Humor in Advertising: An Associative Processing Model

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Abstract

This article reviews a research program on the effects of humor in advertising on positive and negative brand associations and brand choice, and integrates the findings into a single, overarching model. Based on the Associative and Propositional Processes Model of Evaluation (Gawronski & Bodenhausen, 2006, 2007, 2011), we propose that repeated pairings of a novel brand with brand-unrelated humor forms positive brand associations, which mediate spontaneous brand choice. This associative process was found to be independent from the level of distraction posed by humor and from awareness of the stimulus pairings. In fact, the distraction posed by humor benefits persuasion by preventing negative brand associations. Previous marketing research, which mainly viewed humor as a cue in peripheral processing, was rather pessimistic about the persuasive impact of humor. In contrast, this research program suggests that a repeated pairing of a brand with humor affects the brand’s underlying associative structure, which may lead to stable attitude changes that guide overt spontaneous brand choice. Theoretical and practical implications are discussed.
Humor in Advertising: An Associative Processing Model

Persuasion is among the central issues of social behavior, and persuasion attempts can be found almost everywhere. Just walking down the street or surfing the Internet we are already exposed to countless advertising messages. When we read a newspaper or turn on the TV, we see political candidates trying to sway people to vote for them. Even at home, our friends and spouses try to lure us into doing things like join their birthday parties, babysit their children, or take out the trash. The literature on persuasion has addressed a multitude of persuasion variables. Some variables influence deliberative persuasion processes such as the impact of argument quality, biased information processing, and cognitive dissonance, whereas others influence intuitive persuasion processes such as the impact of source credibility, source attractiveness, and the sheer number of arguments. Somewhat surprisingly, it has left out systematic research on one very prevalent message element: the use of humor. It is estimated that between 30 and 42% of ads are intended to be humorous (Markiewicz, 1974; Weinberger, Spotts, Campbell, & Parsons, 1995). In the present article, we aim to address this gap in the social psychological literature by reviewing a research program on the effects of humor in advertising and by introducing an associative model of humorous advertising.

Prior Research on Humor in Advertising

Although social psychologists have not paid much research attention to the topic, humor is one of the most frequently used and studied message strategies in the advertising and marketing literature. This research has revealed several interesting and sometimes paradoxical effects of humor on various marketing outcomes. There is broad agreement among advertising researchers and practitioners that humor enhances the amount of attention paid to ads (e.g., Madden & Weinberger, 1982). Several
experiments demonstrated that humor directly increases positive attitudes towards ads and brands (Chung & Zhao, 2003; Chattopadhyay & Basu, 1990; Cline & Kellaris, 1999; Gelb & Zinkhan, 1986; Lee & Mason, 1999). Humor can also enhance persuasion indirectly by positively biasing ad elaboration (e.g., Allen & Madden, 1985), or by increasing motivation to process ads (e.g., Zhang & Zinkhan, 2006). Other researchers have noted that humor may disrupt critical processing of advertising claims (Cline & Kellaris, 1999), and may reduce negative responses to advertisements like counterarguing (Nabi, Moyer-Guse, Byrne, 2007) or reports of reactance (Skalski, Tamborini, Glazer, & Smith, 2009, for reviews see Eisend, 2009, 2011).

On the downside, there is also evidence that humor can harm the memory for products and brand claims (e.g., Gelb & Zinkhan, 1986; Krishnan & Chakravarti, 2003), which suggests that humor distracts attention from products. Even more importantly, marketing studies generally found that humor has little or no effect on behavioral persuasion variables such as behavioral compliance, purchase intentions, or brand choice (Chattopadhyay & Basu, 1990; Scott, Klein, & Bryant, 1990; Zhang & Zinkhan, 2006). In fact, a comprehensive review about the effect of humor in advertising concluded “the current conclusion from the overall literature concurs with the view that humor does not offer significant advantages over non-humor when persuasion is the goal” (Weinberger & Gulas, 1992, pp. 56-57).

This pessimistic view about the persuasive impact of humor among marketing researchers could be explained by the fact their research was mainly guided by the Elaboration Likelihood Model (ELM, Petty & Cacioppo, 1986). Humor was assumed to affect consumer behavior only through the peripheral route to persuasion. Persuasion through the peripheral route occurs when the consumer is unable or unwilling to engage in much message-relevant thought, and instead uses simple
mental shortcuts to process a persuasive message (e.g., the sheer number of arguments presented or the attractiveness of the source). Peripheral processing only generates weak and short-lived attitude changes that are hardly persuasive on a behavioral level (Petty & Cacioppo, 1986).

**Our Research Approach**

In the present article we deviate from the ELM approach, and instead propose an associative processing model of humor in advertising. We start by the notion that humor is a source of positive affect, and humorous ad campaigns usually present viewers with multiple brand-humor pairings. We propose that this repeated humor-brand pairing forms positive brand associations that guide spontaneous brand choice. In contrast to peripheral processing, associative processing is thought to always influence brand attitudes; when consumers process the ad only superficially, but also when they process it more thoroughly (although this is a domain of debate). Brand associations formed on the basis of multiple pairings with affective stimuli are robust (Sweldens, Osselaer, & Janiszewski, 2010) and are considered fundamental for persuasion (Greenwald & Leavitt, 1984; Osselaer & Janiszewski, 2001). Compared to the general conclusions of marketing research, our model proposes that humorous ad campaigns can promote overt brand choice, which may help to explain why so many advertisers choose to use humor in their ads. Importantly, our model also speaks to the particular psychological mechanisms involved in the processing of humorous ads. Although marketing research has made important progress in identifying the kinds of messages, market segments, and consumer types in which humor can impact persuasion, it spoke less to the particular psychological mechanisms involved.

Besides using a different theoretical approach, we also used a different experimental approach than most previous marketing studies. We chose to employ a
less obtrusive, and in some respects more ecologically valid way to investigate the
effect of humorous advertising. In the majority of marketing studies participants were
presented with a single humorous or non-humorous ad, and afterwards reported their
thoughts about the ad and brand, and/or rated their attitudes and purchase decisions on
explicit Likert-type rating scales (e.g., Chattopadhyay & Basu, 1990; Cline &
Kellaris, 1999; Lammers, Leibowitz, Seymour, & Hennessey, 1983; Lee & Mason,
1999; Zhang & Zinkhan, 2006). An important limitation was that the research relied
exclusively on self-report measures to assess attitudes and purchase intentions.
Moreover, the research participants were usually aware of the experimenter’s goal to
investigate advertisements. It is unlikely that the explicit way in which research
participants were consulted about their opinions about ads in marketing studies
resembles the way consumers deal with ads in the real world. In real advertising
situations consumers are frequently exposed to multiple humorous ads promoting the
same brand, and this happens mostly involuntarily and without being asked for an
opinion afterwards.

We also took into account the fact that automatic processes may govern the
impact of ads on brand choice. The average consumer is exposed to thousands of ads
per day (Jhally, 1998). This abundance of advertising information exceeds the
attentional resources of most consumers, which means that a lot of product
information passes by unnoticed and will not be deliberately evaluated at all (see
Heath, 2001). Although consumers are usually inattentive of what is said about brands
in ads, they certainly form impressions of them. They unintentionally pick up brand
information throughout the day, from tasting, using or wearing a particular product to
seeing its particular packaging or logo in the shop or in a marketing campaign. When
making a spontaneous purchase decision (e.g., in the supermarket), consumers often
rely on this automatically retrieved brand information (see Bargh, 2002; Dijksterhuis, Smith, Van Baaren, & Wigboldus, 2005).

Furthermore, we took into account that real advertising situations potentially evoke resistance and ad avoidance. Ads typically force themselves upon consumers, sometimes in unwanted places (e.g., in e-mail and SMS text messages), and/or at inconvenient times (e.g., interrupting a popular TV show). More generally, every ad is an overt attempt to change the opinion and behavior of its perceiver, which automatically triggers resistance (Sherman, Crawford, & McConnell, 2004; for a review, see Knowles & Linn, 2004). Thus, compared to experimental participants on whom previous research conclusions were based, actual consumers may experience more resistance when confronted with commercial advertising, and may react with more avoidance or irritation.

