (HK: $\chi^2 = 5.0$, $p < .05$; Korea: $\chi^2 = 4.9$, $p < .05$). For the majority of central characters, the type of occupation could not be identified (HK: 66.7%, Korea: 65.9%). Both male and female characters in the Hong Kong sample had relatively equal proportions of managers/administrators and professionals (males 11.0%, females 8.7%, $p > .05$), while male characters had a higher proportion than female characters in the Korean sample (males 28.2%, females 14.3%, $p < .05$). A significant difference in credibility between the male and female characters was found in the Korean sample but not in the Hong Kong sample. In Korea, male characters were more likely to be presented as authority persons in product recommendation, whereas female characters were more likely to be presented as product users ($\chi^2 = 8.44$, $p < .05$). These results showed that gender differentiation was reflected in the age and working role of the characters in both countries. However, greater sex-role differences were reflected in the occupation and credibility variables of the Korean sample, not the Hong Kong sample. Therefore, H3 was supported only in the age and working role of characters.

Table 2: Characteristics of male and female characters by society (N=1201)

Variables	Hong Kong		Korea	
	Male (n=227)	Female (n=249)	Male (n=367)	Female (n=358)
	%	%	%	%
Age				
Under 13	25.6	16.1	15.0	9.5
13-19	7.9	8.0	6.8	8.9
20-35	52.9	69.5	53.4	67.9
36-49	9.3	3.2	14.7	10.6
50 and above	4.4	3.2	10.1	3.1
Productivity				
Working	19.4	12.0	13.9	8.1
Non-working	80.6	88.0	86.1	91.9
Occupation				
Managers/ administrators	3.4	3.3	9.2	1.4
Professionals	7.6	5.4	19.0	12.9
Secretaries/ clerks	1.7	4.3	0.0	0.7
Sales/ service workers	10.2	4.3	3.7	3.6
Factory workers	0.8	0.0	1.2	0.7
Others	10.2	15.2	9.8	4.3
Unidentified	66.1	67.4	57.1	76.3
Credibility				
Product user	40.5	43.8	2.2	3.4
Authority	33.9	39.0	24.0	15.6
None	25.6	17.3	73.8	81.0

Comparing female characters between the two samples, significant differences were found in the age ($\chi^2 = 16.01$, $p < .01$), occupation ($\chi^2 = 16.30$, $p < .05$) and credibility variables ($\chi^2 = 260.79$, $p < .01$) (Table 3). Among the characters 13 years old and above, female characters in both samples had equal proportions in the age of 20 to 35 years (67.9% vs. 69.5%), while female characters in the Korean sample had a higher proportion in the age of 36 years and above than in the Hong Kong sample (13.7% vs. 6.4%). The Hong Kong sample had a higher proportion of the female characters employed as white collar (non-professional) and blue-collar workers (HK 8.6%, Korea 5.0%), whereas the Korean sample had a higher proportion of the female characters employed as professionals and managers/administrators (Korea 14.3%, HK 8.7%). However, female characters in the Hong Kong sample were more often presented as product users (HK 43.8%, Korea 3.4%) and authority figures (HK 39% vs. Korea 15.6%) than in Korea. As a result, female characters in Hong Kong commercials were depicted as being younger and less in high-level occupation, but more credible than in Korean commercials. Therefore, H4 was partly rejected.

Table 3: Characteristics of female characters by society (N=607)

Variables	Hong Kong (n=249)		Korea (n=358)	
	F	%	F	%
Age				
Under 13	40	16.1	34	9.5
13-19	20	8.0	32	8.9
20-35	173	69.5	243	67.9
36-49	8	3.2	38	10.6
50 and above	8	3.2	11	3.1
Productivity				
Working	30	12.0	29	8.1
Non-working	219	88.0	329	91.9
Occupation				
Managers/ administrators	3	3.3	2	1.4
Professionals	5	5.4	18	12.9
Secretaries/ clerks	4	4.3	1	0.7
Sales/ service workers	4	4.3	5	3.6
Factory workers	0	0.0	1	0.7
Others	14	15.2	6	4.3
Unidentified	62	67.4	106	76.3
Credibility				
Product user	109	43.8	12	3.4
Authority	97	39.0	56	15.6
None	43	17.3	290	81.0

6 Discussion and conclusion

The current study showed mixed results on the effects of cultural differences along the masculinity/femininity on gender role portrayal in society. The masculinity scores of countries seem not directly related to the relationship and working role portrayals of commercial characters. Gender differentiation is reflected in the age and working role of the characters in both countries and greater sex-role differences are reflected in occupation and credibility in Korea, a feminine society, not in Hong Kong, a masculine society. Meanwhile, masculinity scores are found to be related to female stereotyping in terms of age and occupation. Compared to Korea, television commercials in Hong Kong portray female characters as being younger and less in high-level occupation.

A lack of difference in the relationship role depictions between the two countries could be attributed to heavy use of celebrity endorsements in both countries. Korean television commercials especially overuse celebrities, who not only behave as endorsers but more appear as a product model or a spokesperson, and advertising campaigns in Hong Kong also make increasing use of local celebrities (Pae et al., 2002). Also, the depiction of working roles as a proxy for the masculine value of productivity was found not definitive. The majority of central characters in both countries were not depicted in the working condition and the characters in working roles were seldom featured as employers and employees.

The result that greater sex-role differences in occupation and credibility were found in Korea than Hong Kong shows counter-evidence for the Hofstede's framework that there would be more sex-role differences in masculine countries than in feminine countries. It reveals that Korean society is male-dominated, while Hong Kong is more egalitarian. It also illustrates roles that masculinity dimension does not play, such as the male chauvinism is still found in "feminine" Korea. However, Korean society is changing apparently in terms of women's issues and rights and the recent changes may create greater sensitivity to the issue of stereotyping in advertising.

Gender is a critical factor in developing marketing strategy via advertising messages emphasizing information that is thought to persuade the male or female target (cf. Worlin, 2003). The finding that television commercials in both Hong Kong and Korea contain similar level of gender role portrayals provide managerial implications for international advertisers to approach Asian consumers as homogeneous in terms of gender image in advertising communication. It is observed there is tendency towards increasingly homogeneous cross-cultural groups with similar needs, which can be approached in the same way in Asian countries. The multinational corporations especially tend to create a unified message and adopt similar executions (Tai, 1997), therefore, it can be ar-

gued that gender portrayal is increasingly converging across the countries in the region.

This study also confirms that the difference on the masculinity dimension is not able to elucidate all differences in gender role portrayals in television advertising, thus, the concept of 'gender of nations' needs further examination. Possible interactions among the cultural dimensions could be considered in analyzing the role depictions - for example, a configuration of collectivism and femininity in the relationship with others (de Mooji, 2003).

Many countries in Asia have been rapidly industrialized during the past few decades and may struggle with how to reconcile conflicts between traditional values and new values. Therefore, in exploring the relationship between gender portrayal and advertising effectiveness, it may be necessary to investigate how and to what extent the changing nature of society affects gender stereotyping in one country as well as among countries in this region. In this light, differences in levels of interest in the gender typed content of television programming, advertising ethics codes, and women's movement activity are possible explanations that warrant further research attention.

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Part V

Communication and New Media

Greg Kiss and Franz-Rudolf Esch

Effects of interactive and imagery-strong websites

1. Introduction
2. Theoretical background
 - 2.1. Definition and dimensions of interactivity
 - 2.2. Hypothesis development
3. Method
4. Results
5. Summary

Abstract

We investigate the impact of website interactivity in connection with its attention-getting effect on imagery processing and the generation of mental imagery. Results of an experiment indicate that the use of interactivity on brand websites can increase the activity of the Internet users' imagery and support different dimensions of mental imagery, such as vividness or complexity. Furthermore, highly interactive and imagery-strong websites can lead to more favorable attitudes toward the site and the brand as well as to stronger behavioral intentions. Implications for theory and practice of internet advertising are discussed at the end of this article.

1 Introduction

Since the commercialization of the Internet interactivity is emerging as a focus of advertising practitioners and researchers because it is one main characteristic that distinguishes the Internet from traditional media. In traditional media with mainly one-way communication processes the audience consists of passive message receivers, while the Internet engages the audience in the (two-way) communication process. Its interactive nature gives users much more freedom in controlling the messages they receive and allows users to customize messages according to their own needs and wants (Liu and Shrum 2002).

Thus, the impact of progressive levels of interactivity on imagery processing and mental imagery is of particular interest for marketing communication, as these variables can positively correlate with consumers' attitudes and behavioral intentions (e.g. Bone and Ellen 1990; Babin and Burns 1997). However, increasing the level of interactivity of websites would also mean that companies could lose some control over the users' communication experience; an effect which seems to be less desirable (Bezjian-Avery, Calder and Iacobucci 1998). Nonetheless, this article will show that a brand-focusing and imagery-evoking use of interactivity can also create more effective online advertisements.

For this reason, the strength of interactivity and mental imagery is examined in detail. First, the theoretical background on interactivity and imagery-strength of websites and their influence on advertising effectiveness are outlined. Then, the experimental design is described. The experiment investigates the direct effects (indirect effects with imagery processing as a mediator variable are not considered) of interactivity and imagery-strength of a website (2×2 mixed design) on imagery activities and mental imagery as well as attitudinal and behavioral constructs. Next, the results of the ANOVA and the MANCOVA are presented. Finally, implications and limitations of the study are discussed and promising topics for future research in this field are suggested.

2 Theoretical background

The continuously growing interest in the field of internet communication has led to many different definitions and conceptualizations of interactivity (e.g. Blattberg and Deighton 1991; Steuer 1992; Hoffman and Novak 1996; Rafaeli and Sudweeks 1997; Downes and McMillan 2000; Liu and Shrum 2002; Liu 2003). Consequently, the number of different definitions makes it difficult to understand the whole nature of interactivity (Ha and James 1998; Kiss 2005).

2.1 *Definition and dimensions of interactivity*

The considerable attention on Internet communication over the past few years led, among other things, to many different definitions and conceptualizations of interactivity (e.g. Blattberg and Deighton 1991; Steuer 1992; Hoffman and Novak 1996; Rafaeli and Sudweeks 1997; Ha and James 1998; Downes and McMillan 2000; Liu and Shrum 2002; Liu 2003). These definitions vary from author to author and study to study.

For instance, Sohn, Leckenby and Jee (2003) distinguish between interactivity definitions that focus on the characteristics of the medium, on users' subjective perception of interactions or on characteristics of a message from an interpersonal communication perspective. Compared with this, Hoffman and Novak (1996) distinguish between person-interactivity (interpersonal perspective) that occurs between humans through a medium and machine-interactivity (mechanical perspective) that happens between humans and machines to access different contents. Especially with a view of the fast developing software robot technology this second approach does not seem to be very long-lasting.

Several researchers explicitly underline that the two-way communication abilities form an essential dimension of interactivity (Williams, Rice and Rogers 1988; Ha and James 1998; McMillan and Hwang 2002; Liu and Shrum 2002; Liu 2003). Nonetheless, two-way communication processes may also work without any levels of interactivity, for example, an internet website made of flash-movies (similar to TV-spots) without any links or choices for the user except for a "next" button (Kiss and Esch 2003). This means that two-way communication is an important precondition for interactivity, but does not form a dimension of the construct itself (see also Rafaeli 1988).

Range of interaction: Steuer (1992) defines the range of interaction as the number of possibilities for action at any given time. According to this, the more options a user has within a communication process, the greater his/her control over the communication experience and the higher the probability of achieving his/her communicative goals.

Arieli (2000) observed that in goal-directed search conditions active control of information was associated with better memory and learning. If users con-

stantly control their experiences, they need to focus their attention and need to be cognitively active. A direct result of this more cognitive involving experience induced by higher interactivity is better user learning on account of a deeper cognitive processing. Furthermore, active control makes information acquisition more effective, because it enables users to obtain information in a way most suitable to them. Thus, interactivity has an attention attracting effect on users of a website which should lead to better information processing and better learning of the content of a high interactive contrary to a low interactive website. But this advantage of interactivity was reversed in Ariely's study when demands on processing resources were high on account of difficult tasks the participants had to solve.

Sundar, Brown and Kalyanaraman's (1999) study support this negative effect of active control due to an extra effort needed to navigate through a highly interactive website. Participants in a moderate interactivity condition (with an extra information link) judged a political candidate to be more caring and more qualified than participants in the low (with no extra information link) or the high interactivity condition.

In sum, a high interactive website with lots of options is more engaging and requires users' closer attention and more cognitive processing than is needed for low interactive websites.

Responsiveness: Rafaeli and Sudweeks (1997) emphasize the importance of relatedness and relevancy in the concept of interactivity. With reference to their definition, responsiveness describes the extent to which later messages in a sequence relate to earlier messages.

In their study, Cho and Leckenby (1999) found that higher responsiveness between a banner ad and its complementary website leads to higher perception of interactivity and as a result to more favorable attitudes toward and purchase intentions of the advertised brand. It is to be supposed that, when Internet users are exposed to a website (or to special contents of it) through clicking on a hyperlink, they may have their own expectations about the contents of that website (or page). If the expected contents are not found, or the contents of the website are not related to the hyperlink users have clicked, they may not interact with it or may leave the website immediately. However, higher levels of responsiveness as one dimension of interactivity in websites should lead above all to more positive attitude and behavioral intentions.

Speed of interaction: Rice and Williams (1984) suggest that media are interactive, if they have the potential for immediate communication. Bearing this in mind, the speed of interaction can either be high as in the case of real time communication (e.g. telephone conference), or low as on a store-and-forward basis (e.g. e-mail communication). This dimension of interactivity refers to the response time (Lombard and Snyder-Duch 2001), the response time of a communicator influences the perception of interactivity. Dellaert and Kahn (1999)

have shown that a better response time of a website can result in higher user satisfaction. In their study, participants viewed and evaluated an internet magazine. In the not informed condition, delay had a negative influence on the evaluation of the surfing experience. The negative effect generated by waiting was transferred to the evaluation of the magazine itself. In the informed condition, participants already expected a certain delay so that the actual lack of synchronicity was not particularly noticed.

In sum, the higher the number of clickable areas and links on a website, and the higher the responsiveness as well as the reaction speed of a website, the more interactive it is - and will be perceived as such (Kiss 2005).

2.2 *Hypothesis development*

If users constantly control their communicative experiences, they have to focus their attention and they have to be cognitively active. A direct result of this mental experience induced by higher interactivity is improved learning based on in-depth cognitive processing (Craik and Lockhart 1972). Furthermore, active control makes information acquisition more effective, because it enables users to obtain information in the way most suitable to them (Ariely 1998). And, using a computer mouse for the interaction with a website generates somatosensory information which enhances memory and retrieving processes (Engelkamp and Zimmer 1985).

Moreover, when internet users click on a hyperlink, they probably have their own expectations about the content of the linked website. If the expected content is not found, or the content of the website is not at all related to the hyperlink, users may not interact or may even abandon the website immediately (Cho and Leckenby 1999). For this reason, higher levels of responsiveness should above all lead to a more positive attitude and clear behavioral intentions. Similarly, a quick response to the user's actions and requests should also result in a more satisfying communication experience on a website. By and large, a quick response reduces frustrations (Dellaert and Kahn 1999) and the probability of an early interruption of the communication.

In sum, a highly interactive website with numerous options for the user is more engaging, requires closer attention, and demands a higher cognitive effort to process information than a low interactive website. Highly interactive websites should also lead to more mental imagery activities, better attitudes, and behavioral intentions.

Mental imagery is defined as the representation of any sensory experience in working memory, meaning that a person can experience various modality-specific forms of mental imagery (MacInnis and Price 1987). The experience depends on the stimulation of one or more of the five senses (Childers and Houston 1982). Visual mental imageries are regarded as analog quasi-pictorial

representations of perceptual information (Paivio 1971, 1986; Kosslyn 1980). They can range from a few simple and vague mental images to many complex and clear mental images.

Several studies have shown that mental imagery affects cognitive and affective responses to advertising including the recall of advertising messages, the attitudes toward the ad and toward the brand as well as the behavioral intentions (Babin and Burns 1997; Bone and Ellen 1990; Kisielius and Sternthal 1984; McGill and Anand 1989; Mitchell 1986). It has been repeatedly proven that imagery-eliciting stimuli lead to superior recall as well as to more positive attitudes toward the ad and the brand (for a review see MacInnis and Price 1987; Babin, Burns and Biswas 1992). In addition, there is also some evidence for a positive relationship between imagery processing and behavioral intention (Gregory, Cialdini and Carpenter 1982; Bone and Ellen 1990).

Many imagery-eliciting strategies have been suggested to date. For instance, instructions to imagine have been studied lately by Babin and Burns (1997). Alesandrini and Sheikh (1983) as well as Rossiter and Percy (1983) investigated the effects of various types of pictures on recall and attitude. The present paper hypothesizes that the interaction with a website may improve cognitive processing and, thus, may have a positive bearing on imagery processing. It is further assumed that interactivity supports the formation of a better mental imagery.

These underlying rationales give rise to *hypotheses* concerning the impact of progressive levels of interactivity and imagery-strength of websites on imagery processing, mental imagery, and advertising consequences:

- H1a: Highly interactive websites are more likely to induce imagery processing than low interactive websites.
- H1b: Highly interactive websites are more likely to induce mental imagery than low interactive websites.
- H1c: Highly interactive websites more strongly induce positive advertising consequences (attitude towards the site: A_{site} , attitude towards the brand: A_{brand} , buying intention: BI) than low interactive websites.
- H2a: Imagery-strong websites are more likely to induce imagery processing than imagery-weak websites.
- H2b: Imagery-strong websites are more likely to induce mental imagery than imagery-weak websites.
- H2c: Imagery-strong websites more strongly induce positive advertising consequences (A_{site} , A_{brand} , BI) than imagery-weak websites.

3 Method

The experimental variables interactivity and imagery-strength were manipulated in a between-subjects design. There were two levels of interactivity (low

and high) and two levels of imagery-strength (weak and strong). Thus, the experiment took the form of a 2×2 design with four cells.

Interactivity was operationalized by using three dimensions: range of interaction, responsiveness, and speed of interaction. Range of interaction was manipulated by the number of clickable areas on the website and the number of options within each area. In the low interactivity condition users had only 9 clickable areas and only one option within the website. In the high interactivity condition users had 32 clickable areas and 4 options within the website (see figure 1). Responsiveness was manipulated by the number of unexpected and unrelated reactions to user clicks on the website. In the low interactive condition 2 clickable areas on the website were linked to unrelated information. In the highly interactive condition all clickable areas were linked to highly related information. Speed of interaction was manipulated by the use of time lags within the website. Surfing the low interactive website meant that the participants spent between 8 and 20 seconds waiting (depending on individual surfing behavior). In the highly interactive condition no waiting period existed.



Figure 1: SOLA website with few vs. many clickable areas

Strength of imagery was operationalized by the concreteness of the pictures and logos used on the website. The pictures on the website mainly showed water and elements of the ocean. These pictures were selected and revised in pairs.

For the imagery-strong condition concrete photos were chosen, whereas for the imagery-weak condition unrealistic and more cartoon-like pictures were chosen. Despite the different pictures, each pair had absolutely identical content (see figure 2).

Soft drinks were chosen as the product category for the manipulated websites of the fictitious brand SOLA, because the student sample was familiar with soft drinks (see MacInnis and Price 1987 for the importance of an adequate knowledge of a stimulus to form mental imagery). Four different versions of the same website were designed. This website consisted of 12 linked pages; each page featured one or more pictures and some textual components. Regardless of the values of the independent variables, the quality and the quantity of information in each of the four versions of the SOLA website remained identical.



Figure 2: Imagery-weak (left) and imagery-strong (right) versions of the SOLA website

200 students from a large German university participated in the experiment. As an incentive for participation in the study, the students were added to a lottery list where prizes in the order of 25 €, 50 €, and as first prize 100 € were offered. The gender ratio was almost equal (48.0 percent female and 52.0 percent male), the mean age of the sample was 25.7 years ($sd=5.7$). On average, the

participants began using the internet in the middle of 1997 and they spend an average of 9.98 hours per week ($sd=7.4$) surfing the web.

Participants were randomly assigned to explore one of the four versions of the SOLA website for exactly two minutes. The pretest had shown that two minutes were sufficient to become familiar with the SOLA website. Moreover, participants had to surf the websites of two competitive brands of the soft drink category. The websites of two well-known, but not very strong brands of soft drinks were chosen (to avoid spill-over effects on the judgment of SOLA) and slightly modified. In all test conditions the SOLA website was the second site to be explored, whereas the order of the competitive brands was randomized. After looking at the three websites for a total of six minutes, participants had to answer questions about the SOLA website. Seven-point scales from 1 (low) to 7 (high) were used to rate the characteristics of the dependent variables (see table 1).

The purpose of the pretest was first to verify that the experimental procedure was understood well, that web server and database were responding in the intended way and that instructions and questions were clearly labeled and understandable. Second, the pretest was used to check the effectiveness of the manipulations for every level of interactivity and imagery-strength.

For the manipulation check separate one-way ANOVAs were conducted. Participants exposed to imagery-strong websites rated them imagery-stronger ($M=4.30$) than participants exposed to imagery-weak websites ($M=3.21$) ($F[1,156]=36.14$, $p<.001$). Participants exposed to high interactive websites rated them more interactive ($M=4.86$) than participants exposed to low interactive websites ($M=4.10$) ($F[1,156]=13.84$, $p<.001$). Results showed that participants were able to perceive differences among the manipulations.

Table 1: Operationalizations of the dependent variables

Imagery processing (Cronbach's alpha(imagination)=0.78)	
"How many pictures came to your mind while surfing the website?"	Scale from (-3) "few pictures in mind" to (+3) many pictures in mind
"I fantasized about the product on the site." "I imagined what it would be like to drink the product." "I imagined the taste of the product."	Scales from (-3) "strongly disagree" to (+3) "strongly agree"
Mental imagery (Cronbach's alpha(vividness)=0.87)	
Vividness of the mental image of the brand SOLA	Scales from (-3) "vague"/"not vivid" to (+3) "clear"/"vivid"
Complexity of the mental image of the brand SOLA	Scale from (-3) "simple" to (+3) "complex"
Intensity of the mental image of the brand SOLA	Scale from (-3) "weak" to (+3) "strong"
Attitude toward the website (Cronbach's alpha=0.86)	
"The website of SOLA makes it easy for me to build a relationship with the company." "I would like to visit the website of SOLA again in the future." "I'm satisfied with the service provided by the website of SOLA." "I feel comfortable in surfing the SOLA site." "I feel surfing the website of SOLA is a good way for me to spend my time."	Scales from (-3) "strongly disagree" to (+3) "strongly agree"
Comparison of the website of SOLA with other websites	Scale from (-3) "one of the worst" to (+3) "one of the best"
Attitude toward the brand (Cronbach's alpha=0.85)	
Overall brand evaluation Evaluation of brand sympathy Evaluation of estimated brand quality	Scales from (-3) "I find it bad" to (+3) "I find it good"; from (-3) "I dislike it" to (+3) "I like it" and from (-3) "It has likely a poor quality" to (+3) "It has likely a good quality"
Behavior intentions (Cronbach's alpha=0.79)	
Intention to buy the brand	Scales from (-3) "I wouldn't buy SOLA" to (+3) "I would buy SOLA" and from (-3) "I wouldn't prefer SOLA against other brands" to (+3) "I would prefer SOLA against other brands".
Intention to use the website longer than the given time	Scale from (-3) "no, shorter" to (+3) "yes, longer"
Intention to subscribe to newsletter	Scale from (-3) "no, I wouldn't" to (+3) "yes, I would"

4 Results

H1a suggested that highly interactive websites are more likely to induce imagery processing than low interactive websites. The results of the ANOVA indicated a significant main effect of interactivity on imagery processing ($F[1,156]=4.757$, $p<.05$). Low interactive versus highly interactive websites resulted in mean imagery processing scores of 3.17 and 3.52. In addition, H2a stated that imagery-strong websites are more likely to induce imagery processing than imagery-weak websites. The results of the ANOVA demonstrated that imagery-strength had indeed significant effects on imagery processing ($M(\text{weak})=2.98$, $M(\text{strong})=3.71$, $F[1,156]=16.234$, $p<.001$). *Thus, H1a and H2a were supported.*

H1b and H2b suggested that highly interactive and imagery-strong websites are more likely to induce mental imagery than low interactive and imagery-weak websites. The results of the ANOVA regarding the effects of interactivity on different dimensions of mental imagery varied slightly. Interactivity had significant main effects on vividness ($M(\text{low})=3.54$, $M(\text{high})=4.01$, $F[1,156]=6.33$, $p \leq 0.01$) and on complexity of mental imagery ($M(\text{low})=2.68$, $M(\text{high})=3.33$, $F[1,156]=10.02$, $p<.01$) as well as marginally significant main effects on intensity ($M(\text{low})=3.85$, $M(\text{high})=4.23$, $F[1,156]=2.69$, $p<.10$). *Thus, H1b was supported.*

The results of the ANOVA regarding the effects of imagery-strength were very consistent. Imagery-strength had a highly significant impact on the intensity of mental imagery ($M(\text{weak})=3.55$, $M(\text{strong})=4.53$, $F[1,156]=17.28$, $p<.001$) as well as a significant impact on vividness ($M(\text{weak})=3.50$, $M(\text{strong})=4.06$, $F[1,156]=3.94$, $p<.05$) and complexity of mental imagery ($M(\text{weak})=2.80$, $M(\text{strong})=3.20$, $F[1,156]=3.80$, $p \leq .05$). *Therefore, H2b was also supported.*

H1c and H2c stated that highly interactive and imagery-strong websites more strongly induce advertising consequences than low interactive and imagery-weak websites. These hypotheses were tested by running a two-way MANOVA with mean scale values for the dependent variables A_{site} , A_{brand} and BI, and levels of interactivity and imagery-strength as independent variables. The findings indicated a main effect of interactivity (Pillai-Spur=.14, $F[3,153]=7.99$, $p \leq .001$) and a main effect of imagery-strength on the three dependent variables (Pillai-Spur=.06, $F[3,153]=3.37$, $p \leq .05$). The ANOVA results showed highly significant main effects of interactivity on A_{site} ($M(\text{low})=2.80$, $M(\text{high})=3.62$, $F[1,155]=20.11$, $p<.001$), on A_{brand} ($M(\text{low})=3.85$, $M(\text{high})=4.67$, $F[1,155]=17.93$, $p<.001$) and significant main effects on BI ($M(\text{low})=2.51$, $M(\text{high})=3.12$, $F[1,155]=9.25$, $p<.01$). *Thus, H1c was supported.*

The ANOVA results regarding effects of imagery-strength on the three dependent variables were less homogeneous. The main effect of imagery-strength on A_{site} ($M(\text{weak})=3.01$, $M(\text{strong})=3.41$, $F[1,155]=6.05$, $p<.01$) and on A_{brand} ($M(\text{weak})=4.05$, $M(\text{strong})=4.47$, $F[1,155]=4.19$, $p<.05$) was significant, but it was not significant on BI ($M(\text{weak})=2.74$, $M(\text{strong})=2.89$, $F[1,155]=.17$, $p>.05$). Considering that A_{site} is highlighted as one of the major indicators of the effectiveness of online advertising (e.g., Pavlou and Stewart 2000), *H2c received only partial support*. As Figure 3 shows marginally significant interaction effect emerged between interactivity and imagery-strength especially on the dependent variable A_{site} ($F[1,156]=3.24$, $p<.10$).