To simulate a situation of general low involvement and information overload, we presented brands in an information-rich environment including other brands, various humorous and non-humorous stimuli and lots of filler material. Care was taken to disguise the hypotheses under investigation, the particular brands and ad variables we were interested in, and the particular pairings between brands and humorous stimuli. We also minimized the obtrusiveness of the dependent measurements by using implicit measures of memory and attitudes, and behavioral observations. In several experiments we examined the impact of resistance by experimentally manipulating resistance, measuring individual differences in resistance, or employing field settings in which we encountered natural resistance.

Before presenting the model it is useful to define the term humor as it is used here. The present work subscribes to an incongruity-resolution theory of humor, which defines humor as a cognitive-linguistic problem-solving task that elicits
positive affect (Goel & Dolan, 2001; Raskin, 1985; Suls, 1972). A typical joke contains a setup that causes perceivers to make a prediction about the likely outcome. The punch line violates this expectation, and perceivers will look for a cognitive rule that will make the punch line follow from the setup. When this cognitive rule is found, the incongruity is resolved and the joke is perceived as funny. Thus, the processing of humor comprises two characteristic stages: (1) resolution of a schema-incongruity in order to “get the joke” (cognitive stage), and (2) experience of positive affect (affective stage). Content analyses show that indeed about 69 to 82% of humorous ads throughout the world are based on incongruity-resolution (Alden, Hoyer, & Lee, 1993; Spotts, Weinberger, & Parsons, 1997).

It is important to note that our experiments and model only concern low involvement consumer decisions, which can be defined as spontaneous choices between brands or products that consumers make without much deliberation of the choice alternatives (e.g., choosing between two brands of ballpoints or soft drinks). Indeed, the consumer market segments that most frequently employ humor in advertisements (ads) are non-durable, low involvement products such as snack foods, soft drinks, and beer (Madden & Weinberger, 1984; Weinberger & Campbell, 1991). As mundane as these spontaneous consumer decisions may seem, the sales of low involvement consumer goods amount to billions of dollars. The soft drink market is worth $64 billion in the United States alone (Oakland Tribune, 2004). Moreover, these kinds of small decisions that consumers make in daily life have a significant impact on medical, social, and economic outcomes on both individual consumers and society as a whole (Verplanken & Wood, 2006). Thus, we think it is important to examine how advertising influences low involvement consumer decisions.
We also wish to point out that our theory and experiments are only relevant to advertising in which the humor is *unrelated* to the brand. We chose to study only brand-unrelated humor because it is more common in advertising than brand-related humor. According to content analyses of Spotts and colleagues (1997), 71% of humor in ads worldwide is brand-unrelated. Thus, although we cannot draw conclusions about the effects of brand-related humor, we can still generalize our findings to *most* humorous ads. Although our research does not pertain to deliberate consumer decisions (e.g., deciding on houses, political voting) or to brand-related humor, we do speculate on the effect of humor in these domains in the discussion.

Finally, we chose to study only *novel* instead of mature brands because this gives a clear picture of the effects of humor on brand perceptions and brand choice *per se*, without having to incorporate possible confounding factors like prior knowledge and experience with the brand. Thus, our findings can only be generalized to novel, non-mature brands, as previous research has indicated that humor affects novel and mature brands in qualitatively different ways (Chattopadhyay & Basu, 1990; see also Gibson, 2008).

**Foundations of the Model**

Our model derives in essential ways from three theoretical approaches. From the research on schema-incongruity (e.g., Heckler & Childers, 1992; Houston, Childers, & Heckler, 1987) we derived our hypotheses regarding the effects of humor on attention and memory processes. Research on schema-incongruity distinguishes two types of incongruity in ads: *unexpectedness* and *irrelevance*. Unexpectedness refers to advertising information that is somehow incongruent with prior expectations or schemas. Consider, for example, a TV ad for a British food manufacturer showing an Englishman ordering a shepherd's pie in a restaurant. After taking the order, the
waiter suddenly jumps on the table and starts singing “O sole mio”. Research shows that unexpected information (i.e., the waiter jumping on the table and starting to sing) receives enhanced attention and elaborative processing. Similarly, our model predicts that the inherent schema-incongruity in humor is likely to attract attention and enhance recall of the humorous parts of the ad.

Irrelevance, on the other hand, concerns the extent to which a piece of information pertains directly to, and helps the identification of, the theme or message of a commercial. Research shows that irrelevant information receives little attentional processing and, if encoded, is poorly linked within the associative network. Because the waiter singing “O sole mio” is irrelevant for shepherd's pie (it would be more relevant, however, if the guest ordered lasagna), this product will be poorly processed. Similarly, our model predicts that humor does not support the processing of advertising information that is irrelevant to the humor, such as a relatively meaningless brand name (see also Krishnan & Chakravarti, 2003). In fact, given that humor requires solving incongruities and therefore poses cognitive demands, it is likely that humor withdraws cognitive resources from the processing of humor-unrelated brand names. Thus, we hypothesized that the solving of incongruities within humorous ads impairs memory for humor-unrelated brands.

A second theoretical approach we relied heavily on is the Associative and Propositional Processes Model of Evaluation (APE-model) of Gawronski and Bodenhausen (2006, 2007, 2011). We used this model to derive our hypotheses regarding the effects of humor on implicit attitudes and explicit attitudes. This model differentiates two qualitatively distinct mental processes related to attitude change, namely associative or propositional processes. Associative processes are defined as mental processes based on the activation of mental associations in memory, which are
formed by feature similarity and contiguity between stimuli in space and time. In contrast, propositional processes are defined as the validation of the information that is implied by the activated associations, which is guided by the principles of logical reasoning.

The most important difference between associative and propositional processes is their (in)dependency of subjective truth. Whereas associations can be activated in memory regardless of whether the person considers the information implied by these associations accurate or inaccurate, propositional processes are inherently concerned with a subjective assessment of the validity of activated information. For example, the propositional implication of a positive automatic reaction to a brand on a supermarket shelf (e.g., “I like Brand X cookies”) may be rejected when it is inconsistent with other propositions that are currently considered (e.g., “Brand X cookies are very heavily advertised” and “I shouldn’t buy cookies just because they are advertised a lot”).

The behavioral outcomes of propositional processes are typically measured with self-report scales (also termed explicit attitude measures), while the behavioral outcomes of associative processes are typically measured with response latency measures (also termed implicit attitude measures). Implicit attitude measures are better measures of the outcome of associative processes because they tap directly into the evaluations that are automatically activated upon exposure of the attitude object. One particularly thorny issue is the use of the term implicit attitude. Recently, researchers have noted that although the measure is implicit, the attitude is not, since there is no evidence that the individual is unaware of the attitude (Fazio & Olson, 2003; Gawronski, LeBel, & Peters, 2007). We completely agree with this position.
However, we use the term implicit attitude in this article because it is common in the field.

Explicit and implicit attitudes may be similar or dissociated, depending on whether the propositional implications of the automatically activated implicit attitude is accepted or rejected as a valid basis for evaluative judgment (e.g., Gawronski & Strack, 2004; Nosek, 2005; Olson & Fazio, 2006). We hypothesized that repeated pairing of a brand with brand-unrelated humor leads to a pattern of explicit and implicit attitude change that the APE-model denotes as Case 1 (Gawronksi & Bodenhausen, 2006). Case 1 involves a direct influence on implicit brand attitudes through repeated pairing with humor, that is, evaluative conditioning (EC; for a review, see De Houwer, Thomas, & Baeyens, 2001). These implicit attitudes, in turn, provide the basis for explicit brand attitudes. Case 1 implies corresponding changes in implicit and explicit attitudes, with changes in explicit attitudes being fully mediated by changes in implicit attitudes. According to the APE model, Case 1 should emerge when humor leads to a change in associative structure of the brand’s attitude1. Additionally, the Case 1 pattern only emerges when the consumer accepts the implication of the newly formed brand associations as a valid basis for the evaluative judgment, and hence, does not reject it on the basis of conflicting propositions that call into question the truth-value of the associative evaluation. The APE model argues that contingency awareness, that is, awareness of the pairings of a particular brand with positive or negative stimuli, may provide such conflicting information that reduces trust in the validity of the associative evaluation, leading to a pattern of explicit and implicit attitude change that the APE-model denotes as Case 2. As in the example above, consumers who are contingency aware may discard their liking for
brand X because they attribute it to advertising rather than to the true merits of a brand.

It should be noted that following the recent debate on the role of contingency awareness in EC, the APE model acknowledges that not all EC effects are associative in nature and may sometimes require contingency awareness (see Gawronski & Bodenhausen, 2011, and the discussion of this article). The exact impact of attention and contingency awareness on EC effects is still under debate (e.g., Pleyers, Corneille, Luminet, & Yzerbyt, 2007; Bar-Anan, De Houwer, & Nosek, 2010; Stahl, Unkelbach, & Corneille, 2009). In line with the APE model, we consider EC as an effect that can be both driven by associative or propositional processes. As mentioned before, however, we hypothesized that within the confinement of our experiments (i.e., repeated exposure of a novel low involvement brand in the context of unrelated humor while disguising the particular pairings between brands and humorous stimuli), the impact of humor on brand attitudes follows an associative process described as Case 1 in the APE-model. This pattern would be indicated if 1) humor affects brand attitudes without contingency awareness; 2) There is correspondence between implicit and explicit attitude change; and 3) Effects of humor on explicit attitudes and behavioral choice are fully mediated by implicit attitude change.

A third theoretical approach that strongly influenced our thinking on the associative processes involved in humorous advertising is the Evaluative Space Model of attitudes (Cacioppo, Gardner, & Berntson, 1997; Norris, Gollan, Berntson, & Cacioppo, 2010). A central assumption of this model is that attitude positivity and negativity are independent and can (and should) be separated. For a long time, attitudes have been conceptualized as unidimensional constructs, which implied that when an attitude becomes more positive, it will also become less negative.
(comparable to the bipolar scale of a thermometer: when it gets warmer, it gets less cold). However, one of the central tenets of the Evaluative Space Model of attitudes is that attitude positivity and negativity are separate and often uncorrelated attitude dimensions. This proposition is in line with approach-avoidance models of behavior that generally assume that the behavioral response toward an object depends on the relative strength and salience of both the positive and negative responses towards the object (Dollard & Miller, 1950; Gray, 1987; Knowles & Linn, 2004). Hence, to foster a behavioral change to buy a brand, an ad should ideally form positive brand associations, and simultaneously prevent the formation of negative brand associations. As we will explain below, we hypothesized that the repeated pairing of a brand with humor causes exactly these two processes.

**An Associative Processing Model of Humorous Advertising**

From the aforementioned theories we derived several expectations about the effect of pairing a novel brand with brand-unrelated humor that formed the basis for our model of associative processes in humorous advertising. The model is summarized in Figure 1. The general idea of the model is as follows. Incongruity research demonstrates that advertising information that is incongruent with prior expectations or schemas enhances attention and elaborative processing of ads (e.g., Heckler & Childers, 1992; Houston et al., 1987). Therefore, the model predicts that humorous ads attract more attention than non-humorous ads. However, the enhanced attention is mostly devoted to the schema-incongruity in humor and distracts from the processing of humor-unrelated information such as brand names. In fact, the model proposes that the solving of incongruities within humor impairs the explicit memory for brands that are presented in humorous ads.

(Figure 1 about here)
Besides affecting brand attention and memory, humor will also affect brand evaluations. Given the positivity of humor, we predict that a repeated association with humor will form new, positive brand associations (Gawronski & Bodenhausen, 2006). These positive brand associations should become apparent in different ways. They should be manifested in implicit measures of the brand attitude. If the person currently does not consider propositions that conflict with the positive brand association (e.g., awareness of the pairing with humor), it will also become apparent in positive explicit brand attitudes and behavioral choice. Furthermore, the model posits that the distracting property of humor benefits the persuasion process by preventing negative brand associations, for example due to high resistance. The more humor distracts, the better it works to prevent the formation of negative brand associations.

In summary, the model proposes that the persuasive effect of humor follows a two-step process: a cognitive step and an affective step. The process by which humor prevents negative brand associations is a cognitive process, as it is based on an account of limited cognitive resources: humor distracts, and thereby draws on limited cognitive resources that are required to form negative brand associations. The process by which humor creates positive brand associations is an affective process, as it is based on the property of humor to elicit positive affect. These effects of humor on positive and negative brand associations jointly stimulate spontaneous brand choice. In the following section we will provide empirical evidence to support the theoretical model.

**Empirical Evidence for the Model**

**Explicit Versus Implicit Brand Memory**

Previous studies have found consistent evidence that humor increases the attention paid to an ad (e.g., Madden & Weinberger, 1982; Stewart & Furse, 1986; see
also Gulas & Weinberger, 2006; Weinberger & Gulas, 1992). However, the evidence concerning the effects of humor on attention for *products* is far from clear. Some researchers found that humor impairs memory for brands (e.g., Cantor & Venus, 1980; Lammers et al., 1983; Gelb & Zinkhan, 1986). Others, in contrast, found positive influences of humor on memory (e.g., Krishnan & Chakravarti, 2003; Madden & Weinberger, 1982; Stewart & Furse, 1986). These inconsistent findings may be due to the fact that humorous ads as a whole receive more attention than non-humorous ads. When total attention paid to the ad is experimentally controlled, for example when exposure time is fixed (as was the case in most marketing studies) humor distracts attention from brands. However, when total attention paid to ads is freely decided upon by the consumer, as is the case in most real advertising situations, humorous ads tend to receive more attention overall, which compensates for the distraction effect.

These ideas were confirmed by one of our studies (Hansen, Strick, Van Baaren, Hooghuis, & Wigboldus, 2009, Study 1). We presented participants with a questionnaire that contained pictures of characteristic scenes of humorous and non-humorous (control) ads that were frequently broadcasted on TV at the time. The pictures showed characteristic scenes, that is, identifiable moments of the TV ads. We suspected that participants had seen these ads on TV at home, and may recall some of them. We had no control over the total attention that participants had paid to these ads at home. Based on incongruity research we expected enhanced recall of humorous ads compared to control ads (i.e., recall of the humorous storyline or ‘gist’ of the ad, see Schmidt, 1994, 2002). However, the spillover effect from humorous ads to brand recall was expected to be small because most of the enhanced attention is focused on the humor, which goes at the expense of attention for brand names. In contrast, we
expected lower ad recall for control ads because they attract less attention overall, but a bigger spillover effect from ad recall to brand recall. In summary, we expected ad recall to be higher for humorous than control ads, but controlling for ad recall we expected brand recall to be higher for control ads than humorous ads.

In our study, participants were asked for each picture whether they recalled the ad, and if yes, to provide a short description of the storyline. Ad recall was calculated as the percentage of ads for which participants correctly described the storyline. After, participants were asked to recall what product they thought was promoted in the ad. Product recall was calculated as the percentage of ads for which participants could correctly recall the product.

The results showed that ad recall was indeed on average higher for the humorous ads (67%) than the control ads (53%), confirming that humorous ads receive more overall attention. However, absolute product recall did not differ between humorous and control ads (52% and 49%, respectively). Note that these results imply that controlling for ad recall brand recall is higher for control than humorous ads. That is, if a participant recalled a particular control ad her chances of recalling also the product were 92%, but if she recalled a particular humorous ad her chances of recalling also the product were reduced to 77% (see Figure 2). These results are in line with our hypothesis that humor increases attention to ads as a whole, but within ads distracts attention from products.

(Figure 2 about here)

More conclusive evidence of the distractive property of humor was found in an experiment that used an online measure of selective attention, namely eye tracking (Strick, Holland, Van Baaren, & Van Knippenberg, 2010a, Experiment 1). In the eye tracker, all participants viewed pictures of four novel energy drink brands that were...
paired with (i.e., consistently presented next to) humorous or control texts. A first brand was consistently presented next to 15 different humorous texts (e.g., “The spider was turned down for the position as web designer”), a second brand was consistently presented next to 15 different positive but non-humorous texts (e.g., “Isabelle received the gold medal with tears in her eyes.”), a third brand was consistently presented next to 15 different neutral texts (e.g., “Lisa takes the bus every day to get to work and back.”), and a fourth brand was presented next to 15 neutral filler texts. Figure 3 gives an illustration of the stimulus presentation of a brand-humor pairing. Brand-text pairs were presented for 6,000 ms each. In this experiment, and in all other experiments reviewed in this article, the assignment of brands to the humorous and the various control conditions was counterbalanced between participants to avoid confounding among variables. After viewing all stimuli, participants completed an unexpected brand recognition task. Participants viewed a one-by-one presentation of 24 brands (i.e., the four experimental brands and 20 novel brands), and were asked to indicate for each brand as fast and accurately as possible whether they had seen it before.