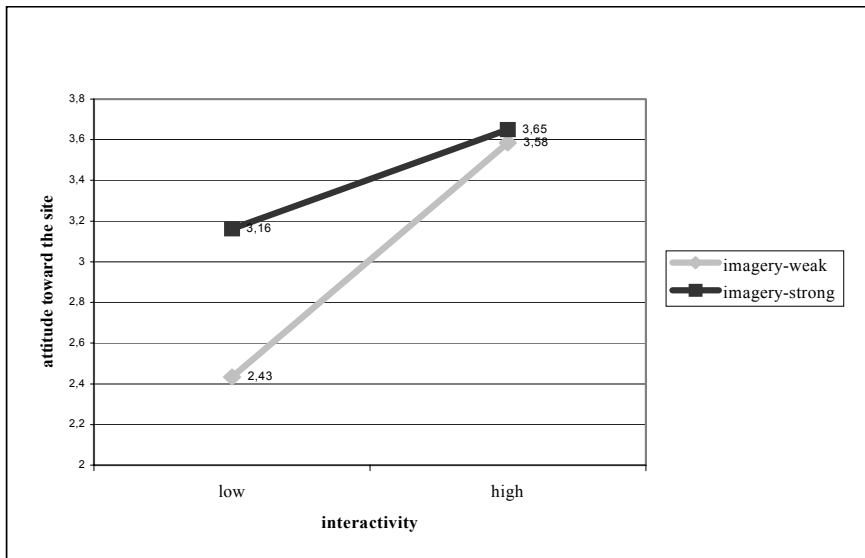


Figure 3: Graph of interaction effects of interactivity on A_{site}

5 Summary

In this experiment we manipulated levels of interactivity and imagery-strength of websites. Our interactivity manipulation was based on a multidimensional conceptualization of the construct with range of interaction, speed of interaction and responsiveness as single dimensions. The experiment showed that progressive levels of interactivity on internet websites can be regarded as an imagery-eliciting strategy that enhances the effectiveness of online advertising.

One potential limitation of our experiment relates to different situations of involvement, which we have neither varied nor manipulated, but which might influence the perception of interactivity (e.g. Liu and Shrum 2002). When users search for information on a website (and are cognitively highly involved), they usually have a clear utilitarian purpose in mind, such as obtaining information on a product they are planning to buy (Hoffman and Novak 1996). Then, the speed of interaction and the responsiveness (message relatedness) of a website may become important. Not surprisingly, internet search engines are mostly rated on their speed and hit ratio. However, when users browse merely for pleasure or to pass the time (and are emotionally highly involved), they tend to seek hedonic benefits and experiential surfing experiences (Hoffman and Novak 1996). In such conditions, the ability to look around and experience the features of a website (and as a result the range of interaction) may be important for them. Therefore marketers have to consider that range of interaction, responsiveness and speed of interaction might not be identically important for searchers and browsers of a website (Kiss and Esch 2003, Kiss 2005).

Future research should also concern users' Internet experience. We expect that not all users will prefer higher levels of interactivity. Because interactivity requires mental resources, we suggest that it can compete with other cognitive tasks, especially when users are unfamiliar with Internet websites (Kiss 2005). High interactive websites and little surfing experience could negatively amplify each other and lead to less favourable attitudes and behavioural intentions.

From the practitioner's perspective, interactive brand websites can enhance the goals and effects of integrated marketing communication (Schulz, Tannenbaum and Lauterborn 1996; Belch and Belch 2000; Esch 2001, 2005). Whereas brand awareness is a necessary requirement for entering an URL into a web browser and visiting the website of a certain brand, traditional media should concentrate on creating and strengthening brand awareness. On the other hand, the combination of interactive elements on websites with brand information (key-visuals, brand logos, etc.) could significantly accelerate the image building process. But, this positive impact of interactivity depends on certain situations and conditions. We have described that interactivity drives users' attention and we could show that it stimulates cognitive processing. Moreover, we have stated the negative effects of interactivity (Ariely 2000) due to the extra effort needed to navigate through a very interactive website. Thus, advertisers have to consider that increasing the level of interactivity in their websites ad infinitum could reverse its positive effects.

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Shintaro Okazaki

Comparative evaluation of American brands' websites in Europe: what do they standardise?

1. Introduction
2. Significance of the study
3. Framework of online standardisation
4. Research method
5. Results
6. Practical and theoretical implications

Abstract

This study explores multinationals' online standardisation in terms of the similarity between home country and host country sites in logo, colour, layout, textual information, static visuals, and interactive images. We compare the home websites of 64 American brands, chosen from Business Week's brand ranking, with their websites created in Germany, France, and Spain. The findings suggest that American brands are likely to tailor the specific website components to each market, while maintaining a minimum level of uniformity for the European markets, in logo, colour, and layout. Other components, such as textual information and visual images, tend to be dissimilar across markets.

1 Introduction

Of the various forms of online environment, websites have been considered one of the most popular platforms. In the case of electronic commerce, the most practical advantage of the website is its capacity to allow consumers to see, consult, and obtain product-related information anywhere, at any time. Thus, establishing global websites with multiple language options is both strategically necessary and practical, especially for multinationals that are attempting to capture markets where their physical presence has not been strong. On the other hand, cultural and linguistic barriers have been pointed out as the most difficult hurdles to overcome in marketing communications. In this regard, creating websites with a local domain code can resolve this important issue. Such localisation, however, could cost a great deal.

Thus, it is reasonable to assume that, strategically, MNCs would favour standardising their websites in multiple markets, as a means of obtaining the principal benefits associated with traditional marketing standardisation: consistent brand image, cost savings, and organisational control. However, there seems to be a lack of empirical research regarding the standardisation versus localisation issue in the online environment. This leaves important questions unanswered.

The purpose of this study is to fill this research gap, by examining the degree of online standardisation adopted by top American brands in European markets. Here, "online standardisation" refers to the similarities and differences between the websites created by the same MNCs at home (the U.S.A.) and in a host country. The chosen countries are Germany, France, and Spain, which differ importantly in terms of cultural and linguistic characteristics, but are relatively homogeneous in socio-economic conditions and technological infrastructure.

2 Significance of the study

It has been widely accepted that the Internet is a global medium which accelerates “cross-border information flow and transactions” (Quelch and Klein 1996). With more and more businesses on line, the Web can provide a “low-cost gateway to the global market”, especially for enterprises engaging in exporting (Dou et al. 2002). In this vein, the interactive medium becomes increasingly viable and important for top brands that increasingly attract consumers outside the home country. In particular, for companies competing on price, selection, and delivery of the product, the characteristics of websites are critical “to increasing the likelihood that customers will shop at that site and will come back for future purchases” (Lynch et al. 2001). However, there is a dearth of empirical research into interactive marketing communications in multiple markets.

The contribution of this study to the literature is twofold. First, the growth of the Internet has intuitively favoured the proponents of international advertising standardisation, because anyone has access to any website from any wired or wireless terminal in the world. However, Roberts and Ko (2002) argue that global interactive communications should be defined as “cross-cultural marketing communications that are deliberately planned and executed to actively engage persons in advertising processing through interactivity”. They contend that websites can be effectively programmed for “establishing corporate and brand consistency and strong equity, while simultaneously allowing flexibility in being culturally sensitive”. If this is truly the case, the websites of global brands should be culturally localised yet at the same time strategically standardised. However, there is little empirical research on this issue. The standardisation versus localisation issue has attracted considerable research efforts in recent years, but most studies have focused on traditional media, leaving the cross-cultural variability of interactive communications unexplored. The results of this study will therefore fill this research gap, by examining global brands’ websites in multiple markets.

Second, as the array of marketing communications has been broadening, global network agencies have expanded their service portfolios horizontally, by merging with more specialised agencies (Tharp and Jeogn, 2001). In this vein, more and more interactive agencies have been expanding their international network under the network’s umbrella, while improving technology has allowed artistic and idea diversity in creative marketing communications. As a result, most interactive agencies are likely to centralise their global marketing strategy because of the top-down structure of mega-agencies (Roberts and Ko 2002). On the other hand, Gould et al.’s study (1999) of globally integrated marketing communications revealed that “it appears that close global collaboration is still not as commonplace as it might be”. Furthermore, it was found that while “co-

ordination applies equally to standardization and adaptation, coordination may be more difficult to achieve in adaptive situations". In this regard, evidence shows that "many MNCs with one brand name have allowed local entities to develop sites ad hoc and how have several sites around the globe that require tighter coordination" (Quelch and Klein 1996). However, this issue of global coordination in interactive communications has hardly been questioned empirically. The results from this study will therefore benefit both academics and practitioners, by providing clearer evidence as to whether a truly centralised approach has been adopted on the Internet.

3 Framework of online standardisation

Quelch and Klein (1996) contend that the Internet is a global medium that accelerates "cross-border information flow and transactions" in two ways. First, it provides a cost-effective transactional function to attract consumers outside the home country, especially for firms engaged in exporting (Dou et al. 2002). Second, it provides an interactive communicational function to inform, entertain, and motivate consumers in terms of corporate, product, and brand information. These two functions, transaction and communication, form the principal axis of the online standardisation matrix.

Figure 1 shows the conceptual framework for this study. These concepts are essentially based on the model proposed by Quelch and Klein (1996), who suggested two primary models of website: the communication model and the transaction model. In our proposed model, communication and transaction features form two ends of one axis, to be balanced with the other axis, which consists of fact and image. To achieve the desired level of online standardisation, the resulting four quadrants need to be effectively combined. The components in each quadrant can be considered the most relevant programs for online brand communications.

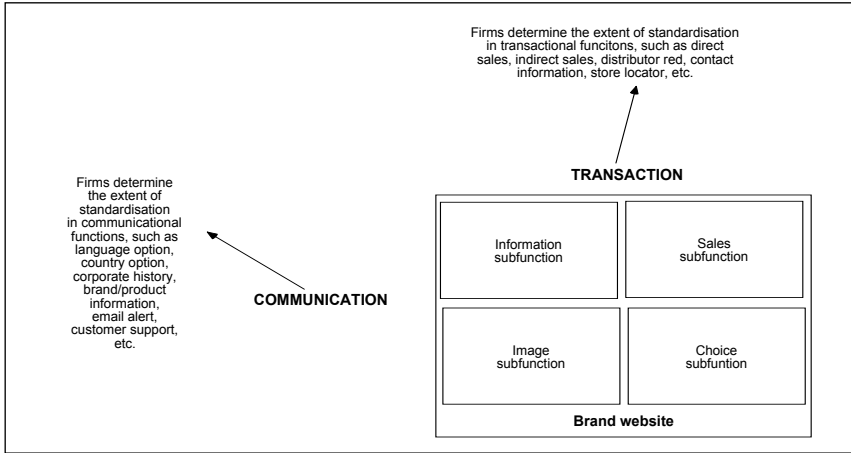


Figure 1: Conceptualisation of online standardisation

The growth of the Internet has intuitively favoured the proponents of international advertising standardisation, because anyone anywhere has access to any website from any wired or wireless terminal in the world. However, Roberts and Ko (2002) argue that global interactive communications should be defined as “cross-cultural marketing communications that are deliberately planned and executed to actively engage persons in advertising processing through interactivity”. Their argument suggests that the websites of global brands should be culturally localised but, at the same time, strategically standardised.

However, there is evidence that, across Europe, the actual online business environment is relatively heterogeneous. The “e-readiness rankings” rated the UK 3rd and Germany 8th, but France 17th and Spain 22nd. This implies that important barriers may face MNCs seeking to establish an online business base in some countries. This “e-readiness score” is relevant because it incorporates: (1) connectivity and technology infrastructure, (2) business infrastructure, (3) consumer and business Internet adoption, (4) socio-cultural conditions, (5) the legal and political environment, and (6) auxiliary Internet supports (The EIU eBusiness Forum 2002). On the other hand, more and more interactive agencies have been expanding their international network under the network’s umbrella, while technological improvement has allowed artistic and idea diversity in creative marketing communications. As a result, most interactive agencies are likely to centralise their global marketing strategy, because of the top-down structure of mega-agencies (Roberts and Ko 2002). Taken together, these considerations lead us to formulate the following research questions:

RQ1: To what extent do multinational corporations standardise their websites in European markets?

RQ2: Are there any differences in terms of country and product type?

4 Research method

In recent explorations, content analysis has proved to be an effective method of identifying the basic characteristics of website communications (Dou et al. 2002; Ghose and Dou 1998; Hwang et al. 2003; Philport and Arbittier 1997). Following the recommendations made by Okazaki and Alonso (2002), the content of major brands' websites in the USA, France, Germany and Spain was examined. Table 1 summarises socio-economic characteristics of the countries examined in this study.

A ranking of "The 100 Top Global Brands" was used for the data selection (*BusinessWeek* 2002). This list consists of brands of a value greater than \$1 billion. For this study, only American brands (by country of origin) were chosen. In total, 66 brands were found. Next, for each brand, the main corporate site of the American headquarters was first identified. Next, their respective websites with localized URLs in each country were identified, using search engines in the local language (Yahoo!, Google, Alta Vista, Lycos, et cetera). In the attempt to create an exhaustive list of host-country websites, the parent company's website was then searched for any links to "Our Global Network". A so-called "global site" with multiple language options was considered a "gateway" to each host-country site. As a result, 64 US sites, along with host-country sites were identified (57 German, 49 French and 43 Spanish sites).

Table 1: Descriptive statistics of countries analysed

	<i>Population</i> ¹	<i>GDP per capita</i> ²	<i>Internet penetration</i> ³	<i>Online shopping</i> ⁴	<i>Online spending</i> ⁵
US	292.0	\$33,946	58.6	39.1	\$70.3
France	59.3	\$30,493	47.3	6.6	\$5.0
Germany	82.3	\$32,822	49.1	14.9	\$25.1
Spain	40.3	\$17,968	21.2	2.5	\$1.3

Note: 2001 data; 1. Millions, according to the national statistical offices; 2. US\$, constant 1995 prices; 3. Access to population aged 15+; 4. Percentage of population ever purchased online; 6. US\$, Billions, B2C.

Source: 1-5 World Advertising Research Center (2002); 5. eMarketer (www.emarketer.com), Baquia.com (www.baquia.com), AECE-fecemd (www.aece.org).

A detailed coding sheet was developed for the content analysis. First, the list of online brand communications to be examined was created on the basis of the literature discussed above. Specifically, the online brand communications were classified into 23 forms, which were partially derived from Ghose and Dou's (1998) research on website content analysis, while consulting the prior work of Dou et al. (2002), Hwang et al. (2003) and Philport and Arbittier (1997). In addition, in order to make an exclusive list of the tools, a series of in-depth interviews was conducted with practitioners of interactive media planning, such as Terra/Lycos.

Next, the extent of online standardisation was understood as the degree of similarity between home-country and host-country websites. This "similarity rating" measure was partially adopted from coding schemes suggested by Mueller (1991). Specifically, the similarity rating was coded for each pair of websites (i.e., between the websites created at home and in a host country. e.g., USA-Germany, USA-France, etc.) on a five-point semantic scale, ranging from 1 ("very different") to 5 ("very similar") with an intermediate scale point 3 ("not determinable"). The web page was first divided into four quadrants: upper right, upper left, lower right, and lower left (see Figure 2). Then, multiple criteria were compared vis-à-vis, and the similarity was measured on a three-point scale from 1 (very different) and 5 (very similar). The coding criteria used were: 1. Company logo, 2. Logo placement, 3. Major copy, 4. Copy placement, 5. Major headline, 6. Headline placement, 7. Major text, 8. Layout in top half/right half, 9. Layout in bottom half/left half, 10. Colour in top half/right half, 11. Colour in bottom half/left half, 12. Photo (product), 13. Photo (model), 14. Photo (background), 15. Major illustrations, 16. Major chart or graph, 17. Flash as opening, 18. Pop-ups, 19. Animated banners, 20. Layers, 21. Pop-under.

The unit of analysis was determined to be the first page or homepage of each website, excluding analysis of hyperlinks. This decision was made because, as the size of websites varies considerably, evaluating an entire site could be extremely time-consuming as well as confusing (Ha and James, 1998). In addition, Hwang et al. (2003) argue that "the homepage is central to web-based communication because it takes on a role more important than the headline of traditional print ads".

Four trilingual coders were employed, all "sworn translators" certified by the Spanish Government for their exceptional linguistic preparation. All four were native Spanish: two specialized in English and French, and two in English and German. Two coders coded every sample website. It was recognized that some loss of information might occur because non-native coders were used to analyse foreign websites. However, it was accepted that such potential bias was minimized by the coders' extensive linguistic preparation: they had all received full four-year University training in the relevant foreign language, and had lived in the relevant country for more than two years. In addition, the subjective in-

terpretation of textual information was minimal, since the coders were responsible for examining only major copy, headlines, text, and visuals on the websites.

The inter-coder reliability was assessed on Perreault and Leigh' Ir (1989), which several researchers consider the best (e.g., Kolbe and Burnett 1991). The superiority of Perreault and Leigh's *Ir* over Scott's ϕ or Cohen's κ lies in the fact that it does not have a multiplicative chance agreement assumption: rather, it explicitly measures the level of agreement that might be expected by a true level of reliability (Perreault and Leigh 1989). At the end of the coding procedure, the results were compared item by item between each linguistic pair. The majority of the reliability indexes exceeded the minimum value of 0.80 recommended by Perreault and Leigh (1989), and were thus determined to be satisfactory.



Figure 2: An example of similarity rating with Kellogg's websites

5 Results

First, Table 2 shows online brand communications identified in Germany, France, and Spain. To answer Research question 1, a multivariate discriminant analysis across the four countries was carried out. If American brands use a standardised approach for their websites across Europe, no statistically significant discriminant function should be found in the first place.

Tests of the skewness and kurtosis of the dependent variables, as well as a Box's M test, suggested little evidence of violation for the basic assumptions of discriminant analysis (Hair et al. 1998).

None of the resulting discriminant functions was statistically significant, indicating that there was no multivariate difference separating the four countries. A univariate F detected only 3 out of 23 variables significantly differentiated across the countries: global/local site option ($p < 0.001$), investor relations ($p = 0.003$), and direct online transaction ($p = 0.003$). Thus, compared to their European websites, American brands' websites created at home emphasise investor relations and direct online transaction at the cost of the global/local site option.

Next, a discriminant analysis was repeated for the European countries only. However, no statistical significance was revealed ($p = 0.99$), nor was any significant univariate F found. This suggests that the frequency of use of online brand communications in Germany, France, and Spain was practically uniform.

Table 2: Frequency distribution of online brand communications (%)

<i>Online brand communications</i>	<i>US (n=64)</i>	<i>Germany (n=57)</i>	<i>France (n=49)</i>	<i>Spain (n=43)</i>	<i>F</i>	<i>p</i>
Global/Local site options	37.9	75.4	65.3	74.4	8.646	***
Corporate information	89.4	84.2	87.8	83.7	0.355	
Corporate news release	53.0	59.6	55.1	58.1	0.208	
Product/Brand news release	51.5	52.6	53.1	48.8	0.065	
General product information	80.3	78.9	83.7	88.4	0.585	
Brand specific information	75.8	68.4	73.5	65.1	0.587	
Investor relationships	45.5	22.8	16.3	25.6	4.843	**
Direct online transaction	71.2	43.9	42.6	44.2	4.887	**
Indirect online transaction	22.7	24.6	28.6	27.9	0.218	
Office/Store locator	33.3	26.3	32.7	30.2	0.270	
Country/Language option	62.1	61.4	71.4	67.4	0.517	
Search engine	68.2	50.9	55.1	53.5	1.505	
Jobs/Career development	62.1	54.4	46.9	46.5	1.225	
Promotion/Prizes/Sweepstakes	56.1	47.4	44.9	53.5	0.596	
Education/Training	39.4	24.6	26.5	39.5	1.616	
Culture/Entertainment	47.0	42.1	53.1	41.9	0.545	
Client registration/Log-in	51.5	36.8	38.8	32.6	1.604	
Guest book/Customer feedback	78.8	77.2	75.5	81.4	0.168	
E-mail alert	25.8	19.3	20.4	11.6	1.088	
FAQs	18.2	19.3	16.3	18.6	0.054	
Free download	19.7	28.1	26.5	27.9	0.503	
Sitemap	45.5	36.8	44.9	46.5	0.436	
Links	4.5	3.5	8.2	4.7	0.429	

Second, a factor analysis was performed on the 23 forms of online brand communications, using the principal component method (varimax rotation), which is an optimum approach to condensation prior to rotation. Only factors

with an Eigenvalue greater than 1 were retained. This procedure reduced the predictor variables down to six subsets of uncorrelated factors (Table 3).

Table 3: Results of factor analysis

<i>Online brand communications</i>	<i>Factor 1</i>	<i>Factor 2</i>	<i>Factor 3</i>	<i>Factor 4</i>	<i>Factor 5</i>	<i>Factor 6</i>
Corporate news release	0.78					
Jobs/Carrier development	0.67					
Investors relationship	0.67					
Search engine	0.58					
Corporate information	0.56					
Direct online transaction		0.76				
Client registration/Log-in		0.63				
Brand specific information		0.55				
Promotion/Prizes/Sweepstakes		0.50				
Culture/Entertainment			0.68			
FAQs			0.62			
Country/Language option				0.73		
US/Global site option				0.68		
General product information				0.53		
Free download					0.73	
Office/Store locator					0.66	
Links					0.56	
Sitemap						0.70
Indirect online transaction						0.58

Factors extracted could fall under various umbrellas: corporate communications (Factor 1); direct transaction (Factor 2); entertainment (Factor 3); choice functions (Factor 4); connectedness (Factor 5); and indirect transaction (Factor 6). The results appear to indicate that elements related to communications and transactional functions are the most important influencing factors in online standardisation, which is consistent with our theoretical framework.

Third, to answer Research question 2, the mean values of similarity ratings were calculated for each of the three European markets. Table 4 presents a summary of the results of similarity ratings. As the table clearly shows, the similarity of logo and logo placement is notably high, while copy, headlines, text, and their respective placement on the websites differ substantially. By contrast, the usage of common colour was relatively frequent. Also, the overall layout of website design was relatively similar. Major photographs differed considerably between the home and host markets, while illustrations were rarely used on the websites. None of the websites employed charts or graphs.

Table 4: Mean values of similarity ratings by country

<i>Components^a</i>	<i>Germany (n=57)</i>	<i>France (n=49)</i>	<i>Spain (n=43)</i>
Company logo	4.39	4.61	4.36
Major copy	1.14	1.36	1.38
Major headline	1.02	1.17	1.08
Major text	2.68	2.53	2.71
Layout	3.29	3.32	3.42
Colour	3.83	4.03	4.01
Major photograph	1.72	1.58	1.64

^a All components were measured on a Likert scale of 1 (very different) through 5 (very similar).

The similarity ratings for interactive images were extremely low for two reasons: (1) the usage of interactive images varies substantially across countries: an MNC's website may be very interactive in one market, but very static in another; and (2) it was often observed that some websites constantly changed the animated images on the same banner. By and large, American brands seem to adopt a relatively localised approach in the creation of websites. This is also consistent with our previous observations: with the exception of very basic elements, such as logo, colour, and layout, most of the components of the websites were dissimilar.

We then calculated the "online standardisation index" by computing the mean value of similarity ratings by country. An analysis of variance (ANOVA) was undertaken for the online standardisation index across three markets (Table 5). The resulting statistics show no significant difference, indicating that the extent of online standardisation varies little across European markets.

Table 5: ANOVA results

<i>Countries</i>	<i>n</i>	<i>Online Standardisation Index^a</i>	<i>ANOVA</i>	
			<i>F</i>	<i>p</i>
Germany	57	1.96	.142	0.868
France	49	2.01		
Spain	43	2.04		

Finally, the online standardisation index was calculated by product category. An ANOVA detected statistical significance across the product categories, indicating that durable goods brands were more likely than non-durables and services to standardise their corresponding websites. This seems to be consistent with prior research on traditional media (Samiee et al. 2003). In Figures 3, 4, and 5, some of the example websites are shown in terms of the product category, and the level of online standardisation.

6 Practical and theoretical implications

The findings suggest that American brands are likely to maintain a basic functional design of brand websites through the use of common logos in uniform colours and layouts, while tailoring copy, headlines, text, and visual images to each market. In terms of international advertising standardisation, this is rather surprising, because much prior research on traditional media indicates a cross-border applicability and widespread usage of the standardisation approach in Western markets (e.g., Duncan and Jyotika 1995; Harris 1994; Mehta 1992; Whitelock and Chung 1989).

Furthermore, it is clear that American MNCs consider Europe as a single market, and one that is strategically dissimilar to their home market. If we observe only the websites created in Germany, France, and Spain, there seems to exist a “regionalisation” strategy across Europe, in that the level of similarity ratings among the European samples was relatively uniform. This may be due to the close geographical proximity of the three countries, which would logically provide more opportunities for personal interaction and the accumulation of greater knowledge (Samiee et al. 2003).

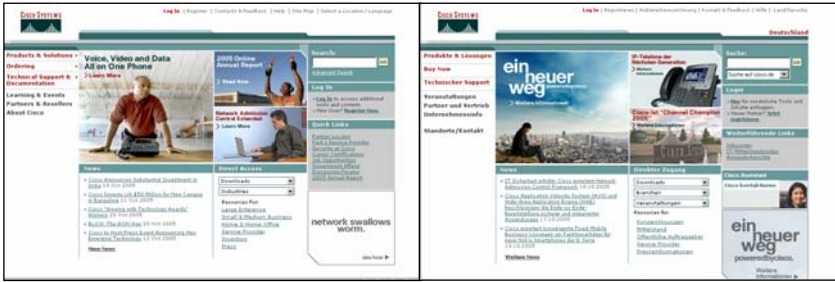


Figure 3: Cisco Systems' standardisation strategy

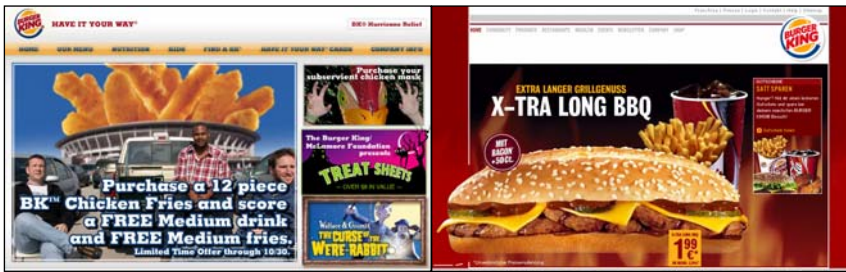


Figure 4: Burger King's localisation strategy



Figure 5: BMW's "glocal" or hybrid strategy

The statistical insignificance detected through an ANOVA of the similarity ratings across three countries provides some evidence for this argument. However, this needs further examination, because we did not actually measure the similarity between the European samples.

On the other hand, our finding is consistent with Taylor and Johnson (2001), who suggest that localisation strategies are more feasible through more en-

hanced technologies, such as global integrated marketing communications. In fact, the digitalisation of telecommunication technology, and mergers and acquisitions among multinational agencies, have contributed to leverage the economies of knowledge and coordination. As a result, global clients and their brands are increasingly demanding the best combinations of global, regional, and local expertise to create a “glocal”, or more hybrid, strategy than the traditional “standardise-or-localise” framework (Tharp and Jeogn 2001).

This study demonstrates that this is actually the case in online integrated communications. It seems reasonable to assume that such global integration is more viable in a state-of-the-art telecommunications technology, such as the Internet, than in traditional print and television media. In this light, it is also possible that global brands are increasingly more concerned with market and consumer differences, rather than demographic similarities, because the same product or service may be positioned differently in different European countries.

Finally, this study detects an important difference in terms of product category. As prior research on traditional media suggests, websites for durable goods are more likely to be standardised than those for non-durables. Evidently, this is consistent with the traditional argument that “both practitioners and academics tend to categorise products on a sliding scale of being culture-free or culture-bound” (De Mooij 1998). Durable goods, especially industrial and high-tech product categories (e.g., cars, computers, audio and video equipment, etc.) are thought to be the least culture-bound, and therefore lend themselves to attractive standardisation opportunities (Batra et al. 1996; Taylor and Johnson 2001). This was also the case for interactive marketing communications. However, services were not found to be more standardised. In contrast, non-durable goods, including food and beverages, which are the hardest to standardise (De Mooij 1998), were found to be less standardised.

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Integrated marketing communications in mobile context

1. Introduction
2. Integrated marketing communications
3. Interactivity
4. A model of IMC communications in mobile context
5. A case study of a company initiating a mobile marketing program
 - 5.1. Study design and methods
 - 5.2. Results and discussion
6. Conclusions and future directions

Abstract

The use of the mobile medium as a communications and entertainment channel between a brand and an end-user is gradually evolving. Academic research on mobile marketing has also begun to flourish. However, the growing body of literature on mobile marketing appears to be inconsistent and fairly fragmented. This paper conceptualizes a model that links the use of database information and mobile media to develop interactive and integrated marketing communication strategies. As a part of this model, we discuss the foundations of mobile marketing and interactive integrated marketing communications. Furthermore, we present a case study of a company that is developing and implementing a mobile marketing campaign in retailing. Although, we discuss the entire model, the case study focuses on the initiation stage of mobile marketing, and how customer's age, gender, family size and interests affect their willingness to give permission to receive mobile marketing.

1 Introduction

“This is the most exciting, most challenging time in the history of advertising research. We are sure to see innovations in research during the next several years the likes of which have never before been seen in the field” (Lavidge 1999)

Over the last few years, mobile marketing has received increasing interest among academics and practitioners. Although there is little evidence on the impact of mobile marketing on firm performance, marketers around the world are increasing their spending on mobile marketing. The size of the European mobile marketing market was about €145 million in 2003 (Jupiter Research 2004). However, numbers are far from the explosive growth figures commonly predicted at the beginning of the twenty-first century. Many academics and practitioners believed that mobile marketing would skyrocket over the next few years (see e.g. IMAP 2002), and that marketing would be one of the leading mobile commerce applications (e.g. Durlacher Research 2001).

Several empirically supported optimistic predictions on the future popularity of mobile marketing rely on indirect units of measurement rather than direct studies on consumers' willingness to receive marketing messages to their mobile devices. Many scholars, for instance, suggest that there is a huge market potential for mobile marketing or advertising, supporting their assumptions with predictions of the global penetration rate of mobile devices and high diffusion of Short Message Service (SMS) (e.g. Scharl et al. 2005; Barnes and Scornavacca 2004; Bauer et al. 2005; Leppäniemi et al. 2005) or technological development such as convergence of mobile and the Internet (Mort and Brennan 2002; Barnes 2002; Okazaki 2005). In fact, mobile marketing similar to all

mobile commerce goes far beyond mobile telephony (see e.g. Vittet-Philippe and Navarro 2000), meaning that a substantial volume of mobile marketing should not be seen as an obvious outcome of high penetration rates of mobile devices, diffusion of SMS, or emergence of high speed network technologies like 3G and other advances in information and communications technology. Rather, they should be seen as a prerequisite for mobile marketing. The key question for marketers is whether customers are willing to receive marketing to their mobile devices. It is critical to remember that consumers not only judge the right ways for receiving mobile marketing communications on their hand-sets, but also can choose the time, the place and context for communications.

Marketing practitioners and scholars have proposed numerous definitions of mobile marketing or advertising. While some of these conceptualizations are similar, there is definitely a lack of consensus as to the most appropriate way in which this emerging phenomenon should be defined. Mobile marketing, as seen in this paper, is: “the use of the mobile medium as a communications and entertainment channel between a brand and an end-user. Mobile marketing is the only personal channel enabling spontaneous, direct, interactive and/or targeted communications, any time, any place.” (Mobile Marketing Association 2005)

During the past several decades, companies around the globe have perfected the art of mass marketing. This is selling highly standardized products to masses of consumers. In the process, they have developed effective mass-marketing techniques to support their mass-marketing strategies. However, in the twenty-first century, marketing managers face new marketing communications realities. Vast improvements in technology have given rise to a number of different new media and opened up opportunities for reaching customers more cost effectively at multiple (targeted) locations with more personalized messages.

Considering this new communications environment, marketers must reassess the roles of various media and promotion-mix tools. Consequently, there has been a dramatic rise in the use of direct-response media as direct marketing becomes adopted as a part of a marketing plan for many products (Fill 2002). Marketers are shifting from mass marketing to the targeted or one-to-one marketing (e.g. Peppers and Rogers 1997). Although, mass-media advertising still dominates business-to-consumer firms’ promotion mixes, marketers are making increased use of new, highly targeted media and are diverting marketing spending to interactive marketing (see e.g. Barwise and Styler 2003). As companies adopt richer but more fragmented media and promotion tools to reach their diverse markets, they risk creating a vague picture of communication for consumers. To avoid this, more companies are adopting the concept of integrated marketing communication (IMC), which calls for carefully integrating all the sources of company communication to deliver a clear and consistent message to target markets (Shultz et al. 1993).

At present mobile marketing, however, is in its infancy. The growing body of literature on mobile marketing is somewhat inconsistent and fairly fragmented. Therefore, to help advance a cohesive body of knowledge on this topic of growing interest and importance, this paper attempts to conceptualize a model that links the use of database information and mobile media to develop interactive and integrated marketing communication strategies. This model is presented in Figure 1. As part of this model, we discuss the foundations of mobile marketing and interactive IMC. Second, we present a case study of a company that had no previous experience in mobile marketing or IMC, and is developing and implementing mobile marketing campaigns in retailing. Although we discuss the entire model, the case study focuses on the initiation stage of mobile marketing, and how customer's age, gender, family size and interests affect their willingness to give permission to receive mobile marketing.

2 Integrated marketing communications

Integrated marketing communications (IMC) is broadly defined as "a concept of marketing communication planning that recognizes the added value of using a comprehensive plan to evaluate the strategic roles of a variety of communication disciplines" (Peltier et al. 2003). In its practical manifestation, IMC combines these disciplines to provide a consistent, clear and compelling message about the organization and its products (see e.g. Shultz et al. 1993). Furthermore, IMC attempts to integrate and synergize elements of the communications mix, as the strengths of one are used to compensate for the weaknesses of others (Kitchen et al 2004). Chang & Thorson (2004) suggest, for example, that television-Web synergy leads to significantly higher attention, higher perceived message credibility and a greater number of total and positive thoughts than does the condition of repetitive advertisement. In addition, Smith and Taylor (2002) propose that publicity and advertising support each other and create greater impact in a cost-effective manner.

IMC has increased in recognition and importance for effective marketing, particularly as marketers are shifting away from mass marketing due to increased media fragmentation and increasing segmentation of consumer preferences (e.g. Eagle and Kitchen 2000; Tedlow 1990), advances in computers and information technology (e.g. Kitchen and Schultz 1999; McGoon 1999), reinforcing customer loyalty via relationship marketing (e.g. Reich 1998; Shultz 2002), and the importance of building and increasing an image-based equity of brands (e.g. Schultz 1999). Although IMC is not without its critics (see e.g. Cornelissen and Lock 2000), its prevalence in educational and applied textbooks written by mainstream marketing theorists and writers (e.g. Kotler et al. 2005; Fill 2002; Smith and Taylor 2002), and its implementation by many advertising agencies and firms across many countries worldwide (e.g. Kitchen et

al. 2004; Kallmeyer and Abratt 2001; Low 2000) all point to the fact that the acceptance of the IMC framework is growing swiftly.

In the same manner as IMC has affected the way marketers communicate with target audiences, the explosive growth of new electronic media has dramatically altered marketing communications planning (Bezjian-Avery et al. 1998; Hoffman and Novak 1996; Peltier et al. 2003). The integration of traditional and electronic media is changing the competitive landscape in how advertisers view marketing and marketing communication (e.g. Lavidge 1999), most notably with regard to IMC planning efforts (Low 2000). Consequently, the great challenge facing marketing managers is to develop IMC plans that maximize the effectiveness of a multitude of data, media, customers, and messages (Peltier et al. 2003). The traditional grouping of promotional tools can no longer be assumed to be the most effective forms of communication. What has happened, therefore, is that the promotional mix has developed in the way that the original emphasis on mass communication campaigns has given way to more direct and highly targeted promotional activities using direct marketing and other tools of the mix. For example, mobile marketing has enabled new interactive forms of communication in which the receiver has greater responsibility in the communication process.

3 Interactivity

Interaction is a hallmark of the paradigm shift in both marketing and communication (Duncan and Moriarty 1998). Interactive media change marketing communications from a one-way process to a two-way process, with the interaction of the marketer and the consumer at its core (Stewart and Pavlou 2002). The concept of interactivity is complex and multidimensional (e.g. Heeter 1989; Liu and Shrum 2002), and there is little agreement on its definition (Cho and Cheon 2005; Ha and James 1998).

Haeckel (1998) viewed interactive marketing as an approach that uses customer data captured via “person-to-person or person-to-technology” contacts to create individualized exchanges designed to have a change effect in knowledge of behavior of at least one person. Similarly, Bezjian-Avery et al. (1998) defined interactivity as “the immediately iterative process by which customer needs and desires are uncovered, met, modified, and satisfied by the providing firm.” Extending these definitions into an electronic media context, Peltier et al. (2003) refer to “electronic interactive media as an electronic medium that has the capability to establish two-way communication system between buyers and sellers.”

At the marketing communication level, interactivity is generated through a combination of one-way and two-way communication (Duncan and Moriarty 1998). Direct marketing, sales promotion, and sponsorship use both one- and

two-way communications. Even packaging can be a mix of both if the package contains a customer service number or other response device. More efforts are also being made to introduce response devices in traditional one-way forms, such as five digit short numbers and e-mail addresses in mass media advertising. This is often called direct response media (e.g. Verhoef et al. 2000).

Since relationships are the objective of marketing communications, impersonal mass communication must be supplemented by personalized communication that by definition is interactive (Duncan and Moriarty 1998). However, most companies have failed to take the advantage of the full potential of interactive marketing (Deighton and Glazer 1998). In particular, as mentioned, the adoption and use of mobile advertising still remains in its infancy (Okazaki 2005). Many organizations that would normally support using sound customer-focused research practices in their marketing efforts abandon this logic in the interactive portion of their communication strategies (Peltier et al. 2003). This deficiency of customer focus is especially problematic from an IMC perspective since a major strength of interactive media is its ability to deliver personalized communication messages. One of the main problems is that still less is understood of how the combination of electronic media and customer databases can be converted into integrated communication strategies (Peltier et al. 2002). The role of databases is especially critical when moving from traditional IMC to interactive IMC (Peltier et al. 2003). Interactive personalized relationships cannot be maintained without the use of ongoing database management practices (Peltier and Schibrowsky 1997).

Despite the paradigm shift that is in progress regarding how marketers and customers interact with each other, and the crucial role consumer databases play in this evolution, considerable amount of theoretical and practical deficiencies are occurring. In particular, though direct marketers have long practiced database management, traditional advertisers and marketers have not (Shepard 1999). The specific problem relating to the ability to develop personalized communication is that majority of marketers who argue to use database information typically place the highest priority on generating transactional and other behavioral data (Preston 2000), to the exclusion of psychographical information such as motivations, attitudes, needs, and lifestyles (Webster 1998). According to Peltier et al. (2003) behavioral data are a necessary prerequisite for maintaining interactive relationships, but the development of meaningful, effective, personalized communication strategies requires an even deeper understanding of the psychological factors that motivate those customers to seek and maintain a relationship.

To accomplish effective interactive IMC, marketers must have the ability to collect personal information from customers and use that data to create information-intensive customer relationship management strategies that use electronic media to generate interaction (see e.g. Glazer 1999). However, while practitio-

ners and academics would agree that the true value of electronic media lies in its interactivity, the way to proceed to make this reality is much more obscure (Peltier et al. 2003). Thus, the concept of a completely interactive IMC approach is more of a challenging idea than a practiced reality (Davenport et al. 2001). By utilizing location awareness, time sensitiveness, and users' personal information, mobile marketing can be a highly interactive element of the IMC approach. Unfortunately, this evokes in the customers the 'big brother' feeling that someone is tracking their movements as well as buying behavior and then utilizing it in mobile marketing campaigns. From the customers' point of view, invasion of one's privacy and general security concerns relating to the mobile medium have been identified as one of the main obstacles to the success of mobile marketing (e.g. Leppäniemi and Karjaluoto 2005)

A recent study found that approximately 65% of US consumers are willing to give their personal information to marketers in exchange for relevant mobile marketing information (eMarketer 2003). However, it is critical to understand that consumers are concerned about the "spam" phenomenon deriving from negative e-mail spamming experiences. The personal nature of the mobile phone makes spamming especially invasive compared to spam received via other channels and devices (Craft Digital 2003). Therefore, the question of how to block spamming becomes of primary importance to the industry. If we look at the legislative definitions of spam, most are focused on consumers providing permission to allow communication, but that is not always the way a consumer sees it. If a message is received by a consumer on their mobile device and it is not timely, not relevant and not requested they may feel that it is spam and they may treat it as spam. This means reporting the spam to their operator, complaining to brands and content partners and generally reacting negatively to the brand and any further mobile communications. Consumers are regularly responding to marketing offers and may or may not read all the full detail in the terms and conditions associated with the offer. It is in these cases where most of the problems start. This is a huge challenge for marketers who are utilizing mobile marketing in their interactive IMC.

4 A model of IMC communications in mobile context

While studying the differences between traditional media and new interactive media, Peltier et al. (2003) identify several elements that are crucial to developing an interactive IMC program. Those elements involve output and response methods which permit ongoing interactivity and customer-marketer dialogues. According to Peltier et al. (2003) interactive media includes four elements: (1) the two-way nature of the communication system, (2) the level of response control each party has in the communication process, (3) the personalization of the communication relationships, and (4) the use and involvement of

database technology. These elements can be applied to the mobile marketing context. Based on these elements, we have conceptualized a model that links the use of mobile marketing database information and mobile media to develop interactive integrated marketing communication strategies. The model is presented in Figure 1.

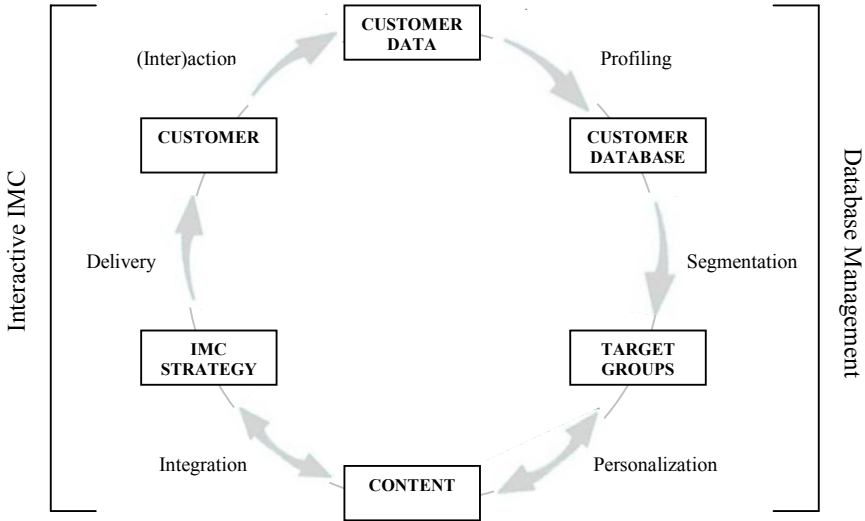


Figure 1: A conceptual model of the relationship between interactive IMC and database management in mobile context

In order to take a full advantage of the interactivity of mobile medium, a company’s marketing strategy should be data-driven. Customer relationship management (CRM) that is driven by databases provides companies a mechanism to create and distribute personalized and interactive integrated marketing communications. Different elements and the relationships between elements are illustrated in Figure 1 and briefly defined in the next sections.

According to Peter Drucker (1954) “there is only one valid definition of business purpose: to create **customer**”. However, it is not an easy task. Markets consist of buyers that differ in many ways. They may differ, for instance, by their needs, resources, locations, and buying behavior. Understanding customers’ needs, wants and demands provides an important input for designing integrated marketing strategies.

Customer responds in many ways to marketing stimuli that companies provide. In this study customer’s response is any **action** made after seeing, hearing,

or reading the marketing message sent by marketer. Depending on what response is sought, **interaction** might occur. Improvements in information and communication technologies offer great possibilities to marketers to utilize customers' mobile data in real time and enter dialogue with customers.

Customer data can be collected in multiple ways using for instance traditional or online surveys, website tracking, presence data, e-mail and SMS responses, and warranty cards. **Profiling** is a process of analyzing and classifying customer data. Thus, **customer database** consists of comprehensive data about individual customers (Kotler et al. 2005). This organized collection of data includes typically geographic and demographic information and buying behavior data. While mobile marketing is permission-based, customer database must contain, at minimum, customer's permission to receive mobile marketing and a mobile phone number. In addition, it may contain information about mobile phone type, and the last location of the customer.

Segmentation is an established and acknowledged technique for dividing a mass market into identifiable subunits, in order to more easily satisfy individual needs of customers (see e.g. Fill 2002). However, in mobile marketing context segmentation means the process whereby specific individual profiles are selected to compose a target group. Thus, **target group** refers to a group of customers from the database who matches with segmentation criterions. In other words, target group is a set of customers sharing common needs or characteristics that company decides to serve.

Personalization is seen as a purpose of applying information technology to better serve customers, to make the interaction more efficient and satisfying for both parties, and to build a relationships that encourages customers to return for subsequent purchases. Personalization Consortium (2005) defines **personalization** as *"the combined use of technology and customer information to tailor electronic commerce interactions between a business and each individual customer. Using information either previously obtained or provided in real-time about the customer and other customers, the exchange between the parties is altered to fit that customer's stated needs so that the transaction requires less time and delivers a product best suited to that customer."*

In this paper, any item that an end-user receives on their mobile devices is defined as **content**. Customer is king, but content is King Kong, says mobile marketing pioneer Vesku Paananen, the developer of Harmonium, the world's first ringtone composer and downloader. Depending on the desired audience response, marketing communicator must decide what to say (message content) and how to say it (message structure and format). The type of mobile content may be, for example, a SMS message, a ringing tone, an EMS picture, a MMS message, a vCard, a WAP link, and an e-mail.

In the model, **integration** refers to the concept of integrated marketing communications which calls for carefully integrate and coordinate company's

communication channels including mobile medium to deliver a clear, consistent and compelling message about the company and its products and services. **IMC** involves identifying the target audience and shaping a well-coordinated promotional program to elicit the desired audience response. Because customers differ from each other in many ways, integrated marketing communications programs need to be developed for specific target groups and even for individuals. To develop an effective integrated marketing communications program, marketers must identify the target audience, determine the communication objective, design message, choose media through which to send a message, and collect feedback to measure the campaign results (Kotler et al. 2005). In the model, **delivery** refers to the channels of communication. Marketers have to choose media through the message will be delivered. Mobile medium is seen as a personal communication channel because it allows personal addressing and feedback.

In the following section we illustrate how the proposed model can be implemented in an organization that does not currently have a functioning customer database and have no previous experience on mobile marketing.

5 A case study of a company initiating a mobile marketing program

The case study reported here was done in conjunction with a retail organization. This company is one of the largest independent retailers in Finland. It has two non-food department stores in two different cities. Its turnover was slightly over €70 million (in 2004). The aim of the case study is to analyze the initiation stage of mobile marketing and the combined effect of different media in soliciting people's permission to receive mobile marketing. Furthermore, we attempt to investigate how customer's age, gender, family size and interests affect their willingness to receive marketing communications over their mobile phone.

5.1 Study design and methods

In terms of case study design, our solution was a single-case study. In Yin's (1994) terminology, the case reported is an embedded single-case design, as the case is studied from multiple levels of analysis. The reason for choosing a case study approach is because in-depth knowledge was needed about management processes such as marketing and customer relationship management. Information about these phenomena is often latent and confidential, and the researcher must have access to an organization to be able to identify them (Yin 1994). The present study required an access to the planning, implementation and analyzing of the marketing campaign in order to be able to investigate the initiation stage of mobile marketing communication in retailing.

We argue that the case company forms a solid base for conducting a study of mobile marketing study in a retail organization because it started to implement

mobile marketing from the very beginning. To be able to examine the initiation stage of mobile marketing, especially customers' preferences for mobile communication, we constructed a single-case study design by selecting the mobile marketing campaign on the following theoretical grounds. First, the case company did not have previous knowledge or experience of mobile marketing. Second, the case company had no customer database of opt-in mobile numbers. Thirdly, the case company was integrating the mobile medium with its overall marketing strategy, i.e. media and promotional tools. Fourth, the case company did not have the technology, i.e. a server or platform to start the campaign. By adopting these criteria, we tried to cover the complexity of starting a dialogue with customers via mobile phone as comprehensively as possible and include such antecedents that could drive different marketing solutions.

The data collection and analysis included the systematic collation of previous knowledge, research data, and theoretical information. The most important primary information sources were three interviews with the retailer and members of the case company's personnel and the data obtained from customers during the marketing campaign. Additionally, we used participant observation during the campaign. Secondary information sources include various documents about the target company, such as articles, internal memorandums, and analyses.



Figure 2: Campaign logic

The majority of customer data were collected via SMS questionnaire. To promote this questionnaire the case company organized a marketing campaign that began on the 16th of November 2004 with a full page advertisement in a free delivery paper. This full page advertisement was repeated two weeks later in the same paper. The circulation of the paper was around 262 000 households in 88 different cities. The paper is published in every second week. At the same

time, the campaign was advertised in the department stores and on the website of the firm. The logic of the campaign is shown in Figure 2.

1.	Type word KYSELY in the beginning of the SMS
2.	Answer to the questions A and B on scale from 1 to 5, how often you visit in our stores. (e.g. A2 B3) 1 = I haven't visited yet, 2 = I haven't visited yet, but I'm going to, 3 = I visit casually, 4 = I visit monthly, 5 = I visit weekly A In Ylivieska 1 2 3 4 5 B In Oulu 1 2 3 4 5
3.	Answer to the questions from C to N on scale from 1 to 5, how interested you are: (e.g. C4 D4 E2 F3 G2 H5 I4 J3 K4 L1 M2 N5) 1 = Not at all, 2 = A bit, 3 = A few, 4 = Quite a lot, 5 = A lot C Toys and Games 1 2 3 4 5 D Reading and Handicraft 1 2 3 4 5 E Movies and Music 1 2 3 4 5 F Home and Information technology 1 2 3 4 5 G Interior construction and Cooking 1 2 3 4 5 H Dressing and Fashion 1 2 3 4 5 I Beauty care and wellness of my body 1 2 3 4 5 J Sport 1 2 3 4 5 K Hunting, Fishing and Camping 1 2 3 4 5 L Motorcycling and Motor sledging 1 2 3 4 5 M Motoring and Car equipments 1 2 3 4 5 N Decorating and Kits 1 2 3 4 5
4.	Add also: Sex: M / N (M=Male, N= Female) Age: Number of members in your household: (e.g. N 24 4)
5.	Add your contact information at the end of the SMS (e.g. MILLA MALLIKAS KOTIKATU 10 40100 JYVASKYLÄ)
6.	Send SMS to the number 17292 You won't have SMS reply from this service
	Example SMS: KYSELY A2 B3 C4 D4 E2 F3 G2 H5 I4 J3 K4 L1 M2 N5 N 24 4 MILLA MALLIKAS KOTIKATU 10 84100 YLIVIESKA You can use capital or small letters. Notice spaces. Service is available with Sonera's, Elisa's, DNA's, Saunalahti's, Kolumbus' and Zeroforty's subscribes.