(Figure 3 about here)

The results are summarized in Table 1. Analysis of the eye tracking data indicated that, compared to both the positive and neutral texts, the humorous texts on average received longer visual attention. The results of the brand recognition task indicated that enhanced attention for humorous texts came at the expense of attention for the paired brands: the average percentage of correctly recognizing “humor brands” was lower than the average percentage of correctly recognizing the “positive brands” and “neutral brands”. The average viewing time of humorous texts was negatively correlated with recognition of the humor brand. Visual attention and brand memory in
the positive and neutral conditions did not significantly differ from each other, which indicates that distraction is unique to humor and is not found in non-humorous positive stimuli (see also Strick, Holland, Van Baaren, & Van Knippenberg, 2010b).

In summary, our studies show that humor distracts from brands, impairing brand recall and brand recognition. Most marketing researchers and advertising practitioners would assume that poor brand memory is detrimental to advertising. After all (they would argue), how can an ad influence brand choice if people forget about the brand? We agree that some form of brand memory is needed for advertising to promote later brand choice. However, this brand memory does not necessarily have to be explicit and conscious. In recent years, advertising research has seen a growing interest in implicit brand memory, which refers to a type of memory in which previous experience with the brand aid in the performance of a task without conscious awareness of this previous experience (Jacoby, 1991; Schacter, 1987; Shapiro & Krishnan, 2001). As an example, assume that one week after being exposed to an ad of the beauty brand “Lady”, a person cannot consciously remember seeing the ad or the brand. Nonetheless, she is more likely to complete the word stem LA_ _ with LADY than with LAND or LACE than a person who has not been exposed to the Lady ad.

There is empirical evidence that tests of explicit and implicit memory show different effects of the same experimental manipulations. For example, divided attention or longer delays between information exposure and memory assessment reduce explicit memory more than implicit memory (Richardson-Klavehn, & Bjork, 1988; Schacter, 1987; Shapiro & Krishnan, 2001). Interestingly, research also indicates that only implicit, not explicit brand memory predicts positive brand
evaluations (Hansen & Wänke, 2009) and brand choice (Shapiro & Krishnan, 2001).
Could it be that humor impairs only explicit but not implicit brand memory?

We examined this question in another experiment (Hansen et al., 2009, Experiment 3). We measured implicit and explicit recognition of brand names one week after exposing participants to 12 humorous and 12 non-humorous print ads. We separated implicit and explicit memory of previously presented brand names by using an adaptation of Jacoby’s process dissociation procedure (for a detailed description of the process dissociation procedure see Jacoby, 1991, 1998). The memory data revealed a significant interaction between type of ad (humorous/non-humorous) and type of memory process. As expected, explicit brand recognition was lower for brands that had been presented in humorous ads than in non-humorous ads, but implicit recognition of brands was similar for both types of ads. These results imply that although humor distracts and therefore leads to lower explicit brand memory, it leaves implicit brand memory intact. Both humorous and non-humorous ads enhance implicit brand memory to the same extent.

This finding is important because for humor to increase positive brand associations that promote brand choice (which our model assumes) some trace of the brand needs to be stored in memory. Previous research indicated that positive attitude change and brand choice require implicit brand memory rather than explicit brand memory (Hansen & Wänke, 2009; Shapiro & Krishnan, 2001). It thus becomes possible that even though humor reduces explicit brand memory, it may increase positive brand attitudes and choice. The finding is also important because it may shed new light on the relation between of distraction and evaluation. Marketing researchers have long been aware of the distracting effect of humor and other creative copy on cognitive processing of brand-related information (termed the “vampire effect” by
practitioners, see Evans, 1988). However, less is known about how distraction relates to attitude change and choice. Many marketing studies investigated either the effect of humor on cognitive variables (i.e., attention, brand memory) or its effect on evaluative variables (i.e., brand attitudes, choice, e.g., Eisend, 2009, 2011; Weinberger & Gulas, 1992). It was assumed, at least implicitly, that explicit brand memory and attitude change go hand-in-hand, and hence, distraction harms persuasion. In contrast, the finding that humor does not harm implicit brand memory suggests that it may lead to positive attitude change despite the distraction.

In the next section we will address the effect of humor on attitude change and choice, and we will discuss how the distracting property of humor interacts with evaluative processes.

**Positive Attitude Change in the Absence of Brand Awareness**

Despite the ongoing debate about the important role of attentional resources (Pleyers, Corneille, Yzerbyt, & Luminet, 2009) and contingency awareness (e.g., Pleyers et al., 2007; Bar-Anan et al., 2010) in EC, there is considerable empirical support for the notion that EC is sometimes not hampered by distraction (Field & Moore, 2005; Walther, 2002), and can ensue in the absence of conscious awareness of the pairing of the stimuli (Aarts, Custers & Holland, 2007; Custers & Aarts, 2005; Fulcher & Hammerl, 2001). Thus, there is reason to assume that despite the distraction, humor could elicit positive associative processes. To study the effect of humor on associative processes we arranged a situation in which products were repeatedly paired with humor, yet in which participants were not intentionally evaluating ads and products (Strick, Van Baaren, Holland, & Van Knippenberg, 2009, Experiment 1). Participants were asked to view a series of full-screen frames displaying two adjacent pages of an opened magazine on a computer monitor. An
illustration of the stimulus presentation in the magazine is presented in Figure 4. Each magazine frame displaying two adjacent pages was presented for 10 seconds. Participants experienced this stimulus presentation as though they were “leafing through a magazine”. To evoke the situation of paying attention to humor instead of brands, we asked participants to focus their attention on pictures in the magazine that were surrounded by a yellow frame, which in fact were always humorous cartoons or non-humorous cartoons (i.e., cartoons with humorous elements removed). Depending on a counterbalance condition, a picture of a novel (but truly existing) energy drink brand (Enorm or Shark) was consistently shown on the same page as a humorous cartoon, whereas a picture of another novel energy drink brand (Shark or Enorm) was consistently shown on the same page as a non-humorous cartoon. This pairing occurred on 10 different pages per brand. Thus, throughout the magazine one brand was 10 times paired humor using 10 different humorous cartoons, and the other brand was paired 10 times with 10 different non-humorous cartoons. After this learning phase we measured participants’ attitudes of the presented brands using an implicit attitude measure. A third, novel energy drink brand (Warp) served as a baseline brand.

(Figure 4 about here)

We expected the unobtrusive pairing with humor to increase brand attitudes. More specifically, based on the notion of independence of attitude positivity and negativity (Cacioppo et al., 1997; Norris et al., 2010) we expected that pairing a brand with humor would lead to enhanced association of this brand with positive affect, not necessarily to reduced association with negative affect. Assuming that positivity and negativity are independent and separable attitude dimensions, pairing a novel brand (i.e., a brand that lacks pre-existing associations) with a purely positive stimulus (i.e.,
humor) should only create new positive brand associations, but should not affect negative brand associations.

Implicit brand attitudes were measured using an evaluative priming task (Fazio, 2001; Fazio, Sanbonmatsu, Powel, & Kardes, 1986), a widely used implicit attitude measure (Gawronski & Bodenhausen, 2006; Hermans, Vansteenwegen, Crombez, Baeyens, & Eelen, 2002). In this task, participants are asked to indicate as quickly and accurately as possible whether a target word (e.g., lovely, mistake) is positive or negative by pressing a left “negative” or right “positive” key. Before each target word appears on the computer screen, a prime is presented (in this case, one of the two experimental brands, the baseline brand, or a filler picture). The task is based on the fact that the primed brands automatically activate an evaluation (Fazio et al., 1986; Fazio, 1995), and in turn facilitate responses to target words that are evaluatively congruent, and inhibit responses to target words that are evaluatively incongruent. For example, if the automatic evaluation of a primed brand is positive, responses on subsequent positive targets will be faster.