Figure 3: SMS questionnaire

The advertisement contained instructions on how to sign up for the case company's loyalty program by SMS. Those who did not want to use their mobile phone to sign up were able to send the registration information by mail or fill in the registration form in department stores. The advertisement also contained the information that by signing up for the loyalty program, consumers automatically opt-in to the case company's permission based mobile marketing database. Basic data that was collected from the consumers included the name, address, age, gender, family size, their interest in 12 different categories of products (such as sports, clothing and furnishing), and the frequency of visits in department store(s) (see Figure 3). These variables will be used to target subsequent marketing messages in near future. All the collected information and a customer's mobile phone number were stored in a mobile service system. The incentive to sign up for the loyalty program was a possibility to win a brand

new car (VW Golf) in a lucky draw. Those who did not want to receive any kind of marketing communications over mobile phone from the case company were able to send an opt-out message to mobile service system. Those who used a paper version were able to choose the opt-out option from registration form. The price of a sent SMS message was around 10 cents.

5.2 Results and discussion

Altogether 7863 consumers signed up between November 16th 2004 and December 31st 2004. The effect of the newspaper advertisements on November 16th and 30th is presented in figure 4.

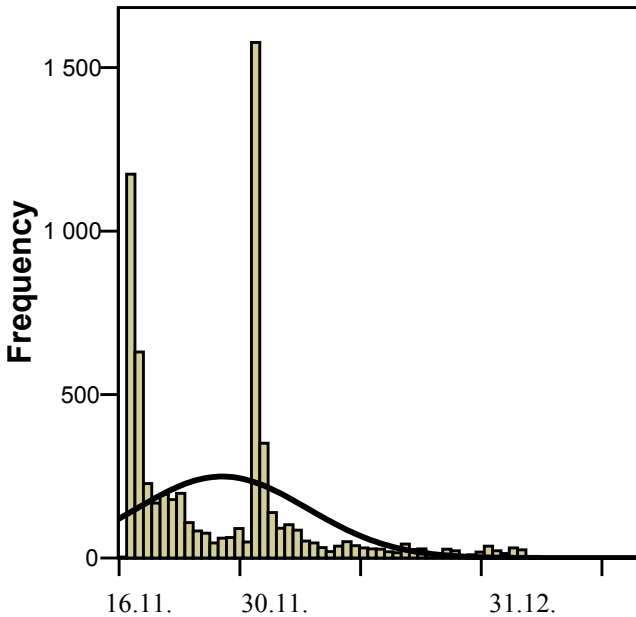


Figure 4: Frequency of responses during the marketing campaign. Newspaper advertisements on November 16th and 30th.

The advertisement generated approximately 1500 new registered customers on both days the paper was published. Since November 30th the campaign was advertised only on the company's Web site and via posters in the department stores. The amount of new registrations varied from a few to around fifty per day. The majority of the customers (6515 persons, 82.8 percent) signed up by

SMS. There were 3398 females (43.2 percent) and 4465 males (56.8 percent) in the sample. The mean age of the respondents was 36.9 years. The mean size of the family was 3.4 persons. Additionally, the respondents gave information about their areas of interests. The amount of interest was measured by the Likert's scale (1 = not at all interested, 5 = very interested). The top three areas of interest were 1) domestic appliance and PCs (mean 3.6), 2) furnishing and cooking (mean 3.4), and 3) renovation and tools (mean 3.4).

The main purpose of the marketing campaign was to build a database of opt-in mobile phone numbers, i.e. get permission to start mobile marketing and to collect information at the individual level. Basically, the campaign succeeded. The majority of the respondents 7023 (89.3 percent) gave their permission to receive mobile marketing. Only 841 (10.7 percent) customers opted-out of receiving mobile marketing. Furthermore, opt-out was much more common among customers who did not use a mobile phone to sign up for the loyalty program: 44.9% opted-out while the corresponding number for SMS participants was only 3.6%.

We next investigated the effects of background factors on willingness to receive mobile marketing. With respect to gender, 90.7 percent of men welcomed SMS marketing from the company whereas the corresponding number for females was 87.5 percent. The difference between the genders measured with chi-square test was statistically significant ($p < .001$). With regard to respondents' age and willingness to receive mobile marketing communications, a statistically significant difference was also found ($p < .001$). This finding indicates that the younger respondents were more willing to receive mobile marketing compared to the older ones. Customers aged equal or less than 18 years were most eager to welcome mobile marketing (6 percent opted-out), whereas the customers aged 65 years or more were least willing (24 percent opted-out). In terms of family size and willingness to receive marketing communications, some effects were found. The bigger the family size, the more willing the customers were are to receive mobile marketing ($p < .001$). Finally, there is some evidence that the strength of interests have some effect on opt-in. The more strongly a customer was interested in different areas the more likely he or she was willing to receive mobile marketing.

6 Conclusions and future directions

The main results of the case study allow us to draw some conclusions. First of all, with relatively small promotional activity the case company gained close to 8 000 new customers to their database of opt-in mobile phone numbers as well as the profiles of the customers. This was possible by the use of two newspaper advertisements, online advertising on the company's own Web site and posters in department stores. Furthermore, our results indicate that consumers

are willing to receive SMS marketing in retailing context. In our case, the consumers were interested in entering mobile marketing communication with the retailer when they were familiar with the SMS technology and the case company had a good reputation, i.e. it was a trusted source to send mobile marketing.

This paper responds to the call for research on the use of the mobile medium in marketing communications by investigating the ways to integrate the mobile medium into the promotion mix and examine the factors that affect consumers' willingness to receive mobile marketing in retailing context. By using a single case study from the retail sector, we showed that by combining the mobile medium, print and the Internet, it is possible to build a customer database in an efficient and cost-effective manner. Although our empirical case mainly contributes to the discussion of how to get permission for mobile marketing, it also gives useful insights into the maintenance process of relationships by asking respondents about their buying interests and other background variables.

The guiding principle of the interactive integrated marketing communications is that to take advantage of the interactivity of the new electronic media such as mobile medium, an organization's marketing strategy must be driven by customer data (e.g. Peltier et al. 2003). This is the main idea in the interactive mobile marketing model. To accomplish this, a company must have a process in place to collect personal information from customers and use that data to create information intensive customer communication strategies that use mobile medium to generate customer interaction.

The present case study is among the first examining the use of the mobile medium as a marketing communication channel. However, the results obtained should be considered tentative. We studied only one retailer and its marketing communication. Despite the fact that the communication mix of this retailer is in line with other companies operating in the same field nationwide, it would be valuable to examine other retailers as well. In summary, we assume that these limitations do not endanger the reliability and validity of the findings, yet they do place boundaries on the conclusions and implications that can be drawn from the study.

On this basis, a natural extension of the study would be the investigation of the role of mobile media in marketing communications mix with other retailers. By doing so we might get valuable insights into how companies internationally use, or plan to use, mobile as a media in marketing communications.

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Part VI

International Advertising

Ralf Terlutter, Sandra Diehl and Barbara Mueller

The GLOBE study – applicability of a new typology of cultural dimensions for cross-cultural marketing and advertising research

1. Cultural dimensions in cross-cultural research
2. Existing frameworks of cultural dimensions
 - 2.1. Hofstede's cultural dimensions
 - 2.2. Schwartz's cultural values
 - 2.3. Inglehart's World Values Survey
3. The GLOBE study
4. GLOBE and advertising

Abstract

One important area of cross-cultural research identifies sets of cultural values useful in describing cultures. Resulting frameworks outline a number of cultural dimensions that attempt to explain a significant portion of country-to-country variance. This article highlights four such frameworks. The first is Hofstede's typology of cultural values, by far the most prominent approach to cultural dimensions in marketing and advertising research. Next, two less frequently applied frameworks are presented: Schwartz's cultural values, and Inglehart's World Values Survey. Finally, a new, alternative cultural framework – entitled GLOBE (House et al. 2004) - is examined. Drawn from organizational and management science, GLOBE outlines nine cultural dimensions and differentiates between societal values and societal practices. The GLOBE dimensions are briefly described and their applicability to marketing and advertising is addressed.

1 Cultural dimensions in cross-cultural research

As the level of global trade increases, corporations around the world have a growing need for knowledge of foreign cultures. For instance, large retail chains such as Netherland's Ahold, Belgium's Delhaize Le Lion or Germany's Metro sell their products to consumers in 25 to 35 countries. For some of these chains, 80% of their sales come from outside the home market. This trend is not unique to European companies. McDonald's sells nearly two-thirds of their burgers outside of the United States, while Toyota sells more of its vehicles in the U.S. than it does in Japan. Because consumers are increasingly found abroad, advertisers must devote an ever-rising percentage of their advertising budgets to foreign markets. The top advertiser in the world today is the American company Procter and Gamble (P & G). Last year, P & G spent 3.57 billion dollars (U.S) selling its products within the U.S., but 4.35 billion dollars communicating with consumers around the rest of the globe (*Advertising Age*, 2005). For such companies, a profound knowledge of foreign cultures is vital, in order to effectively communicate with consumers worldwide.

Information about diverse cultures can be divided into relatively objective, as well as somewhat more subjective criteria (Figure 1). Objective criteria include economic data such as GNI per capita or purchase power per capita, geographic information such as the level of urbanization, socio-demographic data such as age structure or birth rate, and information on the legal and political system in a country. Subjective criteria, which characterize a nation or culture, include the values, attitudes or behaviors shared by its citizens. Among these subjective criteria, values have received the greatest level of attention in

cross-cultural research. Cultural values are considered to be the core of a culture. They determine the perception, the predispositions and the behavior of the members of a society (Markus and Kitayama, 1991). Indeed, values can be one of the most powerful explanations of, and influences on, consumer behavior. The theoretical basis for the analysis of cultural values across nations is that all cultures face similar problems and challenges. These problems and challenges can be dealt with in a variety of ways, reflecting that culture's particular value system. In short, analysis of cultural values allows for the comparison of similarities and differences between various cultures (Kluckhohn 1951, Kluckhohn and Strodtbeck 1961, Parsons and Shils 1951).

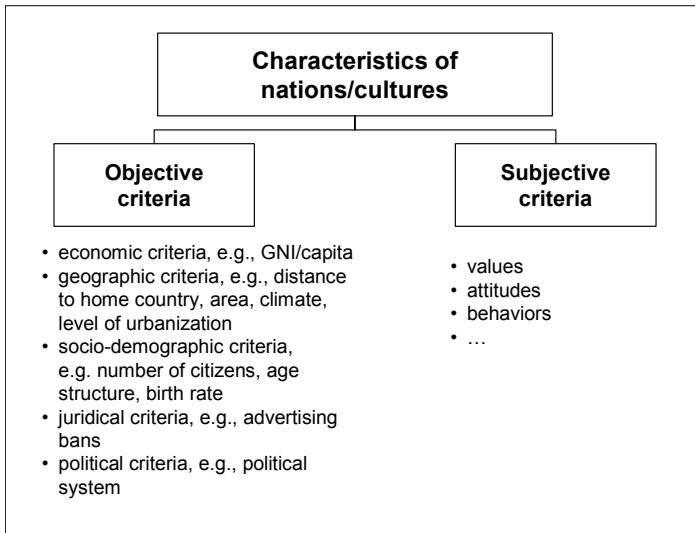


Figure 1: Characteristics of nations/cultures

2 Existing frameworks of cultural dimensions

An important category of cross-cultural research identifies sets of cultural values useful in describing cultures. Resulting frameworks outline a given number of cultural dimensions that attempt to explain a significant portion of country-to-country variance. To date, four such classification systems exist which report data from a large number of countries, allowing for cross-cultural comparisons. The first, developed by Hofstede, identifies five value dimensions based on fundamental problems which all societies face. The second, based on Schwartz's seminal work on human values, outlines seven national-cultural domains. The third, a World Values Survey, advanced by Inglehart, reveals that

a wide range of attitudes and values are reflected in just two major dimensions – the polarization between traditional values and secular-rational values; and the polarization between survival values and self-expression values. The final framework – entitled GLOBE – offers a new alternative. Drawn from organizational and management science, GLOBE outlines nine cultural dimensions and differentiates between societal values and societal practices. Each of these frameworks will be addressed briefly.

2.1 Hofstede's cultural dimensions

Without question, Hofstede (1980, 2001) has developed by far the most influential cultural framework, with over 1,100 citations to his work reported in just the decade between 1987 and 1997 (Sivakumar and Nakata, 2001). A number of researchers have recognized the applicability of Hofstede's dimensions to advertising and marketing – Taylor, Miracle and Wilson (1997); Caillat and Mueller (1996); and Diehl, Terlutter and Weinberg, (2003), to mention just a few. Hofstede outlined four fundamental problems which all societies face: 1) the relationship between the individual and the group; 2) social inequality; 3) social implications of gender; and 4) handling of uncertainty inherent in economic and social processes. Work-related values and behaviors among matched samples of IBM employees at subsidiaries around the globe were examined. Based on 117,000 questionnaires from 88,000 respondents in 20 languages reflecting 66 countries, Hofstede delineated four important dimensions useful in characterizing countries: *Power Distance*, societal desire for hierarchy or egalitarianism; *individualism*, society's preference for a group or individual orientation; *masculinity vs. femininity*, a sex-role dimension; and *uncertainty avoidance*, a culture's tolerance for uncertainty. Later research resulted in the addition of a fifth dimension, *long-term orientation* (Hofstede and Bond, 1988), the cultural perspective on a long-term vs. a short-term basis. Each of these five dimensions is measured on an index scale. Scores indicate relative differences between countries. Combinations of the five scores for each country explain why people and organizations in various countries differ. Figure 2 depicts a diagram highlighting 50 countries on Hofstede's dimensions of power distance and uncertainty avoidance.

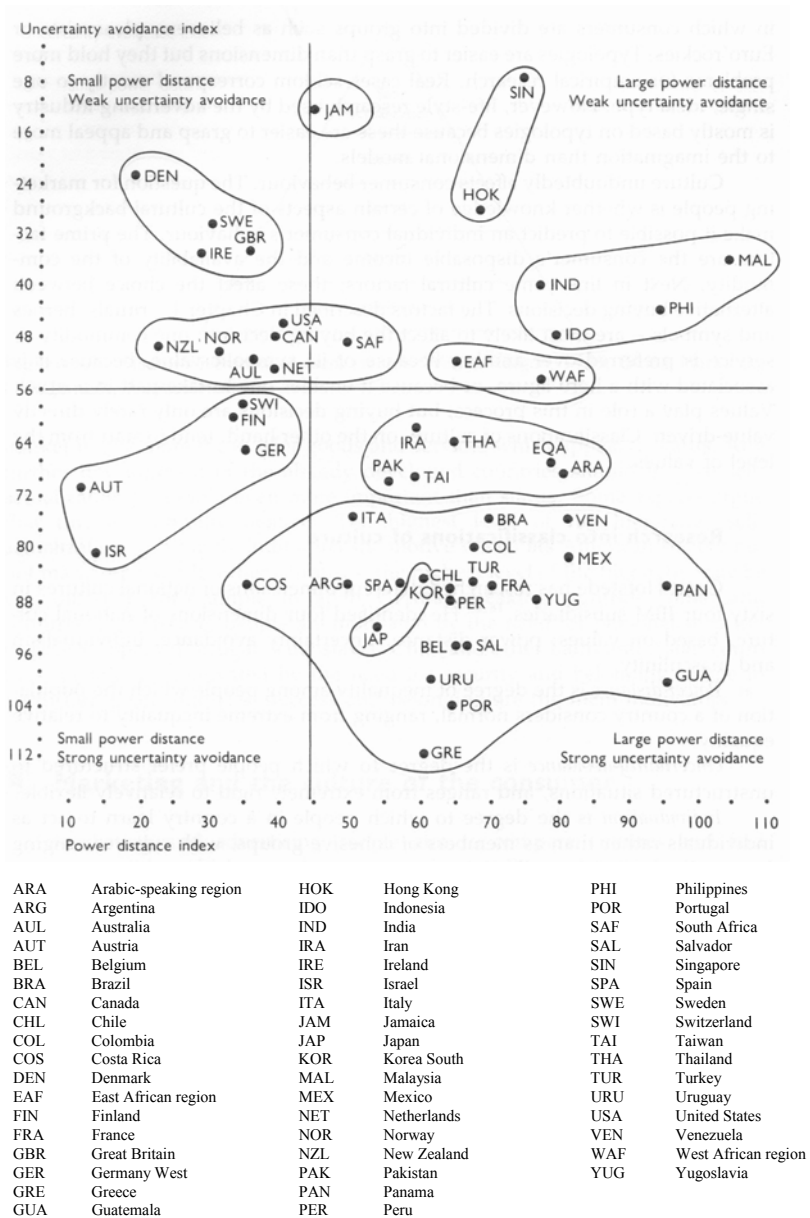


Figure 2: Country map based on two of Hofstede's dimensions: Power Distance and Uncertainty Avoidance (Source: Geert Hofstede (1990), Institute for Research on Intercultural Cooperation, Maastricht, the Netherlands)

Of late, however, Hofstede's work has come under some scrutiny. The description of countries on a mere four or five dimensions is seen as insufficient, with several important dimensions missing. Hofstede (1980, p.313f.) himself admitted: "it may be that there exist other dimensions related to equally fundamental problems of mankind which were not found ... because the relevant questions simply were not asked". Further, Hofstede has been criticized regarding measurement of his dimensions, equivalence of the meaning of his values in each of the cultures as well as the age of his data, which was primarily collected between 1968 and 1972. Because Hofstede measured work-related behaviors and values among employees in large multinational organizations, a transfer of his results to other groups (e.g., consumers) or other areas (e.g., marketing or advertising) and the usage of his results to discriminate national cultures in general, are speculative. Hofstede stated: "The values questions found to discriminate between countries had originally been chosen for IBM's internal purposes. They were never intended to form a complete and universal instrument for measuring national cultures" (Hofstede 2001, p. 493).

Despite all criticism, due to its contribution to understanding cultures, the large pool of country scores for a variety of cultures, as well as the lack of alternative frameworks at the time, Hofstede's typology of cultural values has been applied extensively in cross-cultural research during the last 25 years.

2.2 *Schwartz's cultural values*

Schwartz provides the second typology of cultural values (1992, 1994, 1999, Schwartz and Ros 1995, Schwartz and Bardi 1997, Smith and Schwartz, 1997). Relying on a broad theoretical basis, Schwartz outlined an exhaustive set of cultural dimensions to describe human variety. He conducted a survey of individual values recognized across cultures (Schwartz 1992) as a starting point for the development of a framework of cultural values on a societal level. Schwartz (1994) reported survey data from 38 nations representing 41 cultural groups. Data collection took place between 1988 and 1992.

Schwartz identified three basic societal issues: 1) the relationship between the individual and the group; 2) assuring responsible social behavior; and 3) the role of humans in the natural and social world. Cultural adaptations to resolve each of these issues constitute his framework, which consists of seven national-cultural domains, which differentiate cultures. The seven dimensions are *Conservatism*, a cultural emphasis on maintenance of the status quo, propriety, and restraint of actions or inclinations that might disrupt the solidarity of the group or the traditional order; *Intellectual Autonomy*, a cultural emphasis on the right of individuals to independently pursue their own ideas and intellectual direc-

tions; *Affective Autonomy*, a cultural emphasis on the right of individuals to independently pursue affectively positive experience; *Hierarchy*, a cultural emphasis on the legitimacy of an unequal distribution of power, roles and resources; *Egalitarian Commitment* (or *Egalitarianism*), a cultural emphasis on transcendence of selfish interests in favour of voluntary commitment to promoting the welfare of others; *Mastery*, a cultural emphasis on seeking to actively master and change the world, and *Harmony*, a cultural emphasis on accepting the world as it is rather than attempting to change or exploit it. 35,000 respondents from 122 samples in 49 nations rated the importance of 45 single values as “guiding principles in my life.” Subjects were primarily teachers and students. Based on this data, Schwartz hypothesized a structure for the above seven dimensions (see Figure 3.). In this figure, pairs of value types, which are in opposition (for example, mastery vs. harmony) emanate in opposing directions from the center. In contrast, compatible pairs of value types are located in proximity to one another. By and large, this structure has been confirmed via Similarity Structure Analysis.

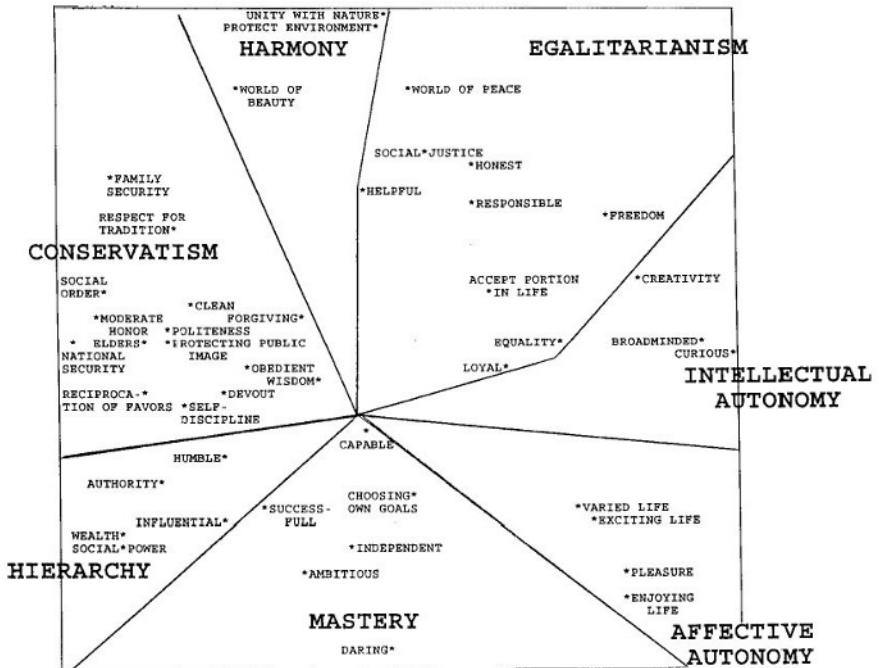


Figure 3: Schwartz's cultural values (Source: Schwartz (1999))

Based on their cultural value priorities, Schwartz arranged countries in a two dimensional space, presenting meaningful groupings of culturally related nations (see Figure 4). Distances between countries represent the degree of similarity or dissimilarity between them.

The arrow adjacent to the name of each value type indicates the direction of increasing importance of that value type relative to the center of the two-dimensional space. A directional line can thus be drawn through the center of the “map” and the arrow located next to the name of each value type. Such a line is drawn for Intellectual Autonomy, extending from the lower left to the upper right in Figure 4. This suggests that the further toward the upper right that a country is located, the greater the importance that country attributes to intellectual autonomy values, relative to all other countries. The further toward the lower left, the less importance the country attributes to intellectual autonomy values. As can be seen in this figure, intellectual autonomy is quite important for (the former) West Germany, somewhat less important in Greece, rather unimportant in Poland, and very unimportant in Nepal (Schwartz, 1999). Schwartz suggests the existence of broad cultural groupings of nations, which though related to geographical proximity, are also based on shared histories, religion, level of development, cultural contact, as well as other factors (such as Western European nations, English-speaking nations, etc.).

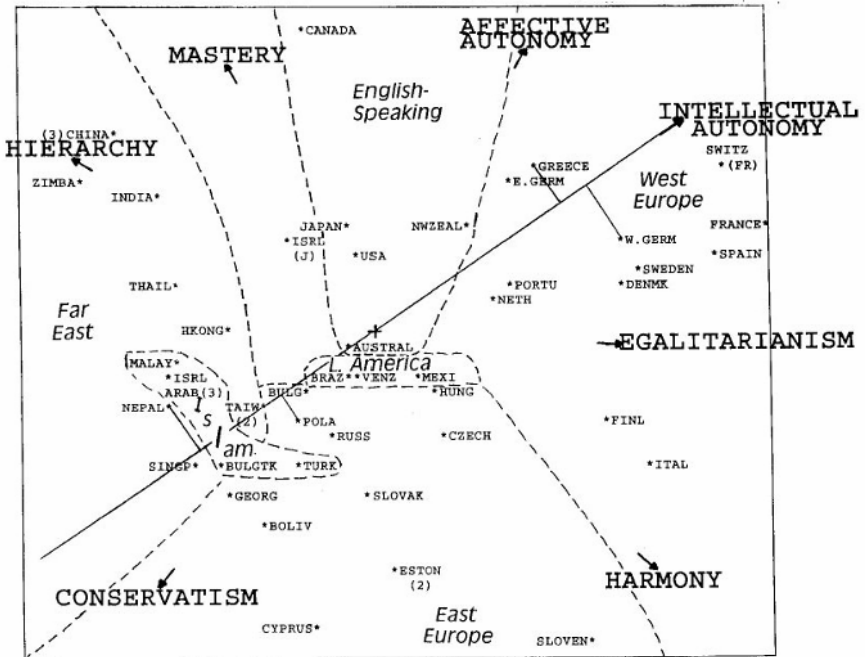


Figure 4: Schwartz's map of countries ((Source: Schwartz (1999) (Note: Based on data from 44 nations))

Compared with Hofstede's work, Schwartz's typology of cultural values has been less widely applied to marketing or advertising. One reason may be the lack of a single comprehensive publication summarizing Schwartz's dimensions for all the multitude of countries examined. Instead, Schwartz's findings are scattered across a number of journals, each focusing on a segment of the total number of cultures explored. Another, perhaps more important reason may well be that Hofstede's (1980) previously published work had already been widely accepted. However, due to its strong theoretical foundation (Steenkamp, 2001), Schwartz's typology could prove useful to both marketing and advertising researchers.

2.3 Inglehart's World Values Survey

A third cultural framework is suggested by Inglehart's World Values Survey – WVS (Inglehart, 1997; Inglehart, Basañez and Moreno, 1998; Inglehart and Welzel, 2005). The survey provides a standardized cross-cultural measure of peoples values and goals, concerning politics, economics, religion, sexual beha-

avior, gender roles, family values and ecological concerns. More importantly, by conducting the survey in waves (the first in 1981 – named the European Values Survey, the second in 1990/1991, the third in 1995/96, the fourth in 1999/2001), WVS charts how values are changing and examines how modernization and tradition interact to shape those changes. A worldwide network of social scientists cooperated in developing the questionnaire and conducting the survey. The entire set of data collected between 1981 and 2001 from representative national samples in 81 societies -- containing 85 percent of the world's population, and based on over 250,000 interviews -- is currently available in Inglehart and Welzel (2005). Data on publics of up to 120 societies (collected in 2005/2006) is expected to be available in 2007.

According to the WVS, there are two basic, broad cultural dimensions, which characterize nations. One dimension is survival values versus well-being values. Inglehart, Basañez and Moreno (1998) note that in post-industrial society, “historically unprecedented levels of wealth and the emergence of welfare states have given rise to a shift from scarcity norms, emphasizing hard work and self denial, to post-modern values emphasizing the quality of life, emancipation of women and sexual minorities, and related post-materialistic priorities, such as emphasis on self-expression.” The second dimension is traditional authority versus secular-rational authority. The authors note that this dimension reflects an emphasis on “obedience to traditional authority (usually religious authority) and adherence to family and communal obligations, and norms of sharing, or, on the other hand, a secular worldview in which authority is legitimated by rational-legal norms, linked with an emphasis on economic and individual achievement.” The data reveals that the basic values and beliefs of populations in advanced nations differs significantly from those found in less developed nations.

Based on survey results, countries are plotted on a two-dimensional “map” of nations (see Figure 5). Societies located close to one another on the map reflect relatively similar responses to most of the questions asked in the World Values Survey. For example, while Americans and Canadians are different in many ways, they nonetheless share similar basic values when compared with most other societies. Accordingly, they are located in close proximity on the map below. To a remarkable degree, the societies cluster into relatively homogeneous cultural zones, reflecting their cultural heritage. Yet, “socio-economic development tends to shift a society's path on the two value dimensions in a predictable fashion: as the work force shifts from the agrarian sector to the industrial sector, people's world views tend to shift from an emphasis on traditional values to an emphasis on secular-rational values. Subsequently, as the work force shifts from the industrial sector to the service sector, a second major

shift in values occurs, from emphasis on survival values to emphasis on self-expression values,” (Inglehart and Welzel, 2005, p. 6).

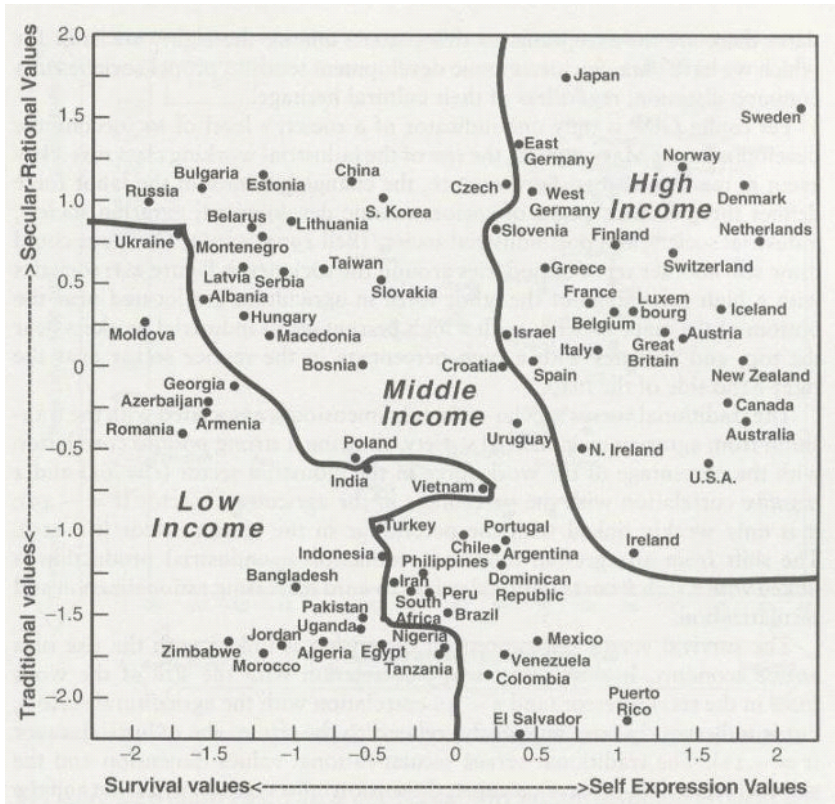


Figure 5: Map of countries, based on the WVS (Source: Inglehart and Welzel (2005))

When compared with the work of Hofstede or Schwartz, the World Values Survey has been the typology least often applied to marketing and advertising. Clearly, the theoretical foundation based on social and political science, the magnitude of empirical data and the longitudinal character of the analyses presented are impressive. However, with regard to its applicability for marketing and advertising, there are some limitations to the WVS framework, when compared with those of Hofstede, Schwartz or GLOBE. The two basic dimensions of survival values versus self-expression values and traditional authority versus secular-rational authority used to describe different cultures are quite broad.

Hofstede (five dimensions), Schwartz (seven dimensions) and, in particular, GLOBE (nine dimensions, to be addressed next) provide significantly more detailed descriptions of nations than the WVS with just two dimensions. For instance, in investigating cultural differences between France and Greece, the two WVS dimensions would provide very little insight as they indicate that both countries are extremely similar, with minimal variance on the two dimensions. However, the other three frameworks reveal more detailed information and indicate, for instance, that the two countries are, indeed, particularly similar with regard to the dimensions of future orientation, performance orientation and in-group collectivism, but distinct with regard to the cultural dimensions of power distance, institutional collectivism, humane orientation, gender egalitarianism, assertiveness, and especially with regard to the dimension of uncertainty avoidance (based on the GLOBE values, addressed next).

3 The GLOBE study

A recent body of work from organizational and management science, entitled the GLOBE project (Global Leadership and Organizational Behavior Effectiveness Research Program) (House et al., 2004), offers an alternative to the previous three frameworks of cultural dimensions. The GLOBE project was initially designed to analyze the relationship between societal values and practices, and leadership effectiveness. However, as it provides data on cultural values and practices in different countries, it is proposed that it may prove relevant for advertising and marketing purposes, as well.

As with the frameworks described above, and in particular, Hofstede and Schwartz, GLOBE reports data on cultural variables from a large number of countries. Data is provided for 62 cultures, based on a survey of 17,300 middle managers in 951 organizations. Managers were drawn from three industries: financial services, food processing, and telecommunications. Given data collection began after 1994, the GLOBE framework is based on relatively current data, especially when compared with the data provided by Hofstede.

In recognizing the work of a large number of cross-cultural researchers, the GLOBE framework provides a broad theoretical foundation for their cultural dimensions.

GLOBE outlined nine cultural dimensions: (1) *assertiveness*, the degree to which individuals in societies are assertive, confrontational, aggressive, and straightforward; (2) *uncertainty avoidance*, the extent to which members of a society strive to avoid uncertainty by relying on established social norms and practices; (3) *power distance*, the degree to which members of a society expect and accept that power is distributed unequally; (4) *collectivism I (institutional*

collectivism), the degree to which societal institutional practices encourage and reward collective distribution of resources and collective action, as opposed to individual distribution and individual action; (5) *collectivism II (in-group collectivism)*, the extent to which members of a society express pride, loyalty, and cohesiveness in their groups, organizations or families; (6) *gender egalitarianism*, the degree to which a society minimizes gender role differences; (7) *future orientation*, the degree to which members of a society engage in future-oriented behaviors such as planning, investing, and delaying gratification; (8) *performance orientation*, the degree to which a society encourages and rewards group members for performance improvement and excellence, and (9) *humane orientation*, the extent to which a society encourages and rewards its members for being fair, altruistic, friendly, caring, and kind to others.

The first six GLOBE dimensions are based on Hofstede's (1980) work. GLOBE scales measuring uncertainty avoidance, power distance and collectivism dimensions were designed to reflect Hofstede's (2001) dimensions of uncertainty avoidance, power distance, and individualism. However, factor analyses conducted by GLOBE researchers revealed that the dimension of collectivism could effectively be divided into two sub-dimensions: institutional collectivism and in-group collectivism. Whereas in-group collectivism, reflecting the degree to which individuals have pride and loyalty in their families, is similar to the dimension of collectivism as typically understood in literature (for instance, Hofstede, 1980, 2001; Triandis, 1989, 1995), institutional collectivism, which reflects the degree to which laws, social programs, or institutional practices are designed to encourage collectivistic behavior, is a form of collectivism that has received limited attention to date (House and Javidan, 2004). Further, because Hofstede's masculinity dimension was seen to be confounded by numerous factors judged irrelevant to the concept, and was also seen to be lacking in face validity, GLOBE researchers introduced two new cultural dimensions: gender egalitarianism and assertiveness.

Future Orientation has its origins in Kluckhohn and Strodtbeck's (1961) past, present, future orientation dimension, which reflects the temporal orientation of the majority of the population in the society. This dimension has some similarities with, but also some distinctions from Hofstede's (2001) long-term orientation (Ashkanasy et al., 2004). Performance orientation has its roots in the construct of need for achievement (McClelland, 1961). Finally, humane orientation is derived from Kluckhohn and Strodtbeck's (1961) dimension of human nature as good vs. human nature as evil, as well as from work by Putnam (1993) and McClelland (1985).

The GLOBE project appears sound from a methodological standpoint. To the benefit of subsequent investigators, GLOBE researchers describe their

methodology in great detail (for instance, pilot studies, double translations and bias testing, bias elimination). Similarly, reliability and validity measures are tested using multitrait, multimethod approaches (Hanges 2004). In addition, over 170 GLOBE researchers from different cultural backgrounds worked together on construct definition, construct conceptualization and on the measurement of the constructs. In most countries/cultures analyzed in the GLOBE project, data collection was carried out by natives of the country or by researchers with extensive experience in those markets.

GLOBE provides data on the societal level and explicitly differentiates between societal *values* and societal *practices*. The distinction between cultural values and cultural practices was incorporated to correspond with Schein's (2004) concepts of artifacts vs. espoused values as two unique levels of culture (House and Hanges, 2004). Artifacts are the visible products, processes and behaviors of a culture. They mainly reflect the "as is" and, therefore, the cultural practices. Espoused values are the individuals' or society's sense of what ought to be, as distinct from, what is. They primarily reflect the "should be" and, therefore, the cultural values. The distinction made between values and practices is similar to DeMooij's (2005) distinction between "desirable" and "desired" values. The desirable refers to social norms that are held in a culture and by an individual (corresponding to the "should be" or the GLOBE values), whereas the "desired" refers to individuals' choices (corresponding to the "as is" or the GLOBE practices). Both, values and practices (the desirable and the desired) are often contradictory in a culture and are therefore seen as paradoxical values, which are found in many cultures. An example provided by DeMooij (2005, p.2) may clarify this distinction: "We don't want to be fat, we should eat healthy food, yet we do eat chocolate or drink beer, and we get fat." For instance, the GLOBE data reveal a slightly negative correlation between societal values and societal practices for the dimension of *assertiveness* ($r = -0.26, p < 0.05$) (Den Hartog, 2004). This negative correlation is in line with the reflections outlined above. It suggests that countries scoring higher on assertiveness practices tend to value assertiveness to a lesser extent while countries scoring lower on assertiveness practices tend to value assertiveness more strongly.

Given the fact that values and practices in a society may be inconsistent and sometimes even contradictory, it is a major strength that GLOBE clearly distinguishes between both levels of cultures. Hofstede (1980, 2001), in particular, often confused values and behaviors (practices) in his dimensions, which is a further weakness of his framework.

While GLOBE provides data on the societal level, it does not do so on the individual level. The items used in the GLOBE project are designed to reflect societal values and practices, not individual values and practices.

However, as individuals are socialized through values that are held and behaviors that are practiced in their cultures, it is very likely that they adopt values and practices that are shared among members of their society (Markus and Kitayama, 1991). The values held and practices shown by members of a culture influence individual values and practices, as they enable the individual to behave according to social norms and rules and in a manner that is rewarded by other members of that group.

GLOBE offers an alternative perspective to the existing frameworks on cultural dimensions. Compared with the previously discussed frameworks by Hofstede and Schwartz, GLOBE presents the most current data on cultural dimensions and it does so for a large number of cultures (62 cultures). It clearly distinguishes between societal values and practices, recognizing that both levels of culture may, on occasion, even be in conflict. With regard to its theoretical foundation and methodology, GLOBE draws on those cross-cultural researchers generally deemed most important in the literature. And, while it draws on previous cross-cultural work (for instance, by adapting five of Hofstede's dimensions with regard to their semantic meaning), it clearly also advances existing frameworks in terms of conceptualization of cultural dimensions (e.g. by splitting up Hofstede's masculinity dimension into the two separate dimensions – assertiveness and gender egalitarianism), as well as with regard to the exhaustiveness and measurement of these dimensions.

A major limitation of the GLOBE study is its relatively small sample, with an average of only about 250 subjects per culture. GLOBE researchers report that the number of respondents ranged from 27 to 1,790, though more than 90% of the cultures investigated had sample sizes of 75 respondents or greater. While 17,300 total respondents is indeed a large figure, it is still a small sample for describing societal values and practices in 62 different cultures. The previously discussed frameworks are all based on significantly larger samples.

A second serious limitation is that respondents were middle managers in corporations. As with the Hofstede study (where IBM employees were surveyed) or the Schwartz investigation (where teachers and students were analyzed), a single group within each culture was analyzed in the GLOBE project, as well. Transfer to other groups (for instance, consumers) remains speculative and requires empirical testing. With regard to the sampling of respondents, only Inglehart's World Values Survey has a more representative sample of the cultures analyzed.

4 GLOBE and advertising

There appears to be significant potential for the application of the GLOBE framework of societal values and practices to marketing and advertising research. A preliminary investigation by Terlutter, Mueller and Diehl (2005) represents the first attempt to apply the GLOBE dimensions to advertising. The focus of this investigation was the dimension of assertiveness. House and Javidan (2004) define assertiveness as “the degree to which individuals in ... societies are assertive, confrontational, and aggressive in relationships.” Members of assertive societies tend to dominate and actively control their environment. They respect strength, and stress competition. Societies scoring high on assertiveness value dominant, tough and straightforward behavior. Societies scoring lower on assertiveness tend to value modesty and tenderness; they are less straightforward and have a greater compassion for the weak.

Assertiveness as a cultural dimension has only been analyzed in a rudimentary fashion (Furnham 1979; Peabody 1985), and prior to the Terlutter, Mueller and Diehl (2005) investigation, never in the context of international advertising. This is surprising, given that assertiveness is an appeal commonly employed in commercial messages (see examples of print advertisements employing assertive appeals in Figure 6).

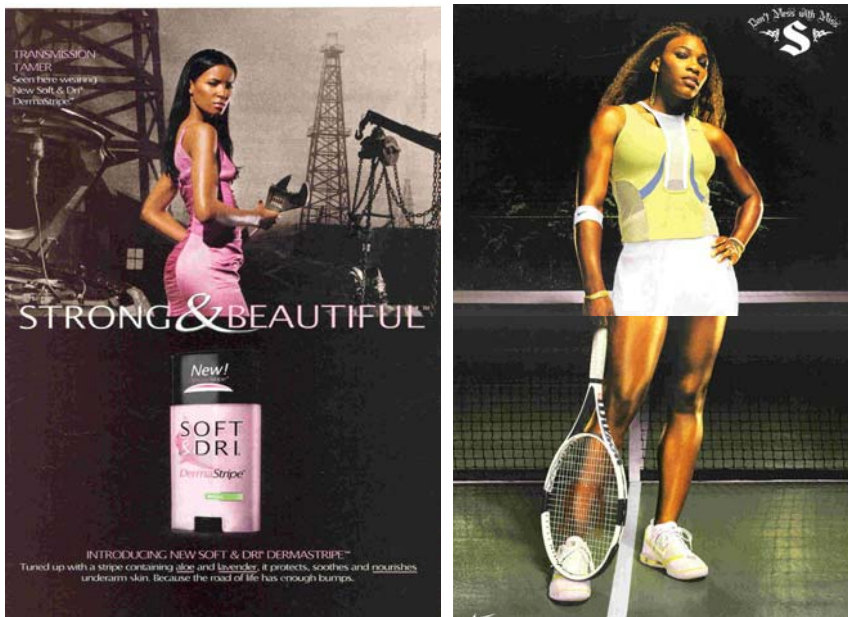


Figure 6: Examples of U.S. print advertisements incorporating an assertive appeal

The dimension of assertiveness is not well covered by Hofstede's work, nor by that of other cross-cultural researchers. Assertiveness might appear similar to Hofstede's masculinity dimension. Indeed, the GLOBE assertiveness dimension was inspired by Hofstede's concept of masculinity. However, correlation analyses, conducted by the authors of the current article reveal only minimal correlations between the country scores of Hofstede's masculinity dimension and GLOBE's assertiveness dimension, indicating that assertiveness is a distinct construct (Hofstede – GLOBE Values: Pearson $r^2 = .214$, $p > 0.10$; Hofstede – GLOBE Practices: $r^2 = .348$, $p < 0.05$). The correlations are based on 46 countries analyzed in both studies.

Terlutter, Mueller and Diehl (2005) surveyed subjects from Germany, U.S., France and England, four countries that differed in their societal values and practices in terms of assertiveness, according to GLOBE. Results revealed that the perception and evaluation of a standardized advertisement incorporating an assertive appeal differed in the four countries, suggesting that such differences can be attributed to the level of assertiveness in a given culture. Advertisers attempting to achieve a specific level of assertiveness in their campaigns will thus need to adapt advertisements to various countries. In assertive markets, stronger assertive cues may be required if consumers are to perceive the ads as assertive in nature. In less assertive countries, more subtle cues may be sufficient to obtain the same level of perceived assertiveness.

Terlutter, Mueller and Diehl (2005) concluded that the GLOBE framework proved useful to their investigation. Future examinations of the dimension of assertiveness are encouraged. Investigators should explore a larger number of markets. In particular, it would be worthwhile to explore the reaction of eastern cultures to assertive appeals. Gender differences may also play a relevant role in the evaluation of assertive appeals. Assertiveness should also be analysed in the context of ads for a wider variety of products (e.g., for both high and low involvement goods), as well as for services. In addition to the dimension of assertiveness, the GLOBE framework offers additional dimensions deserving of analysis, for instance performance orientation, humane orientation, future orientation and gender egalitarianism.

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Shintaro Okazaki and Charles R. Taylor

Towards an understanding advertising standardisation in the European Union: a theoretical framework and research propositions

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Abstract

An accelerating integration of political, economic, and cultural dimensions during the 1990s enabled multinational corporations (MNCs) to operate on a truly global basis, rather than on a multidomestic basis. The standardization of advertising is one of the most researched topics in international advertising, having been formally studied in the academic literature for over 50 years. In recent years, however, researchers have begun to recognize that the "traditional" global-versus-local debate is becoming pointless, because it has been realized that the issue is not the extent to which an ad campaign for a brand can be completely globalise, but to what degree it is possible to standardize a global brand's campaign throughout the world. Thus, this study aims to identify the antecedents and consequences of advertising standardization. Specifically, we attempt to establish a theoretical framework in European markets where, since the seminal work of Harris (1994), little research has been conducted into how advertising standardisation by MNCs operates in this region.

1 Introduction

Over the past four decades, the standardisation versus localisation of advertising in external markets has been extensively debated in the international marketing literature (Agrawal 1996). A standardised approach assumes that advertising content and strategy created at home can be effectively implemented in a host market, in translation where appropriate. A localised approach criticises the standardised assumption for not taking into account the economic, cultural and social aspects of a local environment. Decades of debate have also produced a compromise or contingency approach, which contends that the choice of standardisation or localisation depends on case-specific environmental conditions (Onkvisit and Shaw 1999).

Given these arguments, many empirical studies have been conducted to determine the extent to which multinational corporations (MNCs) standardise or localise advertising content in a variety of situations (Table 1). However, little research has addressed the principal factors influencing standardisation decisions, with the two important exceptions of Laroche et al. (1999) and Samiee et al. (2003). Additionally, despite increasing attention to the impact of marketing actions on firm performance (Zou and Cavusgil 1996), prior research has not focused on the impact of standardisation on financial performance. The objective of this study is therefore to contemplate in this light relevant research propositions on the antecedents and consequences of advertising standardisation. We also attempt to establish a framework in Europe where, since the seminal work of Harris (1994), little research has been conducted into how advertising standardisation by MNCs operates in this region.

2 Industrial organization theory and environment-strategy coalignment

In proposing a theoretical framework explaining the antecedents and consequences of advertising standardisation in Europe, we adopt industrial organisation (IO) theory. This theory has been often used in management literature in terms of a connection between the external environment and company strategy. Fundamentally, the IO theory suggests that market or industry performance is determined by various market structure variables, in particular, environmental variables (Venkatraman and Prescott, 1990; Wirth and Bloch, 1995). Many firms tend to choose their strategies which would best fit the external market characteristics (Özsomer and Simonin, 2004). This coalignment or consistency between the market environment and company strategy is an important organizing concept in organization research (Venkatraman and Prescott, 1990).

Cavusgil and Zou (1994) and Zou and Cavusgil (2002) applied the IO theory in examining the relationship between marketing standardization and performance. Zou and Cavusgil (2002) proposed global marketing strategy (GMS) theory which posits that global marketing strategy is composed of eight dimensions: product standardization, promotion standardization, distribution standardization, pricing standardization, and other dimensions related to coordinating value-adding activities. In their model, the notion of "fit" is emphasized. Here, fit refers to how closely a company's global marketing strategy matches its external environment and internal organizational resources. Zou and Cavusgil (2002) found that strategic and financial performance were maximized when the fit between external market factors and internal organizational characteristics was conducive to a global marketing strategy.

On the other hand, little attention has been paid to the influence of environment-strategy coalignment on MNCs' advertising strategy. Given that Zou and Cavusgil (2002) defined promotion standardization as one of the GMS dimensions, the principle of "fit" between a firm's strategy and its environment may well be applicable to advertising management. In the context of Europe, the acceleration of EU convergence may provide a clearer example of how environmental change may affect strategy formulation.

In the following sections, we attempt to propose key environmental variables as antecedents of advertising standardization in the European Union.

Table 1: Recent findings in international advertising research

<i>Authors (year)</i>	<i>Findings</i>
Duncan and Ramaprasad (1995)	Practitioners consider “single brand image” the most important reason to standardise, while “saving money” is one of the least important. Low use of standardisation in executions is necessitated by cultural preferences and taboos, while low use of standardisation by non-western agencies may be due to the fact that standardisation is largely a western concept.
Laroche et al. (1999)	For all countries, the degree of control is higher for strategic than for operational decisions. Advertising decisions are made by headquarters in France, by a combination of headquarters and multinational agencies in Germany, and by local agencies in the UK.
Sirisagul (2000)	There are no significant differences in either use or degree of standardisation by MNCs from the U.S.A., Japan and Europe. The global advertising practices of the leading MNCs tend to have variations so similar that the results could not establish differences.
Turnbull et al. (2000)	The most valued advantage of standardisation is to provide a consistent brand image across markets. Companies rated highly the benefit of facilitating the coordination of advertising agency activities in the region. The highest rated disadvantage of standardisation was government regulations and constraints on advertising.
Kanso and Nelson (2002)	Government regulations are impeding broadcast media selection for standardised campaigns. The worldwide expansion of satellite TV creates greater demand for standardised advertising.
Chandra et al. (2002)	The nature of the product was found to be a significant factor, but durable goods were negatively related to advertising standardisation. The more diverse the environments of markets, the more likely the firm is to standardise.
Samiee et al. (2003)	The extent of advertising program standardisation of U.S. firms is positively influenced by “organisational control”, “consumer similarity”, “advertising infrastructure”, and “competitive position”.

3 Antecedents of advertising standardisation

3.1 European economic unification

More and more scholars argue that there is clear evidence of the development of a single European market as a result of the political and economic unification process (Leeffland and van Raaij 1995). Much attention has been paid to

the possibility of “pan-European” marketing, and advertising has been one of the most studied elements of the marketing mix. However, individual EU countries still maintain their own rules and regulations for the advertising industry, and marketing executives tend to believe that such regulations would probably be an obstacle to the development of “true” pan-European advertising (Kanso and Nelson 2002). In addition, a meta-analysis identified substantial differences between EU member states in terms of distribution structures, media shares, and direct marketing and market research expenditures (Leeffland and van Raaij 1995). Prior research indicates that, before the unification process, MNCs operating in Europe tended to allow their subsidiaries to decide whether to adapt the headquarters’ basic advertising idea to varying degrees, according to market conditions (Harris 1994; Rijkens 1992; Seitz and Johar 1993).

Nevertheless, recent industry reactions seem to support the proponents of “pan-European marketing”, especially since the introduction of the euro. In particular, non-European MNCs, such as Microsoft, Dell Computer, Electronic Arts, Mitsubishi and Kawasaki Europe, have restructured their pan-European business to develop a consistent brand strategy across the continent (Kaplan 2003; Sweney 2003a, 2003b; Weernink 2002). Thus, we posit the following proposition:

Proposition 1: The advancement of European economic unification directly and positively influences the degree of advertising standardisation in Europe.

3.2 *Globally integrated marketing communications*

The growth of “mega-agencies” has changed the structure and operational practices of globally integrated marketing communications (Global IMC). Most MNCs now seek “one- stop access” for global planning and implementation abilities (Tharp and Jeong 2001). Agencies also believe that services (Griffin et al. 1998). The future use of standardisation is more likely to be increased by such internal and external pressures than by economic benefits or the emergence of global consumers (Duncan and Ramaprasad 1995).

However, Gould et al. (1999) point out that large US-based advertising agencies are likely to assume that “the main issue of global communications is not thought to be standardisation versus adaptation per se but rather organisational coordination which recognises and encourages global strategies while working with local managers and markets” (13). Such integration seems possible only for those “mega-agencies” that hold the majority of international advertising accounts in diverse regions (Moriarty and Duncan 1990). In addition, the proliferation of the Inter/Intranet, the digitalisation of traditional media, and

mergers and acquisitions among media companies have enabled agencies to practice media planning on a global basis (Tharp and Jeong 2001). Hence, it is reasonable to posit the following proposition:

Proposition 2: The practice of global IMC directly and positively influences the degree of advertising standardisation in Europe.

3.3 *Cross-market segmentation*

Conventional segmentation classifies a market into segments on a country-by-country basis, with consumers likely to be classified into segments based on clusters of similar characteristics. In this case, standardisation decisions depend upon the existence of such clusters of countries, which MNCs perceive as having common characteristics in terms of products and brand perceptions. However, an important drawback of this “macro-level” approach is that it overlooks cross-national market similarities, particularly in consumer orientation towards the product and its appeal (ter Hofstede et al. 1999; Smit and Neijens 2000). This micro-level approach has become increasingly popular, because it overcomes the limitations of the macro-level approach by including “behavioural measures that determine the degree of consumer responsiveness to marketing programs” (Hassan et al. 2003, 449).

Clearly, there can be circumstances in which cross-market segmentation based on hybrid variables other than national boundaries is optimal (Hassan and Blackwell 1994). As a result, the extent to which MNCs have been successful in identifying a consumer “who buys brands promoted in global as well as local media throughout the world” (Hassan et al. 2003, 446) is increasingly important. In line with this argument, ter Hofstede et al. (1999) proposed a sophisticated method to establish an effective segmentation of the European yoghurt market. On the basis of product-consumer relations they identified four segments, one of which appears to be pan-European. Although this study involved only one product, it recognises the importance of cross-market segmentation. This argument leads us to posit the following proposition:

Proposition 3: The pursuit of cross-market segmentation directly and positively influences the degree of advertising standardisation in Europe.