We disentangled positive and negative brand associations by means of separately analyzing the response latencies to positive and negative target words of the evaluative priming task. Usually, in an evaluative priming task, the difference score between response latencies to positive and negative targets after priming with an attitude object is used to assess the evaluation of an the attitude object. Separating priming effects on positive and negative target words is a more recent procedure in the field of the evaluative priming procedure (see Robinson & Kirkeby, 2005; Robinson, Ode, Moeller, & Goetz, 2007). However, given our predictions about the independent effect of humor on positive and negative associative processes, it made theoretical sense to separate them.
As expected, the response latencies of the evaluative priming task indicated that priming with the humor brand, compared to priming with the control brand or the baseline brand, speeded up responses to positive target words, indicating positive brand associations (see Figure 5). In contrast, compared to priming with the control or baseline brand, priming with the humor brand did not slow down responses to negative targets, indicating that humor did not reduce negative brand associations. In two follow-up experiments using the same experimental paradigm we consistently found that associating a brand with humor only increases positive brand associations but does not decrease negative brand associations (Strick et al., 2009, Experiment 2 and 3). These results supported the hypothesis that repeated exposure of a brand in the context of unrelated humor, while disguising the particular pairings, elicits an EC effect. More specifically, it leads to more positive, not less negative, brand associations.

(Figure 5 about here)

The results of this experiment also show that the relative difference between humor and control brands is due to the humorous cartoons being evaluated positively rather than the non-humorous cartoons (i.e., cartoons with humor removed) being evaluated negatively, as the control brands were evaluated similarly to a neutral baseline. Moreover, while priming the humor brand speeded up responses to positive targets, priming the control brand did not speed up responses to negative targets.

The specific effect of humor on positive brand associations while leaving negative brand associations unaffected also confirmed our hypothesis that attitude positivity and attitude negativity are independent and may respond differently to experimental manipulations. Note that the lack of effect of humor on negative brand associations is assumed to be limited to no-resistance situations such as this one, as
participants were not aware of being influenced. When resistance is high we hypothesize that humor does affect negative brand associations (see next paragraph).

The results of this experiment provided initial evidence that humor can affect brand attitudes through associative processing, but more evidence is needed to show that unobtrusive pairing with humor corresponds with attitude change according to Case 1 of Gawronski & Bodenhausen’s APE-model. This pattern is indicated when the pairing with humor has a direct effect on implicit brand attitudes, when explicit attitude change and behavioral consequences correspond with the implicit attitude change, and are fully mediated by implicit attitude change. According to the APE-model, this pattern is more likely to emerge if humor affects implicit brand attitudes without contingency awareness. Two follow-up experiments were designed to investigate these issues. Moreover, these experiments tested whether the positive attitude change happens even when humor distracts attention. This would be indicated when the humor brand is evaluated more positively than the control brand even if explicit memory of the humor brand is poorer than that of the control brand.

A follow-up experiment used the same magazine procedure to pair products with humorous or non-humorous cartoons. This time, however, a picture of a ballpoint (or scissors) was paired with humor, while a picture of scissors (or a ballpoint) was paired with non-humor (control condition). After leafing through the magazine and performing a subsequent filler task, participants completed a surprise recognition task. A series of 10 pictures was presented twice, in random order, including the two pictures of the experimental products. To obscure which pictures were of interest, three pictures that had also been repeatedly shown in the magazine served as fillers. Five new (unseen) pictures completed the set of stimuli. Either before or after the
recognition task participants performed the evaluative priming task, using pictures of the ballpoint, the scissors, and filler pictures as primes.

In line with our predictions, the recognition task showed that explicit recognition of the humor product was on average poorer (69%) than explicit recognition of the control product (85%). Analyses of the response latencies of the trials in which the product was correctly identified indicated that the humor product was also recognized slower than the control product. In line with the previous experiment the response latencies of the evaluative priming task indicated that priming with the humor product speeded up responses to positive target words compared to priming with the control product, indicating positive attitude change. Again, priming with the humor product did not slow down responses to negative target words.

These results suggest that pairing a brand with humor, despite the distraction, created positive brand attitudes. However, even though the humor product was recognized less often than the control product, it was still recognized in more than half of the trials. Therefore, it is possible that positive attitudes were only induced in participants who were not distracted by humor. To rule out this possibility, we broke down the analysis of the evaluative priming data for participants who did and did not recognize the humor product. This analysis showed that the evaluative priming effect did not depend on product recognition: a significant positive attitude change was observed even for participants who did not (explicitly) recognize the humor product. Although the level of contingency awareness was not directly measured in this study, these data offer quite convincing support that implicit attitude change was established without contingency awareness. After all, how can a person be aware of a pairing
between a product and particular stimuli without being aware of having seen the product at all?

A final question of this experiment concerned the correspondence of implicit and explicit attitude change. In the final part of the experiment participants were asked to indicate their preference for one or the other product. The pictures of the scissors and ballpoint were presented on the computer screen, and below them a bipolar 7-point scale was presented with the question “Which of these products would you rather take home?” with scale anchors 1 (definitely the scissors), 4 (equally gladly), and 7 (definitely the ballpoint). Irrespective of which product was paired with humor, participants had a higher relative preference for the humor product. Hence, explicit attitude change corresponded with implicit attitude change. Furthermore, a mediation analysis revealed that explicit product preference was fully mediated by positive product associations (see Figure 6). These findings are fully in line with the idea that pairing with humor changes associative processing on which reflective judgments, such as this preference measure, are partly based.

(Figure 6 about here)

Another experiment in this line of research (Strick et al., 2009, Experiment 3) replicated the effects of humor pairing on distraction and implicit attitude change using the same pairing procedure, recognition task, and evaluative priming task, this time using again novel but truly existing energy drink brands: Enorm and Energy Slammers. Depending on counterbalance conditions either Enorm or Energy Slammers was paired with humor (and the other brand paired with non-humor) in the magazine. We replaced the explicit attitude measure by a measure of overt choice behavior. After leafing through the magazine, and completing the recognition task and evaluative priming task in private lab cubicles, participants were led to believe that
the experiment aimed to investigate the influence of energy drink consumption on reaction times. They were escorted to a different room where a stack of Enorm and Energy Slammers cans (in equal numbers) was presented. The experimenter asked the participants to take three sips of energy drink, allegedly to measure its effect on reaction times on a following task. The brand chosen to sip from represented our measure of brand choice. After sipping from the energy drink, the participants were escorted back to their private cubicles to complete another reaction time task to lend credibility to the coverstory.

As expected, participants were significantly more likely to choose the energy drink brand that was unobtrusively paired with humor than the control brand (see Figure 7). Similar to the findings on explicit attitudes, overt brand choice was in line with, and fully mediated by, positive brand associations. Once more, negative brand associations were not affected by the humor pairings and did not predict brand choice.

(Figure 7 about here)

The results of the last three experiments are fully in line with the hypothesis that repeated pairings of a novel low involvement brand with unrelated humorous stimuli affects product attitudes through Case 1 associative processing (Gawronski & Bodenhausen, 2006). Pairing a product with humor directly affected implicit attitude change. Explicit attitude change and behavioral choice corresponded with, and were fully mediated by, implicit attitude change. The attitude change among participants that lacked brand awareness indicated that the implicit attitude change did not depend on contingency awareness.

Furthermore, the results supported the assumption that attitude positivity and attitude negativity are separate by showing that humor affected positive brand associations without affecting negative brand associations. These results contradict
the classic idea that attitude positivity and negativity are endpoints of the same bipolar scale (Cacioppo et al., 1997; Norris et al., 2010). One could ask why is it relevant to disentangle the measurement of attitude positivity and negativity. Although there are several advantages (on which we elaborate in the discussion), one of them became clear to us in the experiments just reviewed: by disentangling these attitude dimensions we uncovered a psychological mechanism that otherwise would have remained hidden. That is, only changes in positive, not negative brand associations mediated brand choice. Without separating positive and negative brand associations, we would not have found the hypothesized mediation effect of implicit attitude change on explicit attitude change and behavioral choice.

The experiments reviewed so far improved our understanding of the role of humor in the development of positive brand associations. However, they have not addressed the impact of humor on negative brand associations. We proposed that resistance is an important source of negative brand associations, and we hypothesized that the negative emotion elicited by resistance forms negative brand associations (Gawronski & Bodenhausen, 2006; De Houwer, et al., 2001). Although we found that distraction does not interfere with the formation of positive brand associations, we hypothesized that it does interfere with the formation of negative brand associations. We will explain these hypotheses below.