3.4 *Cultural distance*

In the past, cultural values have received considerable attention in cross-cultural advertising studies. Hofstede's (1983) cultural dimensions (individualism, uncertainty avoidance, power distance, masculinity, and Confucian dynamism) have been widely used as a framework to explain differences in reactions to advertising approaches (Albers-Miller and Gelb 1996). For example, Roth (1995) contends that consumer goods firms are more likely to adopt an image customisation strategy when local markets differ in terms of uncertainty avoidance, individualism, and socio-economic factors; otherwise they use an image standardisation strategy.

It has also been suggested that European countries vary substantially on the individualism versus collectivism dimension, which some have described as being analogous to Hall's (1976) high versus low context communications (Gudykunst and Tim-Toomey 1983). "Individualism versus collectivism" has been a central theme in many cross-cultural studies, because this dimension addresses the degree to which a culture relies on and has allegiance to the self or to the group. In cross-cultural marketing communications, this dyad has been found to involve, on the individual dimension, a strong emphasis on individual determinism (Mueller 1992), and a relationship between individualism and direct speech techniques (Frith and Wesson, 1991), and on the collective dimension a reluctance to use confrontational practice (Ramaprasad and Hasegawa, 1992), amongst others.

For example, De Mooij (1998) argue that that in the USA "along with a trust in facts goes a distrust of emotions, advertisers tend to be afraid of emotional advertising", and therefore, "they think the rational appeals for their products and services are much more important than the consumer thinks they are" (149). This is a natural consequence of Westerners' tendency to think that "information that serves to enhance rational decision making is good information" (Batra et al. 1997, 673). Therefore, hard sell approaches, for example, explicit comparisons and aggressive brand repetition, are often used in the USA.

Figure 1 summarises some of the basic cultural characteristics in marketing communications. Here, the context of culture determines the "type" of information to be delivered: verbal or non-verbal. The cultural context does not control the "quantity" of information, but rather the "quality" of information. Second, this preference for verbal or non-verbal information determines the way in which to deliver messages: rational or emotional strategies. Finally, along with the type of information and creative strategy, the "meaning" of the message will be influenced by core cultural values: individualism or collectivism. In the advertising literature, there is abundant empirical support for this conceptualisation, in terms of information content (e.g. Hong et al. 1987; Keown et al. 1993; Lin and Salwen 1995; Madden et al. 1986), creative strategy (e.g., Lin 1993;

Ramaprasad and Hasegawa 1992), and cultural values (Belk et al. 1985; Belk and Bryce 1986; Belk and Pollay 1985; Mueller 1987, 1992). For example, the USA and Germany are relatively individualist countries, whose consumers tend to demand structured and explicit persuasion with little ambiguity. By contrast, Italy and Spain are relatively collectivist countries, where preference is given to indirect and less conflictive communications.

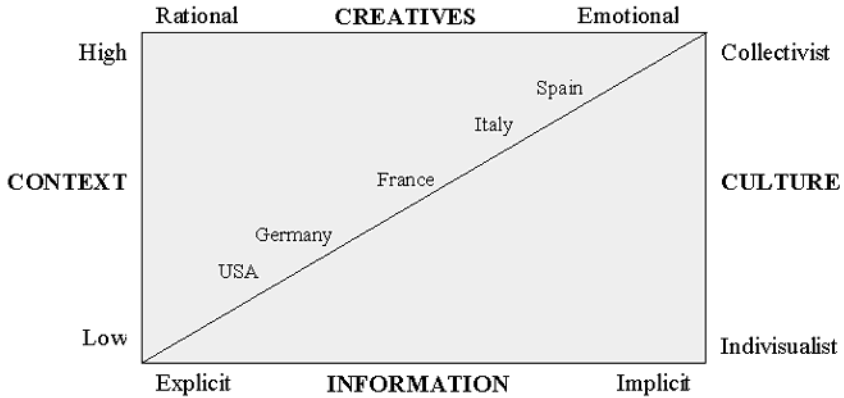


Figure 1: Culture and marketing communications

Such cultural differences have been summarised as a concept of “cultural distance” between the home and host countries, which can be seen as an important impediment to advertising standardisation. We therefore posit the following proposition:

Proposition 4: The cultural distance directly and negatively influences the degree of advertising standardisation in Europe.

3.5 Global brand image

Both academics and practitioners suggest that “the brand’s image be the basis for developing sound product positioning and advertising strategies” (Roth 1995, 55). As European markets consist of socio-economically homogeneous but culturally diverse countries, standardised advertising may not be perceived in the same way across countries, while localised advertising may directly harm the creation of a uniform brand image. In this vein, at least one piece of experimental research examined the effectiveness of standardised visual effects in

international advertising. Its findings suggest that print ads used cross-nationally, employing the same pictures, general layout, advertising topic and language, are likely to be more effective in avoiding image confusion and irritation than a localised approach (Backhaus et al. 2001).

Additionally, a series of content analysis studies found that luxury consumer products, such as fragrance or cosmetic brands (Figure 2), are likely to deploy a higher level of standardisation in European magazine ads (Harris and Attour 2003; Seitz and Johar 1993; Whitelock and Chung 1989).

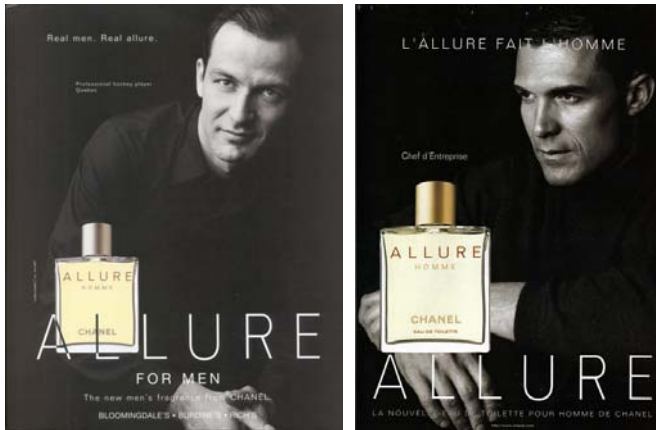


Figure 2: Examples of highly standardised ads

Further, American MNCs use such standardisation in print advertising more than Japanese MNCs (Mueller 1991). Hence, we posit the following proposition:

Proposition 5: The intention to develop a global brand image directly and positively influences with the degree of advertising standardisation in Europe.

3.6 Organisational control

In the 1990s, there was extensive research into organisational control, which is considered particularly important in advertising decisions (Samiee and Roth 1992). An MNC's market knowledge and international experience, whether at headquarters or a subsidiary, influence its advertising standardisation decisions. Most studies of advertising standardisation focus almost exclusively on culture

and economies of scale, but Martenson (1987) introduced internal factors, such as corporate culture and the locus of decision power. Similarly, information exchange, persuasion, coordination, approval and controls have been suggested as factors influencing headquarters' control over subsidiary managers (Quelch and Hoff 1986).

Recently, Laroche et al. (1999) examined headquarters' degree of control over subsidiaries' advertising strategies, and identified four basic determinants: the competitive situation in the target country, the level of communications in the target country, the international involvement of the firm, and the marketing autonomy of the subsidiary. They concluded that "the more local resources such as the services of advertising agencies are munificent, the more responsibility is delegated to the subsidiaries in the field of advertising, either to adapt the campaign to local conditions (strong control) or to develop a new campaign (weak control)" (287). In line with this argument, the following proposition is made:

Proposition 6: The strength of headquarters' control over subsidiaries directly and positively influences the degree of advertising standardisation in Europe.

4 Consequences of advertising standardisation

Given the importance of advertising, and its contribution to the marketing mix, it seems reasonable to conceptualise the consequences of advertising standardisation in terms of firm performance. In this vein, the literature suggests that three types of consequences are important measures of the effectiveness of marketing strategy: advertising effectiveness, strategic performance, and financial performance (Zou and Cavusgil 1996).

4.1 Advertising effectiveness

The impact of standardised advertising would be first reflected in advertising effectiveness. Advertising effectiveness is defined as the degree to which the company's advertising is effective in getting the consumer to like the brand, improve its image and/or purchase the brand. With regard to the international marketing literature, it is well documented that a primary purpose of the use of a global strategy is to improve the image of a product on a global basis as well as increasing sales (Yip 1995). We hypothesise that the level of standardisation strongly influences advertising effectiveness, because the execution and strategies associated with advertising decisions would directly affect consumers' preference on the brand. Hence we posit the following proposition:

Proposition 7: The degree of advertising standardisation directly and positively influences advertising effectiveness.

4.2 *Strategic and financial performance*

In studies of MNC performance, both Samiee and Roth (1992) and Cavusgil and Zou (1994) have stressed the need to consider both the firm's strategic performance and its financial performance. As used here, *strategic performance* refers to success in implementing a successful global strategy. While financial performance often represents the most important long-term goal for firms, the achievement of strategic objectives is likely to be related to future financial performance (Zou and Cavusgil 2002).

Proposition 8: The advertising effectiveness directly and positively influences strategic performance.

Financial performance is a "bottom line" measure that refers to the firm's success in increasing its sales and profitability. We predict that firm's running more effective advertising will see enhanced measures of performance. Therefore, we predict the following relationship would exist:

Proposition 9: The advertising effectiveness directly and positively influences financial performance.

5 Research model

Given both the antecedents and consequences of advertising standardisation, we propose the conceptual model in Figure 3, which will be empirically tested by our future survey. This model predicts that key environmental factors affect the level of advertising standardization in a European context, which in turn affects the firm's advertising effectiveness and its financial and strategic performance.

Both sides of the model warrant attention, as it is important to examine both the factors that make firms more prone to standardize their advertising, and whether standardized advertising is associated with higher performance. Essentially, our model contends that standardization is effective in improving performance when it fits external environmental factors (e.g., market similarity, competition conditions) and internal organizational characteristics.

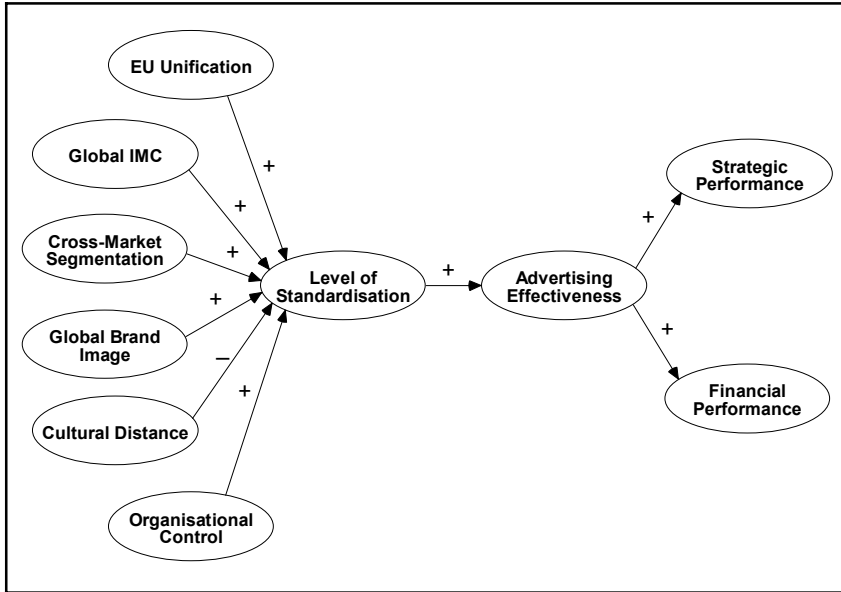


Figure 3: A conceptual model for advertising standardisation

6 Conclusions

The primary purpose of this study is to provide a new insight into the “cause-effect” chain that “traditional” research on international advertising standardisation has neglected (Taylor 2002). The industrial organisation theory was used as a conceptual base to formulate our research framework, by identifying key environmental variables as antecedents of MNCs advertising standardisation decision making. We believe that this framework will serve as a theoretical base for our empirical study, which will examine advertising standardisation practices in the European Union.

The present study contributes to the literature in two ways. First, it serves as a warning signal for “traditional” international advertising research. In the past, too much research has focused on whether a firm should standardise in a given environment. However, since the arrival of the compromise approach, there have been few attempts to explore the principal factors influencing advertising standardisation. Second, our theoretical framework proposes a series of research propositions that can be tested by an empirical survey of MNCs’ subsidiaries operating in European markets. This future survey will substantially update and

improve Harris's (1994) findings on advertising standardisation practices, from the perspective of European unification.

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Assessing measurement invariance of ordinal indicators in cross-national research

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Abstract

Meaningful cross-national comparisons of scales require that the indicators used to operationalize the underlying constructs (e.g., attitudes, values) are measurement invariant across countries. Linear multi-group confirmatory factor (MGCF) analysis is arguably the most common method to assess measurement invariance. Although, strictly speaking, this method assumes continuous variables, in empirical studies typically a covariance matrix for ordinal items (e.g., Likert-type scales) is analyzed. Simulation studies have indeed shown that single-group confirmatory factor analysis is relatively robust against violating the assumption of continuous variables if categorization is based on at least five answer categories and the data does not show excessive skewness and/or kurtosis. New simulation evidence, however, has revealed that these results do not necessarily carry over to multiple groups. These insights and the availability of robust WLS estimators which are considerably less demanding with respect to the required sample size than the full WLS approach strongly advocate the use of appropriate estimation methods for ordinally scaled variables. This paper contributes to comparative cross-cultural research by proposing a procedure for testing measurement equivalence based on the MGCF model for ordinal indicators. The procedure is applied to a cross-national study on attitudes towards a specific advertisement.

1 Introduction

Meaningful cross-national comparisons with respect to hypothetical constructs like attitudes or values require that the observed indicators are measurement invariant (Meredith 1993) across countries. This means that people belonging to different countries should not respond differently to these items if they have the same scores on the underlying latent factors. Otherwise, comparing single indicators or composite scales across different countries would lead to erroneous conclusions.

In marketing, linear multi-group confirmatory factor (MGCF) analysis of the means and covariances of the observed indicators is arguably the most common method for assessing measurement invariance (Steenkamp and Baumgartner 1998) although alternative methods like item response theory (Raju, Laffitte, and Byrne 2002; Reise, Widaman, and Pugh 1993) or generalizability theory (Sharma and Weathers 2003) exist. The proposed testing procedures based on MGCF analysis almost exclusively assume continuous indicators which follow a multivariate normal distribution (e.g., Steenkamp and Baumgartner 1998; Vandenberg and Lance 2000). In empirical studies, however, this approach is typically applied to a covariance matrix for ordinal items (e.g., Likert-type

response scales). This practice, if questioned at all, is justified by referring to simulation studies which show that single-group confirmatory factor analysis (CFA) is relatively robust against violating the assumption of continuous variables if categorization is based on at least five answer categories and the data does not show excessive skewness or kurtosis (e.g., Babakus, Ferguson, and Jöreskog 1987; DiStefano 2002; Muthén and Kaplan 1985; West, Finch, and Curran 1995).

However, based on their simulation results Lubke and Muthén (2004) have cautioned against applying these results to MGCF analysis of ordinal variables. For a measurement invariant factor model and five response categories they show that maximum likelihood (ML) estimation in conjunction with high item reliability and different thresholds among the indicators leads to heavily inflated chi-square values and low parameter coverage for the factor loadings (estimates for the mean model seem to be less effected). In contrast, satisfactory results are reported for estimation methods which explicitly take into account that the data is ordinally scaled.

Although estimation methods for confirmatory factor models for ordinally scaled indicators have already existed for a long time (Jöreskog 1994; Jöreskog and Sörbom 1988; Muthén 1983, 1984), the practical usefulness of this weighted least-squares (WLS) approach was until recently rather limited. The most important restriction is that in order to produce stable estimates, sample size has to be rather large (e.g., West, Finch, and Curran 1995). Furthermore, inflated chi-square test statistics as well as negatively biased standard errors are reported for small to moderate sample sizes (e.g., DiStefano 2002). Meanwhile, so-called robust WLS approaches have been developed that enable the researcher to estimate models at sample sizes which were previously inadequate (Muthén, du Toit, and Spisic 1997). Simulation evidence underscores the superiority of these estimators to the traditional WLS approach (Flora and Curran 2004).

Against the background of these methodological advances applied researchers should definitely consider assessing measurement invariance of ordinal indicators as a viable option. Unfortunately, so far researchers find only relatively little guidance of how to proceed in testing measurement equivalence for this type of data. Although the situation has considerably improved with two recent papers by Muthén and Asparohou (2002) as well as Millsap and Tein (2004), there is still much work to be done. This paper contributes to comparative cross-cultural research by proposing a testing procedure which integrates the sometimes opposing ideas developed in the two papers mentioned above. The remaining part of the article is structured as follows: First, the MGCF

model for ordered-categorical variables is presented and identification as well as estimation issues are addressed. Second, a procedure for assessing measurement invariance for ordinally scaled indicators is outlined. Third, the proposed procedure is applied to cross-national data on attitudes towards a specific advertisement. The final section provides some concluding remarks and discusses avenues for further research.

2 Multi-group confirmatory factor analysis

2.1 Model

In contrast to continuous indicators, CFA for ordinal data assumes that the observed items y are not directly influenced by their corresponding latent factor(s) but indirectly via continuous latent response variables y^* (for a comparison with alternative approaches to model ordinal manifest variables see, for example, Jöreskog and Moustaki 2001). According to this view, the observed data results from a coarse categorization of the corresponding continuous latent response variates. Extended to multiple groups, the CFA model for the response of individual i ($i = 1, \dots, n$) belonging to group g ($g = 1, \dots, k$) on ordinal item j ($j = 1, \dots, p$) can be written as follows:

$$y_{ijg}^* = \nu_{jg} + \sum_{l=1}^q \lambda_{jl} \eta_{ilg} + \varepsilon_{ijg}, \tag{1}$$

$$y_{ijg} = c, \text{ if } \tau_{jcg} < y_{ijg}^* \leq \tau_{j,c+1,g}. \tag{2}$$

The linear factor model for the latent response variable y_{ijg}^* is specified in Equation (1), where ν_{jg} represents the intercept, λ_{jl} the loading of this item on factor l ($l = 1, \dots, q$), η_{ilg} the score of individual i on factor l , and ε_{ijg} the residual score of that person. Typically it is assumed that the latent response variables are multivariate normally distributed:

$$y_{ijg}^* \sim N(\boldsymbol{\mu}_g^*, \boldsymbol{\Sigma}_g^*),$$

where $\boldsymbol{\mu}_g^*$ is a $p \times 1$ vector of means and $\boldsymbol{\Sigma}_g^*$ is a $p \times p$ covariance matrix. Given the model in Equation (1) this leads to the following structure for the means and covariances:

$$\boldsymbol{\mu}_g^* = \boldsymbol{\nu}_g + \boldsymbol{\Lambda}_g \boldsymbol{\alpha}_g, \tag{3}$$

$$\boldsymbol{\Sigma}_g^* = \boldsymbol{\Lambda}_g \boldsymbol{\Psi}_g \boldsymbol{\Lambda}_g' + \boldsymbol{\Theta}_g, \tag{4}$$

where $\boldsymbol{\alpha}_g$ is a $q \times 1$ vector of latent means, $\boldsymbol{\Psi}_g$ is a $q \times q$ covariance matrix for the latent factors, and $\boldsymbol{\Theta}_g$ is a $p \times p$ covariance matrix for the residuals.

Equation (2) depicts the model for the observed ordinal items, where the item-specific threshold parameters τ partition the continuous distribution of y^* into C categories ($c = 0, 1, \dots, C-1$). If the value for the latent response variable y^* exceeds a threshold τ_c , the observed value of the ordinal manifest variable changes. The lowest and highest categories of the thresholds are predetermined ($\tau_0 = -\infty$ and $\tau_C = \infty$), whereas the other thresholds have to be estimated from the data.

In addition to constraints making the factor model in Equation (1) identifiable (e.g., scaling the latent variables by fixing the loading of one reference item per factor to one; see Bollen 1989), further constraints are necessary to identify $\boldsymbol{\mu}_g^*$ and $\boldsymbol{\Sigma}_g^*$. The size of the minimal set of parameter constraints depends on the type of factor model which is estimated. For example, for indicators with at least three response categories the following constraints are sufficient to identify a congeneric factor model (Millsap and Tein 2004, p. 485):

1. For a reference group fix $\boldsymbol{\mu}_g^* = \mathbf{0}$ and $Diag(\boldsymbol{\Sigma}_g^* = \mathbf{I})$.
2. Fix the latent factor means $\boldsymbol{\alpha}_g = \mathbf{0}$ in the reference group.
3. Fix all intercepts in all groups to zero, i.e. $\boldsymbol{v}_g = \mathbf{0}$.
4. For each indicator, impose an equality constraint $\tau_{jgc} = \tau_{jc}$ on one of the thresholds and for the reference item of each factor constrain a further threshold to be invariant across groups (this amounts to $p + q$ invariance constraints).

Because of the two constraints $\boldsymbol{\mu}_g^* = \mathbf{0}$ and $Diag(\boldsymbol{\Sigma}_g^* = \mathbf{I})$, the thresholds in the reference group correspond to percentiles of the standard normal distribution. As is becoming clear from the fourth group of constraints, not all thresholds have to be constrained across groups in the case of three or more answer categories and thus invariance tests can be performed for these parameters.

2.2 Estimation

In principle, LISREL (Jöreskog and Sörbom 1996) can be used to estimate MGCF models for ordinal indicators using the pre-processor PRELIS (see Jöreskog 2004). In the first step PRELIS uses the pooled data to estimate the

thresholds for each latent response variable separately. Thus, a single-group analysis is performed in this step. Holding the thresholds fixed at the values estimated in the step before, in stage two μ_g^* and Σ_g^* are estimated for each group together with their asymptotic covariance matrices. In the third stage MGCF analysis can be applied to the estimated means and covariances to assess the invariance of intercepts, factor loadings, and residual variances like for continuous manifest variables. However, the estimation procedure outlined above is problematic if the invariance of the ordinal indicators across different countries is to be assessed. It seems rather implausible to a priori assume that the thresholds for like items are invariant across groups (step one) whereas equivalence assumptions are tested for other parameters of the model (e.g., factor loadings) in step three. Only in the rare case that the thresholds for a given variable are all shifted by a constant term the LISREL approach would be able to absorb the threshold differences by group-specific intercepts (Muthén and Asparohou 2002).

In contrast, Mplus (Muthén and Muthén 1998-2004) allows for different thresholds across groups (except those thresholds for which equality constraints have to be imposed for identification purposes) and thus is preferable to the LISREL program (e.g., Millsap and Tein 2004). Identifying the MGCF model in Mplus requires the specification of so-called scale factors. Two types of standardization are available. The default option is the Delta approach which amounts to fixing all elements on the diagonal of Σ_g^* to one in the reference group whereas the diagonal is freely estimated in the remaining groups. If tests of invariance hypotheses with respect to the residual variances are of interest, the Theta option which standardizes the residuals in the reference group while estimating group-specific Θ_g in the other groups can be chosen. Mplus offers both a full WLS estimation approach (Browne 1982, 1984; Muthén 1983, 1984) and robust WLS procedures (Muthén, du Toit, and Spisic 1997) which provide robust standard errors as well as adjusted chi-square test statistics.

3 Testing measurement invariance of ordinal indicators

3.1 *Measurement invariance of continuous indicators*

Since the factor model for the latent response variable y^* in Equation (1) is identical to that for a continuous indicator, we briefly review how measurement equivalence is assessed for this type of items. Typically, such a test proceeds as follows (e.g., Steenkamp and Baumgartner 1998; Vandenberg and Lance 2000): First, configural invariance is assessed by imposing the same structure of free and fixed parameters on the matrix of factor loadings across groups. If such a

model fits the data well, it can be concluded that the same conceptual framework underlies the respondents' answers. Second, metric invariance is tested by constraining the factor loadings to be equal in the different groups. If metric invariance holds, changes in the latent variable lead to the same changes for like items across groups. Third, constraining the intercepts to be invariant across groups provides a means to assess scalar invariance. Together with invariant factor loadings this condition assures that comparisons of item means across groups are meaningful. Furthermore, the estimated means of the latent variables represent mean differences with respect to a reference group for which the latent means α_g are set to zero. Finally, equality constraints can be imposed on the residual variances as well. Such a test might be of interest, for example, if a scale is used for selection purposes since selection accuracy decreases with higher error variances (e.g., Lubke and Muthén 2003; Millsap and Kwok 2004). If all aforementioned criteria are fulfilled, measurement invariance has been established as long as the data follow a multivariate normal distribution (Meredith 1993). Although latent means as well as factor variances/covariances can be tested for equivalence as well, invariance of these parameters is not necessary for measurement invariance of a scale.

In empirical studies it is often the case that not all conditions for measurement invariance are met. In this case, basically two options are available. First, if the invariance hypothesis for a certain type of parameter (e.g., factor loadings) is rejected, any further invariance tests are abandoned and the scale is judged not to be suitable for cross-national comparisons. Second, the researcher applies the concept of partial invariance (Byrne, Shavelson, and Muthén 1989). In this case, the indicators responsible for rejecting a specific invariance hypothesis (e.g., metric invariance) are identified and set free. For invariance tests at a higher level (e.g., scalar invariance) the corresponding parameters (e.g., intercepts) are allowed to vary across groups for those indicators which failed the preceding invariance test; for the remaining items an equality constraint is imposed (for a discussion of problems in partial invariance testing see, for example, Cheung and Rensvold 1999). Although the latent factor means would in principle still be identified if only two factor loadings and intercepts per construct were equivalent across groups (Steenkamp and Baumgartner 1998), it is typically required that a majority of indicators per factor is invariant (Vandenberg and Lance 2000).

3.2 *Proposed procedure for testing measurement invariance of ordinal indicators*

In the case of ordinal variables, full measurement invariance requires that not only the intercepts, factor loadings, and residual variances are equal across

groups but also the thresholds (e.g., Millsap and Tein 2004). As has already been shown above, these thresholds cause additional identification problems beyond those of the ordinary CFA model for means and covariances. The issue can be solved by fixing all intercepts to zero and by imposing a minimal set of equality constraints on the thresholds.