**Distraction Prevents Negative Attitude Change**

The scientific study of advertising has focused mainly on the ways to make products and issues more desirable (e.g., Perloff, 2003). Only recently, persuasion researchers have become interested in persuading consumers by reducing their ability or motivation to resist attitude change (for a review, see Knowles & Linn, 2004). Resistance is a form of self-regulation that needs focused attention and therefore
depends on processing motivation and ability (e.g., Wheeler, Briñol, & Hermann, 2007; Wood, Rhodes, & Biek, 1995). There is ample empirical evidence showing that resistance to persuasion is undermined by distraction (e.g., Festinger & Maccoby, 1964; Haaland & Venkatesan, 1968; Petty & Brock, 1981). If humor distracts, and distraction is a good strategy to counter resistance, then humor should be a good strategy to reduce resistance.

Some previous studies indeed indicated that humor counters negative responses to persuasive messages. Cline and Kellaris (1999) showed that humor in ads is especially effective when ads feature weak rather than strong arguments, suggesting that humor can interrupt the critical processing of arguments. Nabi and colleagues (2007) showed that humor can distract from counterarguing a monologue delivered by a political comedian. In research by Skalski et al. (2009) perceivers reported less psychological reactance to a public service announcement when it was presented with humor. Finally, two meta-analyses on humor and persuasion found that humor decreases the level of negative affect and negative cognitions related to ads (Eisend, 2009, 2011).

Although these previous studies showed that humor reduces negative responses while consumers are processing persuasive messages, none of them examined whether humor can prevent the formation of negative brand associations. As we were interested in modelling the effect of humor on associative processing according to the APE-model, and wanted to test our predictions regarding the role of distraction in the formation of negative brand associations, we set out to test how distraction and humor affect positive and negative brand associations.

We did this in Strick, Holland, Van Baaren, and Van Knippenberg (2012, Experiment 2). To manipulate distraction and positive affect separately, we used
humorous, positive, and neutral (control) texts as in Strick et al. (2010b), but added a fourth type of text: brainteasers (i.e., riddles or simple math problems such as “If 6 apples weight 900 grams, 8 apples weigh… 1200 grams”). According to pilot testing these texts fitted a 2 x 2 taxonomy of distraction and positive affect, with humorous texts being distracting/positive, positive texts being non-distracting/positive, brainteasers being distracting/neutral, and control texts being non-distracting/neutral. This stimulus set allowed us to separately test the role of distraction and positive affect on brand associations. The brand stimuli were pictures of 12 novel peppermint brands taken from Strick, Holland, and Van Knippenberg (2008).

Half of the participants were exposed to a resistance manipulation that combined several sources of resistance. They received a description of the study, which explained that the experiment was conducted in collaboration with a big food manufacturer. This manufacturer was introduced as a money-grubber, who often turned to illegitimate means such as clandestine advertising to make money (distrusted source, Knowles & Linn, 2004), and who thinks that students are easy targets to manipulate (susceptibility, Sagarin, Cialdini, Rice, & Serna, 2002). The experiment allegedly tested the latter assumption (forewarning, Wood & Quinn, 2003). Participants in the control condition received an equally long description that explained that the experiment tested the effect of stimulus colors and design on ease of processing.

After the resistance or control manipulation, 3 brands were paired with five different humorous (i.e., distracting/positive) texts, 3 other brands were paired with five non-distracting/positive texts, 3 other brands were paired with five brainteasers (i.e., distracting/neutral texts), and the last 3 brands were paired with five non-distracting/neutral texts, for a total of 60 pairing trials. We paired the stimuli by
presenting them next to each other in the centre of the computer screen. After the learning phase, we measured distraction with the surprise recognition task and brand associations with the evaluative priming task, similar to Strick et al. (2009).

This time we also included a contingency awareness test after the evaluative priming task. The task was designed after the four-picture recognition test procedure by Walther and Nagengast (2006). Participants were presented one-by-one with the peppermint brands in their original size on the left side of the screen with four texts on the right. The instruction beforehand asked participants to select the text that had been paired with the brand. One of these texts was the correct text, a second text was of the same valence as the correct text but differed on distraction, a third text was of a different valence as the correct text but the same on distraction, and the fourth text was of a different valence and also differed on distraction. The contingency awareness test included 60 trials.

Our expectations for the positive brand associations were similar to Strick et al. (2009). Pairing a brand with humor should create positive brand associations but should leave negative brand associations unaffected. This effect on positive brand associations was expected to be similar for brands paired with humor (i.e., distracting/positive) and non-distracting/positive texts as they are equally positive and this effect was found to be independent of distraction in our previous studies.

Moreover, we assumed that positive brand associations would be equally formed in the resistance and control condition. Assuming that resistance is a source of purely negative affect that is unrelated to positive affect, we expected resistance to impact negative brand associations only, but to leave the forming of positive brand associations unaffected.
Our expectations for the negative brand associations were different. We expected our induction of resistance to create negative brand associations. However, these negative brand associations were expected only in the non-distracting conditions (non-distracting/positive and non-distracting/neutral conditions). As distraction reduces resistance, we expected less negative brand associations in the humorous (i.e., distracting/positive) and brainteasers (i.e., distracting/neutral) conditions. Moreover, we expected the reduction in negative brand associations to be mediated by distraction, which would be indicated by lower brand recognition.

The recognition data replicated previous findings and showed no differences between the resistance and control conditions: in both conditions, pairing brands with distracting texts (both humor and brainteasers) impaired brand recognition. In line with our predictions, the evaluative priming data showed that resistant and control participants also reacted similarly to the pairing of brands with positive texts (both humor and non-distracting/positive texts): it led to enhanced positive brand associations.

In contrast, and as expected, resistant and control participants reacted differently to the pairing of brands with distracting versus non-distracting texts (see Figure 8). Compared to the control participants, resistant participants showed increased negativity towards brands associated with non-distracting texts (both non-distracting/positive as non-distracting/neutral texts), indicating that resistance led to negative brand associations when no distraction was provided. Crucially, these differences between the resistance and control condition were not observed for brands associated with distracting texts (both humorous texts and brainteasers), suggesting that distraction prevented the formation of negative brand associations. Additional analyses supported the hypothesis that distraction mediated the relation between
resistance and the prevention of negative brand associations: the more the humorous
texts and brainteasers distracted from brands (indicated by a lower brand recognition
score), the better they prevented negative brand associations.

(Figure 8 about here)

The contingency awareness test showed that on average participants assigned
28% brands to the correct text, which was marginally better than chance. Crucially,
individual differences in contingency awareness did not correlate significantly with
the formation of positive or negative brand associations. Stahl et al. (2009) recently
found that EC effects correlated with awareness of the valence of the paired stimuli
rather than to awareness of the specific stimuli. We also calculated the extent to which
participants were valence aware, that is, to what extent they were aware that brands
were paired with positive (humorous or positive non-humorous) texts or neutral
(brainteasers or neutral) texts. Valence awareness was on average 52%; not different
from chance level. Individual differences in valence awareness did not correlate with
the strength of positive or negative brand associations.

The results of this experiment confirm various aspects of our associative
processing model of humorous advertising. First, replicating the previous
experiments, association of a brand with humor led to the formation of positive brand
associations. Second, association of a brand with humor prevented the formation of
negative brand associations otherwise formed by resistance. Third, the level of
distraction during attitude formation mediated the relation between humor and the
prevention of negative brand associations. The results also provided more conclusive
support for the hypothesis that humor affects brand attitudes without contingency
awareness.
In a follow-up study (Strick et al., 2012, Experiment 3) we found a similar pattern of results when we measured, instead of manipulated, participants’ resistance level, and included this as a continuous factor to the analyses. This provides an important extension to the previous experiment because research demonstrates clear individual differences in the tendency to react with resistance to influence (Briñol, Rucker, Tormala, & Petty, 2004). Another aim of this experiment was to investigate whether the preventive effect of distraction on brand negativity would generalize to overt brand preference. Although we found evaluative priming results in the previous experiment, it is important to show that these basic cognitive processes also affect overt consumer behavior (Baumeister, Vohs, & Funder, 2007).

All participants received an instruction that was less offensive than the resistance manipulation of the previous experiment. It simply informed participants that the experiment aimed to change the participants’ opinions about products through conditioning, just like in advertisements. Because this instruction included only a single resistance manipulation (forewarning of being influenced, Wood & Quinn, 2003) we expected considerable resistance in some participants, but less in others.

After the instruction, participants entered the pairing phase. Distraction and positive affect were this time manipulated using pictorial stimuli instead of texts (for representative examples of the stimuli see Figure 9). We used 15 humorous (i.e., distracting/positive) pictures, 15 non-distracting/positive pictures (taken from the International Affective Picture System [IAPS, Lang, Bradley, Cuthbert, 2001] 15 distracting/neutral pictures (i.e., neutral IAPS pictures with brainteasers), and 15 non-distracting/neutral pictures. Examples of the pictures can be seen in Figure 9. The brand stimuli were pictures of 4 novel energy drink brands. Each brand was paired with all pictures of a single category, resulting in 60 pairing trials.
After the pairing phase and a subsequent 3-min filler task, overt brand
preference was measured using a coupon choice task (Bushman, 2005; Strahan,
Spencer, & Zanna, 2002). Participants were asked to imagine that the producer of the
energy drink brands offered them a total of eight discount coupons each worth 50
eurocents. They could spend the coupons on the four brands, and they were asked to
indicate how many coupons they would like to spend on each brand.

Next, participants indicated their level of resistance by answering the questions
“During the first part of this experiment, to what extent did you feel resistant to be
influenced?” on a seven-point scale, ranging from 1 (not at all) to 7 (very much). This
indicated considerable variance in resistance, $M = 3.39$ ($SD = 1.58$). Finally,
contingency awareness was measured using an adapted version the four-picture
recognition test. This time, participants were informed that the brands had been
systematically paired with one of four categories of pictures (humorous pictures; non-
humorous positive pictures; brainteasers; neutral pictures) and were asked to assign
each brand to the correct category.

The results of the coupon choice task indicated, as expected, that the
participants overall spent more coupons on brands paired with positive pictures. This
effect was uncorrelated with the level of resistance. Furthermore, as expected, the
level of self-reported resistance did correlate with a higher preference for brands
paired with distracting pictures (i.e., humor and brainteasers) relative to brands
associated with non-distracting pictures (i.e., non-humorous positive and neutral
pictures). This result is in line with the hypothesis that distraction prevents negative
brand associations. Most importantly, we found evidence that these stimulus pairings
affect overt brand preference in a similar way as they affect brand associations.
In the contingency awareness test participants assigned 19% of the brands to the correct pictures, which did not differ from chance level. Contingency awareness did not correlate with the level of reported resistance, nor with the EC effect, providing additional evidence that humor affected brand preference without contingency awareness.

These results suggest that adding some distraction in real persuasion situations, which we propose usually involve some level of resistance, may enhance the effectiveness of ads. In a set of field experiments (Strick, Veling, Van Baaren, & Holland, 2012, Experiment 3), we tested the effects of distraction and positive affect in a field setting. We set up a one-week flyer campaign aimed at recruiting participants for our psychology lab, and used humorous cartoons and brainteasers as distracters. To manipulate distraction and positive affect, we created four alternative versions of flyers using the 2 x 2 taxonomy of distraction and positive affect. The humorous (i.e., distracting/positive) version featured a humorous cartoon. The three control conditions were constructed by replacing the caption of the cartoon by a non-distracting/positive caption, a distracting/neutral caption (i.e., a brainteaser), or a non-distracting/neutral caption. Also mentioned on the flyers in capital letters was a request to bring the flyer to the lab when the person decided to participate. This request was needed to count the number of participants recruited by each type of flyer. Each day of the week a new set of flyers was used that featured different cartoons and control versions.

The effectiveness of each flyer was determined by calculating the percentage of participants that were recruited through each type of flyer. During the week of the flyer campaign, we asked each and every participant who entered the lab if she was recruited on the basis of a flyer. If the answer was yes, she was asked to hand over the
particular flyer. If she forgot to bring it, she was shown examples of the four types of flyers that were used on that particular day, and was asked to indicate which flyer she had had.

As expected, the flyers with a humorous (i.e., positive/distracting) cartoon attracted the most participants to the lab: 13% of the participants during the campaign week was recruited through a humorous flyer. After followed the distracting/neutral (8%) condition, the non-distracting/positive (6%) condition, and finally the non-distracting/neutral (6%) condition. Statistical analyses indicated that both distraction and positive affect contributed to the success rate of the flyers. These results corroborate the idea that both distraction and positive affect in humor can boost ad effectiveness in real advertising situations. Distraction decreases attitude negativity, and positive affect increases attitude positivity.

**Discussion**

The aim of the present article was to present a model that explains the effects of repeated exposures to humorous advertising on positive and negative brand associations and brand choice. We reviewed a research program of multiple lab and field experiments that support the various premises of the model. In short, the predictions of our model on associative processes in humorous advertising can be summarized as a two-step process: First, the inherent incongruity in humor draws attention to ads as a whole, but within the ad attention is selectively drawn to humor, which comes at the expense of attention for the advertised brand, leading to impaired explicit brand memory. This impairment of explicit brand memory does not necessarily harm persuasion, because a) humor does not impair implicit brand memory, which is a better predictor of persuasion than explicit brand memory; and b) distraction prevents the formation of negative brand associations otherwise formed by
potential resistance. Second, the positive emotion engendered by humor increases positive brand associations. Both the strength of the positive and negative brand associations, in turn, guide subsequent spontaneous brand choice. Thus, humor promotes brand choice because it forestalls the development of negative brand associations due to its distractive properties, and engenders positive brand associations due to its positive emotional outcomes.

**Merits of the Model to Research on Humor in Advertising**

Marketing research typically considers humor a peripheral cue in advertising, which implies that its effects on brand attitudes are only weak and short-lived. Instead, we tested the hypothesis that humor can function as a positive stimulus in an associative process. We showed that repeated pairing of a brand with humor leads to a direct implicit attitude change, which likely denotes a change in the underlying associative structure of the brand attitude. This implies that humor may have a more long-term effect on brand attitudes than previously assumed. Changes in the associative structure of attitudes are generally more stable than attitude changes without changes in associative structure (Gawronski & Bodenhausen, 2006). Indeed, some researchers concluded that EC effects are resistant to extinction (De Houwer et al., 2001) and show spectacular stability over time (Baeyens, Crombez, Van den Bergh, & Eelen, 1988; Levey & Martin, 1975). Note, however, that we cannot draw strong conclusions about the long-term effect, as we have not tested it in our experiments.

The stability of the attitude change is not only important to determine its long-term effects, but also to determine its possible effects on behavioral choice. After all, ads can only affect brand choices if the attitude change lasts until the consumer actually steps into a store. It was our prediction that repeated pairings of a brand with
humor forms brand associations that guide behavioral choice. Indeed, our experiments showed that the pairing with humor stimulated behavioral choice in various situations. Marketing research generally concluded that brand-unrelated humor is not persuasive on a behavioral level. Hence, a principal contribution of our research is in demonstrating that the persuasive impact of humor was previously underestimated.

The contrast between conclusions drawn in marketing research and in our own work can also be explained by using a more disguised experimental approach. One difference was that the purpose of the research to investigate advertising was usually quite obvious in marketing studies. Under such circumstances research participants are likely to pay more-than-usual attention to the ads and discount the impact of irrelevant affective cues such as humor as irrelevant to their judgments. This was less likely in our studies because we often disguised the true purpose of the study. Furthermore, marketing research on humor in advertising relied exclusively on self-report measures to assess attitudes and purchase intentions. Explicit and implicit attitudes may be dissociated (e.g., Gawronski & Strack, 2004; Nosek, 2005; Olson & Fazio, 2006). This suggests that solely relying on explicit attitude changes may lead to premature and sometimes erroneous conclusions.