With respect to invariance tests for ordinal indicators, different strategies have been proposed. In a nutshell Muthén and Asparohou (2002) propose a “specific-to-general” strategy (sequentially relaxing constraints beginning with the most restrictive model) whereas Millsap and Tein (2004) tend to prefer a “general-to-specific” procedure (sequentially imposing additional constraints beginning with the less restrictive model) unless strong prior information on non-invariant parameters is available. Since researchers are often lacking the required prior knowledge for a “specific-to-general” strategy, empirical invariance tests typically have a distinct exploratory character. In this case, configural invariance should be assessed at first, based on the set of minimal threshold restrictions suggested by Millsap and Tein (2004). Analogous to tests for continuous items it seems natural to continue by imposing equality constraints on the factor loadings, followed by a test on equal thresholds. Preliminary simulation evidence, however, suggests that this approach can lead to erroneous conclusions. Instead, it seems preferable to first assess the invariance of the thresholds while holding the factor loadings constant across groups. This test appears to be rather robust against group-specific factor loadings (see also Glöckner-Rist and Hoijtink 2003). Once it has been controlled for non-invariant thresholds metric invariance can be assessed. Finally, across-group equivalence of error variances can be tested, for example, using the Theta parameterization implemented in Mplus.

4 Empirical study

4.1 Data

The empirical study compares judgments of a single commercial print advertisement (hereafter simply referred to as “ad”) for a fragrance in France and Germany (see Figure 3 in the Appendix).¹ In order to ensure comparability, identical ads were used in both countries. In each country 120 students were exposed to the ad for about three seconds. Afterwards, respondents were asked to judge the ad along a couple of indicators intended to measure their emotional and cognitive impression. Each factor was measured by four indicators (see the

¹ We wish to thank the Institute for Consumer Research at the University of the Saarland for providing the data for this study.

factor model in Figure 1): the affective dimension comprised the indicators “good”, “pleasant”, “attractive”, and “positive”; the cognitive dimension was assessed on the items “informative”, “convincing”, “clear”, and “credible” (the same or similar items have been used, for example, by MacKenzie and Lutz (1989) to measure “attitude towards the ad” and “ad credibility”). Respondents expressed the degree to which they endorsed these indicators on a five-point Likert scale with answer categories ranging from “does not apply at all” (1) to “applies very well” (5). Each national sample was evenly split up into male and female respondents.

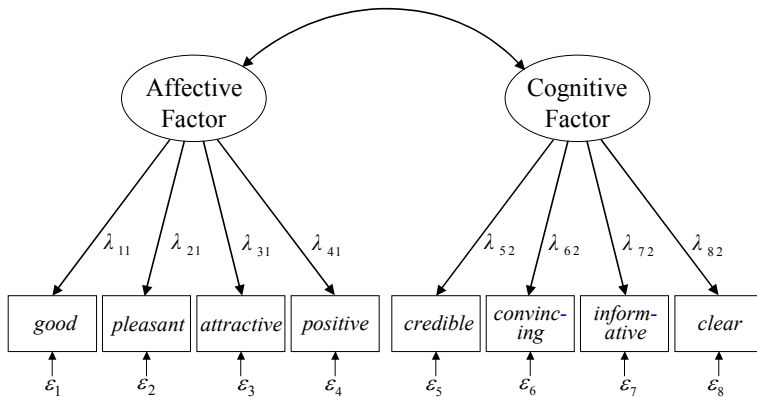


Figure 1: Proposed factor model for attitudes towards a specific ad

For the indicator “positive” three French students indicating “does not apply at all” had to be merged with their peers choosing “does not apply” because no one chose the former category in the German sample. Furthermore, none of the respondents in both countries perceived the ad as definitely unpleasant (category 1). Although screening the data did not reveal any extreme non-normality, the indicators “good” and “attractive” slightly exceeded the critical value of $|1|$ for skewness and kurtosis proposed by Muthén and Kaplan (1985).

4.2 Results

As explained above, the program Mplus is advantageous over LISREL with respect to assessing measurement invariance for ordinal indicators and it was therefore used in this study. Due to the small sample size, we applied the robust WLSMV estimator. Since degrees of freedom are not calculated but estimated for this estimator (Muthén 1998-2004), we additionally provide “traditional” degrees of freedom for the models. Throughout the analyses models were

specified under the Delta parameterization. All fit indices as well as the results of chi-square difference tests are reported in Table 1.

As a first step, configural invariance of the congeneric two-factor model was tested (Model 1). For this purpose equality constraints for the thresholds have been limited to the minimal set of identification restrictions discussed in section 2. Fit indices for this model are as follows: $\chi^2 = 72.54$, $df = 21$, $p = 0.000$, CFI = 0.968, TLI = 0.977, RMSEA = 0.143, and WRMR = 1.093. Despite CFI and TLI indicating a good fit indices like RMSEA and WRMR clearly suggest that the model must be rejected.² Modification indices (MI) indicated that the main source of the misfit can be traced to two, albeit different, cross-loadings in the French and German samples. Allowing for a cross-loading of the indicator “credible” on the emotional factor in the German sample and an additional loading of the indicator “positive” on the cognitive factor as well as an error covariance for the indicators “informative” and “clear” in the French sample yielded a considerable improvement in fit (Model 2): $\chi^2 = 33.23$, $df = 20$, $p = 0.032$, CFI = 0.992, TLI = 0.994, RMSEA = 0.074, and WRMR = 0.704. This conclusion is further supported by a highly significant likelihood ratio test statistic $\Delta\chi^2 = 43.45$ ($df = 3$, $p = 0.000$; see Muthén and Muthén (1998-2004) for chi-square difference testing under the WLSMV estimation). Although the chi-square difference statistic for Model 2 is still significant, all remaining indices point to a good (CFI, TLI, and WRMR) or at least an acceptable (RMSEA; Browne and Cudeck 1993) fit.

Rejecting the assumption of full configural invariance poses the question as to whether further invariance tests are justified (e.g., Steenkamp and Baumgartner 1998; Vandenberg and Lance 2000). Relying on the concept of partial invariance (Byrne, Shavelson, and Muthén 1989), we interpreted the country-specific cross-loadings as extreme forms of metric non-equivalence with a significant loading in one country and a zero factor loading in the other country. Thus, we tested for the equality of the main factor loadings and the thresholds across groups while leaving the two cross-loadings unrestricted (Model 3). For this model, results show a clear deterioration in fit: $\chi^2 = 63.99$, $df = 32$, $p = 0.0007$, CFI = 0.980, TLI = 0.991, RMSEA = 0.091, and WRMR = 1.097. Accordingly, the likelihood ratio test yielded a significant chi-square difference of 44.34 ($df = 19$, $p = 0.0008$). In order to identify the cause of the misfit, the invariance assumption for the thresholds was examined. First, for

² Following Hu and Bentler (1999), the subsequent rules of thumb for good model fit were applied: CFI ≥ 0.95 , TLI ≥ 0.95 , and RMSEA ≤ 0.06 . In addition, the weighted root mean square residual (WRMR; Muthén and Muthén 1998) in conjunction with a cut-off value of WRMR ≤ 0.90 (Yu 2002) was used.

each individual indicator all thresholds except those necessary for identification purposes were jointly set free. Second, for those indicators showing a significant improvement in fit upon relaxing the equality constraints, each individual threshold was separately tested for invariance. Eventually, this procedure identified two non-invariant thresholds, one for the indicator “positive” and one for the indicator “clear”. The estimation of the corresponding model (Model 4) provided a considerable improvement in fit with $\Delta\chi^2 = 20.74$ ($df = 2$, $p = 0.000$) and overall fit measures $\chi^2 = 52.43$, $df = 32$, $p = 0.013$, CFI = 0.987, TLI = 0.994, RMSEA = 0.073, and WRMR = 0.970.

Table 1: Overall fit measures and chi-square difference tests

Model	χ^2 df	p	$\Delta\chi^2$ df	p	RMSEA	CFI	TLI	WRMR
1	72.54 21 (38)	0.000	–	–	0.143	0.968	0.977	1.093
2	33.23 20 (35)	0.032	43.45 3 (3)	0.000	0.074	0.992	0.994	0.704
3	63.99 32 (61)	0.001	44.34 19 (26)	0.001	0.091	0.980	0.991	1.097
4	52.43 32 (59)	0.013	20.74 2 (2)	0.000	0.073	0.987	0.994	0.970
5	47.45 31 (58)	0.030	8.21 1 (1)	0.004	0.067	0.990	0.995	0.930
6	40.40 30 (57)	0.097	9.32 1 (1)	0.002	0.054	0.993	0.997	0.859

Figures in parentheses represent the calculated (“traditional”) degrees of freedom.

Since model fit was not completely satisfactory (e.g., WRMR > 0.90), constraints on the factor loadings were relaxed for each indicator separately in a further step. The only significant likelihood ratio test statistic emerged for the indicator “credible” ($\Delta\chi^2 = 8.21$, $df = 1$, $p = 0.004$). Allowing for group-specific loadings for this indicator resulted in the following fit measures (Model 5): $\chi^2 = 47.45$, $df = 31$, $p = 0.030$, CFI = 0.990, TLI = 0.995, RMSEA = 0.067, WRMR = 0.930. Although we were aware of the risk of overfitting, a WRMR

above the cut-off value of 0.9 and a significant MI for a cross-loading of the item “convincing” on the emotional factor in the French sample justified a final model modification (Model 6), for which the following fit measures emerged: $\chi^2 = 40.40$, $df = 30$, $p = 0.097$, CFI = 0.993, TLI = 0.997, RMSEA = 0.054, WRMR = 0.859. The chi-square difference is again significant: $\Delta\chi^2 = 9.32$, $df = 1$, $p = 0.002$. Because invariance of the residual variances is of only minor importance in our context we do not report the results of these tests.

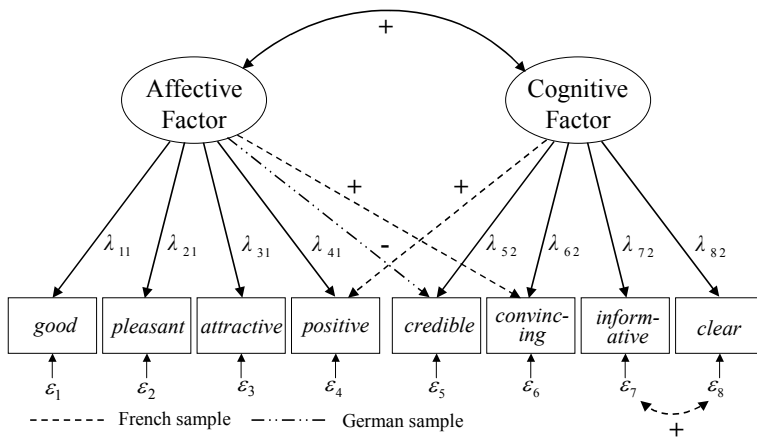


Figure 2: Structure of the final model (model 6)

Given that all fit statistics for Model 6 (see Figure 2) comply with their corresponding cut-off criteria, we now briefly elaborate on the substantial findings of the measurement invariance tests (parameter estimates for Model 6 are reported in Table 2). The most interesting result is certainly that, despite a significantly positive correlation between the emotional and the cognitive factor, the emotional appeal of the ad seemed to be detrimental to its credibility for the German respondents; no such effect was observed in the French sample. On the other hand, French respondents tended to more strongly endorse the items “positive” and “convincing”, both with increasing levels of perceived emotional appeal and cognitive content of the ad. Thus, in contrast to the German sample French respondents do not unequivocally connect these indicators to the cognitive factor. In addition, the main factor loading of the item “credible” was considerably higher for the German respondents. Compared to the aforementioned findings, the remaining violations of cross-national invariance (i.e., two invariant thresholds) are of rather minor importance.

Table 2: Parameter estimates for model 6

Indicator	Thresholds		Factor Loadings		Reliability	
	Germany	France	Germany	France	Germany	France
Emotional F.						
good	-2.5/-1.7/-1.0/0.8		0.834 (0.034)		0.70	0.78
pleasant	-1.6/-0.9/0.6		0.853 (0.037)		0.73	0.92
attractive	-2.4/-1.7/-0.9/0.2		0.785 (0.045)		0.62	0.73
positive	-2.1/-0.8/ 0.7	-2.1/-0.8/ 1.8	0.834 (0.049)		0.70	0.73
<i>credible</i>	n/a		<i>-0.668</i> (0.203)		n/a	n/a
<i>convincing</i>	n/a		<i>0.244</i> (0.081)		n/a	n/a
Cognitive F.						
informative	-1.1/0.1/1.2/2.4		0.713 (0.050)		0.51	0.42
convincing	-2.0/-0.6/0.4/1.9		0.798 (0.040)		0.64	0.73
clear	-2.3/-0.7/ 0.1/1.3	-2.3/-1.2/ 0.1/1.3	0.690 (0.049)		0.48	0.44
credible	-1.6/-0.4/0.7/2.1		1.283 (0.181)	0.825 (0.129)	0.80	0.67
<i>positive</i>	n/a		<i>0.707</i> (0.241)		n/a	n/a
	Germany	France		Germany	France	
Latent Means			Variance			
Emotional	0.00	0.14	Emotional	1.00	1.98	
Factor	(-)	(0.18)	factor	(-)	(0.52)	
Cognitive	0.00	0.56	Cognitive	1.00	1.58	
Factor	(-)	(0.17)	factor	(-)	(0.45)	

Standard errors in parentheses; cross-loadings in italics.

Overall, these results suggest a fundamentally different item functioning of a considerable number of indicators in the two countries. Finally, the estimated

latent means show that French respondents considered the ad significantly more cognitive than their German peers; no difference was evident with respect to the emotional factor.

5 Conclusion and further research

In this paper, a procedure for assessing measurement invariance by means of multi-group confirmatory factor analysis for ordinal indicators has been proposed. Its application was illustrated by comparing the responses of French and German students to items intended to measure the affective and cognitive dimension of attitudes toward a single ad. The empirical results revealed interesting differences in item functioning between both countries. Since responses were restricted to only one ad and measurement invariance was tested in a rather exploratory style, future studies should examine whether the results in this study can be replicated for similar ads and/or different samples. A concluding decision concerning the use of the affective and cognitive scales should consider the consequences of the identified non-equivalence (Millsap and Kwok 2004). Assuming that in practice the unweighted sum of each dimensions indicators would be used for French-German comparisons of advertising judgments, we make the following preliminary recommendations: First, the emotional dimension should be measured by a shortened three-item scale which omits the item "positive". Second, because of the rather ambiguous connotations of some of its items, the cognitive dimension might best be represented only by the indicator "informative". From a methodological perspective, simulation studies should further explore the presumption that tests for the invariance of thresholds are rather robust against violating the assumption of invariant factor loadings.

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Appendix 1

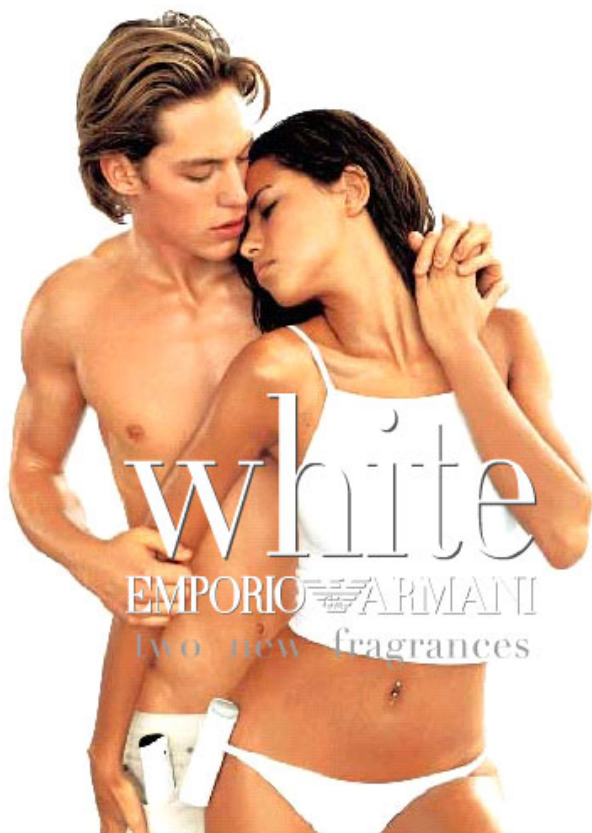


Figure 3: Advertisement used in the empirical study

Guido Purper and Peter Weinberg

Retail advertising: an empirical comparison between German and French consumers

1. Introduction
2. Prior research and theoretical background
3. Methodological approach
4. Empirical results
5. Discussion and implications

Abstract

Internationally operating retailers are faced with the decision of pursuing standardized or locally adapted marketing and advertising strategies. In this context, the question is raised, whether retail advertising as a shopping motive of consumers is of different importance for consumers' store choice in markets with differing cultural backgrounds. In addition, the authors analyze in this article the question of whether the demands of the consumer regarding the style and content of retail advertising are influenced by culture. The results of a consumer survey about grocery retailing, that was carried out in France and Germany, are presented on this basis. The authors show that retail advertising does not hold the same importance in every culture with regards to the purchase decision process. Moreover, it is verified for the first time that there exist cross-cultural differences in terms of the demands on retail advertising content and retail advertising style.

1 Introduction

In retail, as in many other parts of the economy, readily seen market saturation tendencies can also lead to a noteworthy growth often only being possible through the entrance into markets which have not yet been penetrated. Such a kind of growth can be realized by the internationalization of retailers in non-food as well as food-related segments of the market (in terms of a regional diversification towards foreign markets). One of the most important problems in this environment is the question of whether a soon to be developed market should be arranged in the same manner as previously occupied markets (standardization, e.g. Dawar and Parker 1994, Levitt 1983), or if a market arrangement which takes the local conditions into account is the better choice (differentiation, e.g. Ackerman and Tellis 2001, De Mooji and Hofstede 2002, Kragh and Djursaa 2001, Singhapakdi et al. 1999).

The above-mentioned question affects every part of the marketing-mix of a firm and thus also its advertising planning. When it comes to ad standardization, Whitelock and Chung (1989) propose six dimensions: picture, size, color, general layout, caption, and explanatory text. The ad standardization approach is supported by its potential for cost reduction and efficiency gains, for example in the areas of advertising conception and advertising production (e.g. Harvey 1993). Standardization also brings advantages in the eyes of the customer, by preventing image confusion and customer irritation, for example. However, the standardization approach assumes that the homogenization of economic systems leads to a homogenization of consumer behavior. On the other hand, standardization leads to a decreased ability to account for the specific characteristics of

each country, its target consumers and their behavior (Backhaus et al. 2001). According to the above statement, a standardized ad can thus only be successful if the shopping motives and demands of the customers regarding the content and style of retail advertising are similar. These variables will be analyzed by the authors with the help of a consumer survey, carried out in France and Germany, regarding cross-cultural differences.

2 Prior research and theoretical background

Retail advertising is an important instrument when it comes to communicating the abilities of a retailer (e.g. merchandise and service offerings) to customers (Hathcote 1995). In contrast with advertising for other businesses, which often deals with the build-up of emotional images, retail advertising mostly aims to increase (local) sales. Furthermore, it is characterized by usually being carried out in local markets (James and Alman 1996). An examination of the numerous publications about retail advertising leads to the identification of two main thematic focuses. The articles belonging to the first point focus on advertising budget allocation decisions across media and ad types (e.g. D'Souza and Allaway 1995, Hathcote 1995, Jørgensen et al. 2000) as well as on advertising efficiency (e.g. Bearden et al. 1984, Fitzgerald 2004, Moriarty 1983). The second focus concerns the themes of "sale advertising" and "retailer credibility" (e.g. Bobinski et al. 1996; Burman and Biswas 2004; Burton et al. 1999; Keiser and Krum 1976; Lichtenstein and Bearden 1989; Lichtenstein et al. 1991). With regards to the proven "selling power" of retail advertising (Burton et al. 1999) and the fact that consumers are the target group of retail advertising, it is, however, highly surprising that there exist only scarce insights into the corresponding expectations and demands of consumers. An exception is the investigation of James and Alman (1996).

James and Alman (1996) explored consumer expectations of information in different types of advertising, where advertisements were classified on the basis of the functions they are expected to perform. They collected more than 4,000 statements about eight different types of advertisements (retailer advertising, advocacy advertising, public service advertising, corporate advertising, political advertising, direct response, comparative advertising, and brand image advertising). According to their data, the most important information content consumers appeared to expect in retail advertising, is about products and services (40.1 per cent out of 595 statements). An also sizeable proportion of the statements indicated expectations about retailer information (31.8 per cent), followed by expected puffery or hype to be ignored (15.8 per cent). Information trying to induce to purchase (11.5 per cent) and information about action to be taken by the target audience (1.5 per cent) were least expected in retailer advertising. An

overview over these results is presented in Table 1. Overall, James and Alman could demonstrate that, compared to other advertising types, consumers expect a rather high degree of organizational, namely retailer, information as well as a high degree of product and service information when it comes to retail advertising.

Table 1: Distribution of expected information content in retail advertising (according to James and Alman 1996)

<i>Information expectation</i>	<i>%</i>	<i>N</i>
About products and services	40.1	236
About the retailer	31.1	186
Puffery / hype to be ignored	15.8	95
Inducement to purchase	11.5	69
Target market action to be taken	1.5	9

595 statements about retail advertising were analyzed.

According to the research of Dawson et al. (1990), shopping motives have a significant impact on a consumer's store preferences and store choice. Thus, the ability of a store to fulfill certain shopping motives is crucial (Gröppel-Klein 1998). Hibbert and Tagg (2001) showed that stores which fulfill a consumer's shopping motives increase their probability to be patronized by this consumer. In this context, the advertising of a retailer counts, in addition to many other motives (Geuens et al. 2001; Sheth 1983). In order to answer the question of whether advertising has, as a shopping motive for store choice, a different importance depending on the culture of the consumer, it seems useful to utilize Sheth's framework (1983).

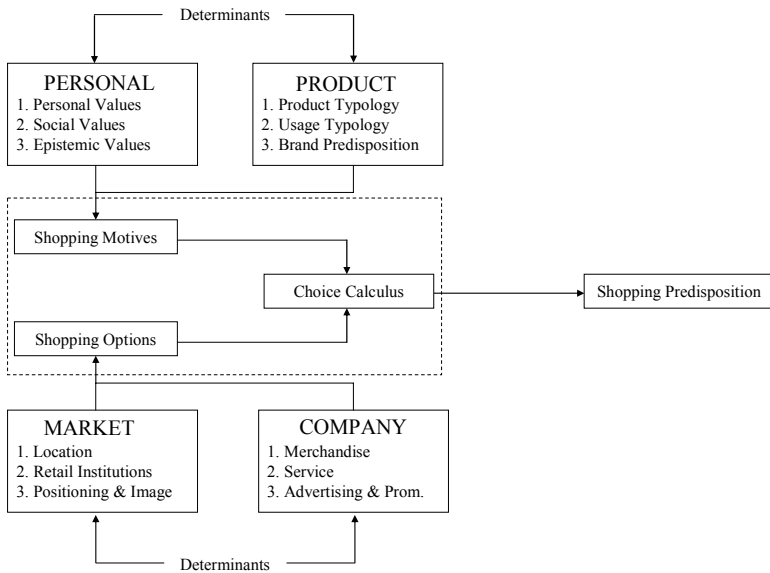


Figure 1: The influence of social values on a consumer's shopping motives according to Sheth's framework (1983)

Shopping motives depend on heterogeneous variables such as a consumer's personality traits (Mooradian and Olver 1996) and sex (Dholakia 1999). Sheth (1983) developed a broad framework according to which shopping motives depend on, among other things, the values of the society in which the individual lives. Naturally, it is to be expected, that the shopping motives in societies with different cultural backgrounds will be differently calibrated. This interrelation could already be verified by Weinberg and Purper (2004). Accordingly, that advertising as a shopping motive holds a different importance in different societies is to be expected.

The French and the German culture will be closely examined in this article. To what extent these two cultures differentiate themselves from one-another can be clarified using the results of cross-cultural social research. The classification of national cultures in terms of different cultural dimensions has been developed in many studies (e.g. Hall and Hall 1990, Hofstede 2001, House et al. 2004, eds., Trompenaars 1993). These studies can be drawn upon to assist in the evaluation of the cultural similarities of France and Germany. In Table 2, six

selected cultural dimensions and the corresponding characteristics of France and Germany are presented: affective vs. neutral, gender egalitarianism, high-context vs. low-context, masculinity, power distance, uncertainty avoidance. Table 2 shows that differences which are mostly clear to see exist between the cultures. Additionally, further past studies already verified the considerable cultural differences between France and Germany (e.g. Grunert et al. 1998, Kale 1995, Mendel 1991, Ronen and Shenkar 1985).

Table 2: Selected cross-cultural differences between France and Germany

<i>Cultural dimension</i>	<i>Value (France)</i>	<i>Value (Germany)</i>
Affective vs. Neutral (Trompenaars 1993)	Affective	Neutral
Gender Egalitarianism (House et al. 2004, eds.)	3.64 (As Is)** 4.40 (Should Be)**	3.10 (As Is)** 4.89 (Should Be)**
High-Context vs. Low-Context (Hall and Hall 1990)	High-Context	Low-Context
Masculinity (Hofstede 2001)	43*	66*
Power distance (Hofstede 2001; House et al. 2004, eds.)	68* 5.28 (As Is)** 2.76 (Should Be)**	35* 5.25 (As Is)** 2.54 (Should Be)**
Uncertainty avoidance (Hofstede 2001)	86* 4.43 (As Is)** 4.26 (Should Be)**	65* 5.22 (As Is)** 3.32 (Should Be)**

* = Value acc. to Hofstede (2001) ** = Value acc. to House et al. (2004, eds.)

Due to the fact that, in general, the assumption of clear cultural differences between France and Germany can be acted upon, equivalent differences in terms of characteristics of shopping motives as well as in terms of the importance of retail advertising as a shopping motive are probable. H1 is formulated for the importance of retail advertising as following:

H1: There are differences in terms of the importance of advertising of a retailer regarding store choice between German and French consumers.

Additionally, that the influence of cultural differences limits itself not only to the importance of the ad for the customer is to be surmised. Diehl et al. (2003), Shao et al. (2004), and Tai and Chan (2001) have noticed that differences in cultural values may cause perceptual differences and thus demand the use of varying advertising information content in different cultures. Moreover, it can be expected that differences in cultural values may also demand the use of different advertising styles (e.g. Kroeber-Riel and Weinberg 2003, Mueller 2004). Whitelock and Rey (1998) have shown that varying advertising approaches are selected in different cultures. So, for example, in the UK, the approach "humor" is oftenly implemented, while the advertisements in France are more dreamlike and emotional. Consistent with these outcomes, Bonnal's (1990) findings about consumer expectations showed that British consumers prefer honest, witty and funny advertising, whereas French consumers want advertising to be more artistic.