Limitations of our Research

We have mentioned that our model is only relevant to advertising novel, low involvement products and brand-unrelated humor. A fourth limitation of our model is that we always paired the brands with different humorous stimuli instead of repeating the same humor. This limits the relevance of our model for humorous ads campaigns that repeat the same humorous ad over and over again. Because our model proposes that the distracting effect of humor is based on incongruity-resolution, it is likely that the distraction declines with repeated exposures to the same joke. Moreover, with
repeated exposures the funniness of the joke likely wears off and no longer produces positive attitude changes (see Gelb & Zinkhan, 1985; Zinkhan & Gelb, 1990). This implies that a frequent change of creative copy within a humorous ad campaign is preferred to repeating of the same ad over and over again. Note that the former is preferred over the latter also for other reasons. Research shows that associating a brand with different stimuli that evoke a similar affective response leads to a direct brand-affect association whereas associating a brand repeatedly with the same affective stimulus leads to an indirect brand-affect association via the brand-stimulus association (Sweldens et al., 2010). Direct brand-affect associations are more robust than indirect brand-affect associations because they are resilient to factors that weaken the brand-stimulus association (e.g., memory decay, changes in stimulus evaluation).

Our research mirrored previous research by showing that the pairing of a brand with unrelated humor led to generally poorer brand memory. It is likely that this effect on explicit memory is moderated by the brand-relatedness of humor. Indeed, marketing studies imply that humor’s attention-gaining property can facilitate recall of the brand when the humor is linked to the brand. For example, Krishnan and Chakravarti (2003) demonstrated that humor that is relevant to the brand claims positively influences memory for brand claims. In contrast, when humor was unrelated to the brand it was more likely to impair brand recall. In the latter case, all people generally recalled was the funny storyline of the ad.

Suggestions for Future Research

Brand-related humor likely supports brand recall better than brand-unrelated humor. Future research, however, should investigate whether brand-related humor is also more persuasive than brand-unrelated humor. We regard this conclusion not self-evident. The assumption among marketing researchers and practitioners that brand
recall predicts persuasion is longstanding and pervasive, but recent research and theorizing suggests they are actually uncorrelated (Heath & Feldwick, 2008; Heath & Nairn, 2005; Till & Baack, 2005). What differs between related and unrelated humor, however, is that related humor provides information that can be rationally linked to the advertised brand, and therefore may serve as a rational argument in propositional reasoning (Gawronksi & Bodenhausen, 2006). This implies that a pairing with related humor could evoke a direct explicit attitude change depending on a subjective assessment of the strength of the humor as an issue-relevant argument. If the humor (in combination with other considered propositional information) is accepted as a valid reason to like the brand, this should lead to a direct (positive) explicit attitude change. However, if the humor is rejected as a valid reason to like the brand, a direct explicit attitude change fails.

It is important to note that the possible direct effect of related humor on explicit brand attitudes does not necessarily change the associative process we assumed in our model. According to the APE-model, associative and propositional processes take place concurrently and may have similar or dissociated outcomes, depending on the circumstances. The positive associative process described in our model does not depend on the outcome of the propositional process, but on the presence or absence of positive affective stimulus that provides a basis for the EC effect. Thus, as long as the humor itself evokes positive affect it provides a basis for presumed associative process.

Another question that should be answered in future research is whether humorous ads could affect deliberate consumer choices through the proposed associative process. Deliberate choices are characterized by explicit thoughts about the true merits of a brand rather than the reliance on automatic evaluations, which
reduces the change that implicit attitudes directly guide behavior (Fazio & Towles-Schwen, 1999). However, there is reason to believe that forming positive brand associations may affect deliberate decisions indirectly. As explained before, the APE-model proposes that explicit attitude changes may follow from implicit attitude changes when a person accepts the propositional implication of the implicit attitude. Research on persuasion has shown that positive primary responses to stimuli can bias the direction of critical thought (Chaiken & Maheswaran, 1994). Furthermore, consumers sometimes consider their affective reactions to brands as a valid argument in the decision process (Darke, Chattopadhyay, Ashworth, 2006). Indeed, recent research shows that affective responses to brands quite pervasively affect decisions, even if consumers are highly motivated to make accurate decisions, and even when conflicting factual brand information is presented (Dempsey & Mitchell, 2010).

Along these lines, sprinkling an issue-irrelevant joke here and there may increase a person’s or a brand’s appeal. Political campaigns, for example, may benefit from this as politicians displaying a good sense of humor are liked more and are considered more competent (Martin, 2007), and positive personality estimates have a significant impact on election outcomes (e.g., Caprara & Zimbardo, 2004; Todorov, Mandisodza, Goren, & Hall, 2005). It seems reasonable to assume, however, that issue-relevant humor has a greater impact on political voting than issue-irrelevant humor. A number of scientific studies have concluded that relevant humor in speeches of political officials can serve as a powerful rhetorical tool (e.g., Meyer, 1990; Speier, 1998; Stewart, 2011). Moreover, research shows that – especially in the U.S. – relevant humor has a profound influence on the perceptions of politics through politically flavored late night comedy shows (Kloer & Jubera, 2000; Young, 2008). For example, the widespread cynical joke about President Nixon “Would you buy a
used car from this man?”, which is said to have greatly hurt his 1960 election campaign (Janus, 1981), was so powerful because it made an actual point (i.e., that Nixon was untrustworthy).

**Concluding Remarks**

Although this article deals with the effects of humor in advertising, we would like to encourage the study of associative processes in other domains of consumer research as well. In the past decade the study of consumer behavior has witnessed increasing attention to the possibility that various automatic and implicit processes drive consumption behavior. Yet, the empirical work on advertising is still dominated by explicit approaches, in which participants are intentionally evaluating the persuasiveness of ads. This experimental approach is not representative for the way in which consumers process ads and brands in daily life. In many cases, the impact of ads is not based on effortful reasoning. Furthermore, people are often unable to introspect how advertising influences their attitudes and behavior.

Although consumers invest minimal attention to ads, and are generally somewhat sceptical about them, they may still be influenced. Advertising often influences consumers “underneath the radar” by consistently placing their brands in the context of pleasant, happy, exciting, or indeed humorous experiences. These associative processes may influence people without them being aware of it. Considering that much of the associative process in advertising goes by unnoticed, marketing researchers should combine explicit research methods with implicit measures and behavioural observations.
References


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Footnotes

1 According to the APE model, Case 1 could also emerge when humor leads to a change of pattern activation of pre-existing brand associations, but this explanation is precluded by our use of novel brands that, by definition, lack pre-existing brand associations.

2 We reasoned that ad recall was a necessary condition for product recall. Indeed, it was never that case that participants could recall the product without recalling the ad.
Table 1

*Average Viewing Times of Texts and Percentages of Brand Recognition as a Function of Text Type in Strick et al. (2010a) Experiment 1*

<table>
<thead>
<tr>
<th>Text Type</th>
<th>Viewing Time in ms</th>
<th>Brand Recognition in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>4345ₐ (555)</td>
<td>83ᵥ (38)</td>
</tr>
<tr>
<td>Positive</td>
<td>4284ₐ (502)</td>
<td>88ᵥ (33)</td>
</tr>
<tr>
<td>Humor</td>
<td>4933ₐ (588)</td>
<td>64ₐ (48)</td>
</tr>
</tbody>
</table>

*Note.* SD in parentheses. Means that do not share subscripts differ within columns at $p < .05$. 
Figure 1. Schematic representation of the effect of humor in ads on brand associations and choice.
Figure 2. Percentage of recalled ads and products in Hansen et al. (2009, Study 1).
Figure 3. Illustration of a brand-humor pairing presented in the eye tracker in Strick et al. (2010a, Experiment 1).
Figure 4. Illustration of the pairing of a brand with humor and non-humor in the “magazine paradigm” used in Strick et al. (2009, Experiments 1-3).
Figure 5. Mean reaction times in evaluative priming task to positive and negative target words after priming with the humor brand, control brand, or baseline brand in Strick et al. (2009, Experiment 1). Error bars represent standard errors of the means.
Figure 6. Path analyses illustrating the mediating role of positive product associations on the relation between humor pairing and product choice (Strick et al., 2009, Experiment 2). The parenthetic numbers represent the relation between humor pairing and product choice before controlling for positive product associations. * $p < .05$
Figure 7. Number of times the Enorm and Energy Slammers brands were chosen in the Enorm-humor and Energy Slammers-humor conditions (Strick et al., 2009, Experiment 3).
Figure 8. Mean reaction times in evaluative priming task to negative target words after priming with brands associated with distracting or non-distracting texts in the resistance and control condition (Strick et al., 2012, Experiment 2). Error bars represent standard errors of the means.
Figure 9. Examples of the stimuli used to manipulate distraction and positive affect in Strick et al., 2012 (Experiment 3).