Regarding this article, the authors seek to test whether these results can be transferred to retailing and if a consumer's cultural background influences the demands regarding retail advertising content and advertising style. The attempt to carry out a widespread analysis of every form of advertising content and style is forgone within the scope of this article. Instead, this article rather represents an initial approach to the topic. The use of price information in ads (as an example for typical retail advertising content, e.g. Bobinski et al. 1996) and pleasing advertising appeal (as an example for advertising style) will be examined.

A more exact look into the peculiarities of the cultures of Germany and France, which could influence the demands regarding advertising content and advertising style, will be taken in the following. As shown in Table 1, the French culture sets itself apart from the German culture through a lower masculinity ranking. This points in the direction, that the French place more value on quality of life and comfortable surroundings than the Germans. The classification of France as a high-context culture (Hall and Hall 1990) is in accordance with the assumption of a strong emotional imprint on the French culture, because members of high-context cultures act, in general, emotionally more often than members of low-context cultures. Trompenaars (1993) places the French among the emotional cultures as well.

Contrastingly, the German culture, according to the above dimensions, can be described as a culture which characterizes itself through a high cognitive

imprint and a high amount of practicality. The higher masculinity value and consequently strong orientation on material values point towards the notion that Germans are more fact and price oriented than the French. From these cultural characteristics of the cultures of Germany and France, the authors come to H2 and H3:

H2: It is more important for German consumers than French consumers that advertisements from retailers inform about prices.

H3: It is more important for French consumers than German consumers that the style of a retail advertisement is appealing.

3 Methodological approach

The empirical data was collected by a consumer survey about grocery retailing in Germany (Darmstadt) and France (Paris) carried out in 2003. 100 respondents were interviewed (50 Germans and 50 French). The interviews were conducted during the respondents' shopping trips (in front of two department stores, one in each country). The authors chose the quota sampling technique with the characteristics age and sex. The structure of each sample was nearly the same as that of the corresponding population (regarding the chosen characteristics). As both of the populations are highly similar to each other with regards to the mentioned characteristics, the samples' structures are identical. Table 3 contains these structures.

The measurement of the importance of the advertisement of a retailer in regards to store choice was carried out by giving the respondents six shopping motives, they had to bring in a rank order according to their subjective importance. One of these shopping motives was "appealing advertising style", the others were "high quality of the merchandise", "wide variety of the merchandise", "low prices", "attractive store layout", "good service and friendly store personnel".

The measurement of the variables analyzed in H2 and H3 ("importance of an appealing advertising style", "importance that the advertising contains price information") was carried out through a five-point Likert scale, from 1 (very important) to 5 (not important at all), with which the respondents would state how important each aspect was to them.

Table 3: Structure of the French and the German sample

Age	Nationality	Sex		Sum
		Female	Male	
≤ 19 years	French	3	3	12
	German	3	3	
20-29 years	French	3	3	12
	German	3	3	
30-39 years	French	5	5	20
	German	5	5	
40-49 years	French	4	5	18
	German	4	5	
50-59 years	French	3	3	12
	German	3	3	
≥ 60 years	French	8	5	26
	German	8	5	

4 Empirical results

In order to test H1, the previously described ranking of shopping motives was utilized. As hypothesized, significant differences in the importance of advertising could be demonstrated using a Mann-Whitney-U-Test (Table 4). The advertising of a retailer was of higher importance regarding store choice in France than in Germany. The mean values are 54.77 (France) as compared to 46.23 (Germany), with a higher mean value designating a higher importance of a shopping motive. Since the difference is (weakly) significant ($p=.058$), H1 can be accepted.

Other shopping motives that were of significantly higher importance for the French than for the Germans were “wide variety of the merchandise” ($p=.04$) and “good service and friendly store personnel” ($p=.08$). The Germans evaluated “low prices” as considerably more important than the French did ($p<.001$). Regarding the motives “high quality of the merchandise” ($p=.109$) and “attractive store layout” ($p=.821$), no significant differences between the cultures were observed.

Table 4: Cross-cultural differences in terms of the importance of shopping motives

<i>Shopping motivation</i>	<i>Nationality</i>	<i>Mean rank</i>	<i>P</i>
High quality of the merchandise	French	54.58	.109
	German	46.42	
Wide variety of the merchandise	French	58.66	.004**
	German	42.34	
Low prices	French	34.36	.000***
	German	66.64	
Attractive store layout	French	51.12	.821
	German	49.88	
Appealing advertising style	French	54.77	.058*
	German	46.23	
Good service / friendly store personnel	French	57.95	.008**
	German	43.05	

* $p < .1$ ** $p < .01$ *** $p < .001$

In order to test the hypotheses H2 and H3, ANOVA's were conducted. The corresponding results are shown in Table 5. When interpreting the results, one has to take into account that the lower the mean value, the more important the respective shopping motive. It can be seen from Table 5 that, in accordance with the authors' expectations, information about prices from retail advertising is significantly more important to the German respondents than to the French respondents ($M_F=3.16$; $M_G=2.28$; $F=13.475$; $p < .001$). H2 can therefore be accepted.

In contrast, a pleasing and original appearance was, as previously supposed, significantly more important to the French respondents than to the German respondents ($M_F=3.18$; $M_G=3.78$; $F=5.931$; $p < .1$). Therefore, H3 can be accepted as well.

When comparing the mean values of the two aspects within each of the two cultures, the results show that the price information was noticeably more important to the German respondents than a pleasing appearance of the ad. From the perspective of the French respondents, both aspects were of almost equal importance. Overall, both aspects were evaluated as of rather moderate importance since three out of four mean values exceed 3 (the only explicitly as important

evaluated aspect is the availability of price information from the German point of view).

Table 5: Cross-Cultural differences in terms of the importance of price information and an appealing advertising style

	<i>Nationality</i>	<i>Mean value</i>	<i>F</i>	<i>p</i>
Importance of price information	French	3.16	13.475	.000***
	German	2.28		
Importance of appealing advertising style	French	3.18	5.931	.017*
	German	3.78		

* $p < .1$ ** $p < .01$ *** $p < .001$

5 Discussion and implications

The investigation of French and German consumers has indicated several differences in the behavior of the two samples. While the samples employed in the research were numerically and regionally limited, they were comparable enough to provide indications of the types of differences in selected aspects of consumer behavior that international retailers are likely to encounter in the markets they penetrate. The authors were able to demonstrate that advertising as a shopping motive in the purchase decision process does not hold the same importance in every culture. Beyond this, it could be verified for the first time, that for the field of retail advertising, cross-cultural differences exist in terms of the demands on advertising content and advertising style. The cultural dimensions which were used (Masculinity vs. Femininity; High-Context vs. Low-Context; affective vs. neutral) showed themselves to be well suited for the prognosis of culturally specific demands on retail advertising. In closing, the results suggest that the cultural dimensions applied in cross-cultural research provide a good basis for the planning of retail advertising. This is a highly encouraging and practically relevant consequence since it is widely considered as extremely difficult to study advertising practices for standardization and cultural adaptations in terms of what part of advertising content or what type of appeal should be standardized and what other part should be adapted to cultural particularities (e.g. Cervellon and Dubé 2000).

The results of the study are restricted by some limitations. First, as already mentioned above, the samples from Germany and France were relatively small (each sample included 50 respondents). Although the authors managed to draw the samples congruently from both populations in terms of the characteristics of "age" and "gender", an analysis of a larger sample would be desirable for the future. Furthermore, the authors suggest that other nationalities are investigated in future studies of this topic. Second, the existing study was carried out in the field of grocery retailing. It remains to be seen if the results of tests in other retail sectors (e.g. apparel retailing, consumer electronics retailing etc.) would be similar to the ones presented in this article. Third, only one form of advertising content and one form of advertising style were examined. Further analyses should attempt to more extensively examine the relationship between the culture of a society and the demands of the customers in terms of retail advertising content and style.

It appears recommendable to the authors from a practical view that retailers account for culture-specific particularities when planning the contents and style of advertising. A standardized retail advertisement strategy must be advised against in countries with clear cultural differences on the basis of the different demands of the consumers on the advertisements of retailers (consistent with the empirical findings from Whitelock and Rey 1998). If the culturally specific demands are not accounted for, a situation can arise in which a retailer can only inadequately satisfy the shopping motive of retail advertising. This can lead to a disadvantage for the retailer in terms of the consumer's store choice.

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Part VII

Outlook on International Advertising

Charles R. Taylor

The future of international advertising research: suggestions for moving the discipline forward

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Abstract

In spite of global marketing receiving increased attention from business, the public, and academicians alike, research on international advertising has not yet lived up to its potential in terms of advancing theory or helping managers. While some progress has clearly been made, more systematic research is needed. This paper reviews progress in international research and offers specific suggestions that can help research in this area make a bigger impact on the marketing and advertising fields. Topical areas in need of more research are discussed. Key research need areas include: the circumstances under which standardization of advertising is effective; the link between standardized advertising and firm performance; the relationship between global advertising strategy and brand equity; cross-market segmentation; theory on culture's impact on advertising; the evolution of new advertising media; and public policy issues in international markets. The author stresses the need for more truly international research teams.

1 Introduction

While recent years have witnessed attention increasingly being paid to international advertising theory and practice, progress in this area still lags behind other areas of inquiry within the advertising field (Taylor 2002). It is clear that some progress in understanding what can make international advertising programs effective has been made; however, it is equally clear that much more work needs to be done.

In contrast to advertising and international marketing specialty journals, which are experiencing a distinct increase in articles focusing on international advertising, a study by Zou (2005) suggested that the leading marketing journals and general international business journals (i.e. *Journal of Marketing*, *Journal of Marketing Research*, *Journal of Consumer Research*, and *Journal of International Business Studies*) publish very few articles dealing with international advertising.

One exception found has been the influential *Journal of Advertising*. A study completed by Zinkhan in 1994 found that in the *Journal of Advertising's* first 29 years, an average of one international article appeared per year. In a more recent content analysis conducted by Taylor (2005), it was found that 32 articles on international advertising were published between 1994 and 2004 in the *Journal of Advertising*. This averages to be 3.2 articles per year which represents a significant increase from previous years.

Although content analysis (34%) has remained the most common methodological approach to international advertising studies, it was found that other approaches, such as experiments (25%) and surveys (22%), were also being widely employed (Taylor 2005). Regarding the countries being studied, it was found that among non- North American studies, Asia was the most studied region (44% of international articles), and Europe was the second most studied (22%).

The purpose of this paper is to critique the approach used in the study of international advertising and to identify promising areas for future inquiry. As such, the paper will serve as an update of both the Taylor (2002) and Taylor (2005) studies.

This paper will begin with a review of earlier studies that have examined the progress made on international advertising research. This will then be followed by some recommendations on the approach taken by international advertising articles. Lastly, the paper will outline promising areas for future research by offering examples of recent articles that have been effective in expanding knowledge in key areas.

2 Are we making progress? Prior literature reviews

Periodically, leading scholars have assessed the progress that has been made in the international advertising field. All seem to agree that there has been some movement in the right direction. Yet, there is still a longstanding consensus that research in this area has fallen quite short of where it could be. A summary of these findings is shown in Table 1.

The first major comprehensive review of the progress made in international advertising research was conducted by Gordon E. Miracle in 1994. Miracle's overall conclusion was that international advertising research was "exceedingly underdeveloped" in terms of the theoretical and methodological approaches used (1994). The paucity of scholars who were committed to international advertising research and an associated lack of programmatic research were cited as major reasons for this deficiency. Miracle also criticized many studies for ignoring advances in research made by earlier studies. Perhaps the most important conclusion of the Miracle (1984) study was that due to the lack of systematic research few scientific generalizations could be made about international advertising.

By 1991, the notion of the global economy was garnering much more general attention. At this time, Moriarty and Duncan (1991) reviewed the interna-

tional advertising literature. The authors found several issues that were drawing more attention than they had in the past, including standardization vs. local adaptation, the potential power of global branding as reinforced through advertising, the evolution of global media, and how changes in political and economic systems were contributing to cultural convergence. While the authors cited some progress in these areas, they stressed that considerably more research was needed. Specifically, they believed that a deeper understanding of what global advertising is and the forces that may make it more important was needed.

Zinkhan (1994) noticed that more articles were being written on international advertising. However, he stressed the need for programmatic research and outlined several questions that needed to be addressed by advertising scholars (see Table 1).

Taylor (2002) argued that in spite of some progress made on certain international advertising issues, much more was needed to be done in order to produce theoretically important and managerially relevant research. Taylor cited the abundance of descriptive studies, particularly content analyses, as suggesting that the research needed to move to the next level. He specifically suggested that greater attention to be paid to establishing data equivalence in cross-cultural research. Moreover, he named several specific areas in which research needed to advance (see Table 1).

In Taylor's (2005) recent study, the progress made on the issues outlined by the above authors was evaluated. Both the number of scholars interested in international advertising and the number of studies conducted have increased. Moreover, some of the definitional questions posed by Moriarty and Duncan (1991) have been addressed and we are witnessing the beginning of a trend towards the use of more advanced methodologies. However, it is still the case that relatively little programmatic research is being conducted. Although some attempts have been made to apply richer theoretical bases to international advertising research, there is still a critical need for more comprehensive theoretical models that can be empirically tested. In terms of the process associated with the scientific method described by Miracle (1984), the literature appears to be at the point where some generalizations can be made, though few of these map into comprehensive theoretical frameworks.

In summary, it appears that international advertising has progressed over the last twenty years, albeit not as quickly as it could. The following section suggests some specific changes that could help to remedy this situation.

3 Suggestions for improving the efficacy of international advertising research

Longstanding problems in international research include the need to have more programmatic research and the need to have more cross-national research streams. The passage of time has made it more feasible to remedy this situation for reasons that will be discussed below. Similarly, the idea of addressing the deficiency of theoretical applications in global research is now realistic. A few newer issues, including the need to emphasize equivalence in cross-national research and the need to measure cultural dimensions, are also addressed.

3.1 More research by cross-national teams

The need for increased research by cross-national teams is obvious to many who study international advertising. The greater the ease of communication across borders, as well as increased interaction among scholars, offers a greater potential for more collaborations of this nature. Academic conferences focused on advertising, such as those sponsored by the American Academy of Advertising and ICORIA, should attempt to foster this type of research. Indeed, academic meetings are critical in fostering global research collaborations. The good news is that these meetings are beginning to help accomplish this goal. Nonetheless challenges remain, as these meetings as well as those of the Japan Advertising Association and Korea Advertising Society, focus on advertising in general, and not on international advertising. While the International Advertising Association offers an impressive annual meeting, historically it has been geared primarily at practitioners. Thus, it is incumbent upon those with an interest in international topics and who also belong to these organizations to stress the special benefits of cross-national collaborations on international advertising research.

A related issue is the need to have truly international editorial review boards for prestigious journals in marketing and advertising. International research should be reviewed by an international group of scholars.

3.2 More testing of existing theories in cross-cultural contexts and the creation of new theoretical perspectives

It is all too rare that international studies either a) test well established theories from the marketing and advertising literature (e.g., the theory of reasoned action; the elaboration likelihood model); or b) introduce a new theory that incorporates multiple national perspectives. Since the current state of international advertising research requires stronger theory bases, this represents a pressing need.

3.3 *Establishing data equivalence*

All too often, international advertising studies do little to ensure that respondents to a survey or experimental subjects respond to equivalent instruments. Increasingly, researchers are making efforts to ensure instrument equivalence before data is collected, such as using a translation/back translation process (Miracle 1988; Craig and Douglas 2000). However, the literature on established equivalence has advanced faster than these concepts are being applied. For example, Harkness et al. pointed out the importance of choosing an appropriate translation team and following additional assessment procedures prior to collecting data in 2003, yet researchers are now just beginning to do so in practice.

Now, it is clear that measuring equivalence after data collection is also critical. A number of techniques, including Steenkamp and Baumgartner (1998) method based on confirmatory factor analysis as well as Ewing et al.'s (2005) Rasch-based method, are available. We are at the point where applying one of these techniques should be regarded as a prerequisite when publishing an international survey study or using experimental data collected from two or more countries.

3.4 *Need to measure cultural dimensions*

While many international studies propose that cultural dimensions account for the differences in advertising practices of different countries, it is all too rare that the proposed cultural dimensions are actually measured. For example, it may be proposed that collectivistic countries have more advertisements that focus on the "group". Particularly in experimental research, authors should provide a measure of the cultural dimension to ensure that participants in the study actually vary on the proposed dimensions. This type of "manipulation check" is more important than ever, as we are in an era where at least some level of cultural convergence is taking place, particularly among populations such as businesspeople and college students. The Terlutter, Mueller and Diehl (2005) article that examines the newly identified dimension of assertiveness is a good example of a study that does this.

3.5 *Better promotion of international research as important to the discipline*

On top of the difficulty of performing good international advertising research and the lack of programmatic research, international advertising has never been regarded as a glamorous area of research. Relatively few scholars have made tenure at elite Universities by publishing international studies. Zou's (2005) study indicates that the Journal of Marketing, Journal of Marketing Re-

search, *Journal of Consumer Research*, and *Journal of International Business Studies* published a combined total of 8 articles on international advertising during the thirteen year span from 1990 to 2002. Moreover, the most cited article published in the same time period received 35 SSCI citations. It is a respectable number, but significantly fewer than those of top consumer behavior or marketing strategy articles.

While it well accepted that we live in a global economy, much emphasis continues to be on developing theories that may be, at least to some degree, culture bound. Therefore, as better research on international advertising evolves, it is important that those who study these issues help to promote its importance to the field.

4 Needed research: some key areas

4.1 Models of standardization

In recent years, it has become clear that research on standardization needs to shift from a focus on a debate to examining the conditions under which advertising can be standardized and the level to which it can be standardized (Duncan and Ramaprasad 1995; Taylor 2002). Thus, studies that examine factors that make standardization more feasible and/or desirable need to be conducted. Several factors that could facilitate standardization have been suggested, such as various environmental factors (e.g., market similarity, customer similarity, media environment) along with other factors such as firm size, firm experience, and product type. A few promising studies, including Laroche et al. (2001), and Saimee et al. 2003, have examined the impact of such factors. However, more such studies are needed in order to develop a comprehensive model.

4.2 Is standardized advertising linked to firm performance?

With marketing managers and ad agency personnel under increasing pressure to justify advertising expenditures based on return on investment (ROI), there is a pressing need to examine global advertising's impact on a firm's performance. While the Global Marketing Strategy theory (GMS) developed by Zou and Cavusgil (Cavusgil and Zou 1994; Zou and Cavusgil 2002), has been developed to examine the link between broader marketing strategies and firm performance, too little study of standardized advertising's relationship with performance have been conducted. A recent study by Okazaki, Taylor and Zou (2006) found that standardized advertising did increase financial and strategic performance for subsidiaries of Japanese and U.S. firms operating in the EU

when the conditions were appropriate for standardized advertising. Additional research on other countries is badly needed.

4.3 How does global advertising contribute to brand equity?

An issue related to the standardization/ performance relationship is the mechanisms by which standardized advertising can build brand equity. More knowledge of the process by which global brands are built is necessary (Moriarty and Duncan 1991). Of particular interest in this vein is the role of which the creation of a uniform brand image plays in building brand equity. Additional attention to how global brand equity can be effectively measure is also needed.

4.4 Can cross-national market segments be reached effectively?

A dramatically understudied area in international research is the extent to which market segments that cut across national boundaries can be reached. While this issue has been broached in textbooks for many years, we know very little about how successful firms have been successful in targeting cross-national segments. Although some articles have focused on identifying possible cross-national segments, such as “global teens” or “global elites” (Hassan and Katsanis 1994), very few empirical studies have been conducted. Hofstede et al.’s (1999) study of cross-market segmentation in the European yogurt market is an exception, but clearly more research is needed. Even a descriptive survey of managers focusing on the use of cross-market segmentations, how segments are identified, and whether it can be successful would be worthwhile.

4.5 Examining the effectiveness of specific executional techniques cross-culturally

While numerous content analyses providing descriptive data on the advertising executions used in various markets have been conducted over the years, it is only recently that we are seeing an increasing number of experiments examining which techniques are effective in each market. The content analysis studies provide researchers with a basic platform for conducting experiments, from which they can help to better understand the underlying reasons why a given execution is effective. Experimental research incorporating cultural variables can help move us toward building a theory of culture’s impact on advertising. This theory can also be helpful to managers (e.g., Taylor, Miracle and Wilson 1997). Studies using a similar approach to that of Stewart and Furse (1986) in systematically analyzing the effectiveness of a wide array of executional techniques would be ideal.

4.6 *Development of a general theory of culture's impact on advertising*

A glaring hole in the international advertising literature is the lack of general theory on how culture influences advertising. While Geert Hofstede's dimensions have provided some insight, it is clear that these dimensions, based on work related values, do not fully explain culture's impact on advertising. Thus, more research on the impact of cultural similarities and differences on advertising is needed. While an impressive number of studies have examined culture's impact in some way, we remain without a useable comprehensive theoretical framework on the role of culture in advertising.

In addition to Hofstede's framework, DeMooij's (1999) concept of value paradoxes provides one choice of platform from which to build. DeMooij argues that paradoxical values are found in most cultures and that they are frequently reflected in advertising. DeMooij makes a distinction between what is "desirable" in terms of social norms and what is "desired" when individuals make purchase choices. She argues that this might lead to advertising that appears to contain values that conflict with mainstream culture. Regardless of which platform culture's impact on advertising is built from, a more generalized theory of culture's impact on advertising is needed.

4.7 *Studying how New Media will evolve?*

After a series of bumps, the internet has finally established itself as a major advertising medium. With search engine advertising leading the growth and rich media increasing the internet's versatility, it has become clear that internet advertising will be around for some time to come. Over time it was learned that when used properly, the internet can be effectively used as part of IMC to build brands (Chiagouris and Wansley 2000).

Technology is expanding on a global basis. Asia and Europe, along with the U.S., are adopting new technologies at a rapid pace, and the evolution of new media is clearly an international issue. Research on whether additional new media, such as SMS messaging along with MMS messages, ringtones, advergames, and additional new devices can be used to build brands is needed. Lessons learned from the internet, such as the importance of trusting the advertiser and the consumer's desire for privacy are important considerations. It is possible that the careful study of these media will help them evolve faster than the internet had into effective vehicles for advertising. As mentioned above, the ability to contribute to brand equity appears to be vitally important to advertisers who have other media options. Thus, research on the brand building capability of new media is very important.

4.8 *Research on marketing and policy issues in an international context*

While research on public policy issues, such as deceptive advertising, product labeling, advertising to children, and public service campaigns among others, has received considerable attention in the U.S. in recent years, additional cross-cultural research is needed. Issues now coming to the forefront, such as marketing's impact on obesity and intellectual property issues related to advertising, clearly require more insight from a global perspective. As regulations vary around the world, it is important to both analyze regulatory differences as well as look for commonalities in the way consumers across cultures react to various advertising stimuli. Again, the collaboration of individuals from different countries for studies on a given topic is needed to drive our knowledge forward. The Moon and Chan (2006) study in this book examining the impact of gender portrayals across nations is a good example of such research.

5 Conclusion

Suggestions have been offered to help improve the contribution quality of international advertising research. We are currently at a key point in time where the groundwork to make substantial progress that is useful in terms of both theoretical advancement and managerial relevance is necessary. Programmatic research that follows state of the art procedures and addresses important research questions building upon prior findings is badly needed. To the extent that strong studies are published, international advertising research has the potential to gain prominence within the field in the future.

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Appendix 1

Table 1: A history of articles examining international advertising research progress

Key issues and research questions in international advertising
<p>Miracle (1984)</p> <ul style="list-style-type: none"> • Too few scholars consistently study international advertising. • More systematic research should build on prior studies. • Analytical models should be built based on generalizations made from a body of research. • More comparative studies (i.e., studies that collect data in more than one country simultaneously) are needed. • More studies should use the advanced methodological techniques that are used in domestic research. • Theory development needs to be more rigorous. There is a need for theoretical bases that come from a broader set of fields, including communications, anthropology, political science, psycholinguistics, and sociolinguistics.
<p>Moriarty and Duncan (1991)</p> <ul style="list-style-type: none"> • What is a global advertising campaign? Does it need to use exactly the same executions everywhere? Is it still global if it has been translated? • How do we evaluate whether global advertising does, indeed, work? • What exactly does a brand with global awareness have that a brand without it does not? What exactly does global brand power mean? • How fast is cultural convergence happening and how far will it go? To what extent will European consumers become more alike? To what extent will global consumers become more alike? • To what degree and in what form will global media evolve? • To what extent do economic and political factors drive cultural convergence? How much of the political changes that have been occurring in some parts of the world can be accounted for by the desire for a market economy? How will consumers in newly opened markets such as Eastern Europe respond to modern advertising? Will they be vulnerable to modern advertising techniques?

Zinkhan (1994)

- With increasing globalization, are market forces enough to correct trade imbalances between nations or is government intervention required?
- Which type of organization is more successful: global corporations or multinational corporations? Under what conditions does each prosper (or fail)?
- What is the effect of government intervention on the wealth of nations? How does advertising contribute to the wealth of nations?
- What special considerations need to be taken into account when exporting advertising practices from one nation (or culture) to another?
- How can global brands be created and managed? What is the role of advertising in maintaining global brands?
- What market entry strategies are likely to be the most successful, and what is the appropriate role for communication to play for each entry strategy?
- With respect to communication, how can the areas of managerial practice and academic research be better merged and integrated?
- What are the best ways to measure advertising phenomena and how can these ratings be used to maximize communication performance?
- Which industries are most appropriate (and which are least appropriate) for applying advertising methods and principles?
- Is there a predictable life cycle for advertising? That is, is there a natural evolution for advertising principles and practices?
- What are the best ways to educate students and managers about international advertising?

Taylor (2002)

- Too many descriptive studies of advertising content and not enough research on why various advertising execution techniques are effective in certain markets.
- There is a preoccupation with whether campaigns should be standardized to the detriment of seeking answers for pragmatic execu-

tion across markets.

- A lack of rigor in establishing equivalence in studies comparing data from multiple countries, both in terms of study design and data analysis.
- A disturbing lack of knowledge about whether, and when, targeting segments that cut across national boundaries (i.e. inter-market segmentation) can be effective.
- Not enough focus on control of international advertising campaigns, both in terms of who makes the decisions and the extent to which they are effectively implemented.

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