Being Funny is Not Enough: The Influence of Perceived Humor and Negative Emotional Reactions on Brand Attitudes

Caleb Warren

Marketing Department, University of Arizona, Tucson, AZ, USA

Erin Percival Carter

Marketing Department, University of Maine, Orono, ME, USA

A. Peter McGraw

Marketing Department, University of Colorado Boulder, CO, USA

Correspondence should be addressed to Caleb Warren (PhD at University of Colorado Boulder) is an Assistant Professor in the Marketing Department, Eller College of Management, University of Arizona, 1130 E. Helen St. #320X, Tucson, AZ, 85712-0108, calebwarren@arizona.edu.

The authors thank Martin Schreier, Oleg Urminsky, Dan Bartels, Jonathan Levav, Meg Campbell, John Lynch, and Mark Ratchford for feedback on the project. We also thank J. J. Chen, Matt Farmer, and the Humor Research Lab (HuRL) for research and editorial assistance.

Being Funny is Not Enough: The Influence of Perceived Humor and Negative Emotional Reactions on Brand Attitudes

Abstract

Humor is a common goal of marketing communications, yet humorous advertisements do not always improve consumer attitudes towards the advertised brand. By investigating a potential downside of attempting to be humorous, our inquiry helps explain why humorous ads can fail to improve, and potentially even hurt, brand attitudes. We show that advertisements intended to be humorous also risk causing negative emotions independent of humor appreciation. We investigate the link between humor appreciation, negative emotional reactions, and brand attitudes using four samples of advertisements. We find that attitudes toward an advertised brand depend less on the degree to which the ad seems funny and more on the degree to which the ad triggers negative emotional reactions. Consequently, whether an advertisement helps or hurts brand attitudes depends on whether the ad decreases or increases consumers' negative feelings independent of perceived humor.

Keywords: Humor, Emotion, Attitudes, Advertising, Branding

Advertisers regularly try to be humorous as a means to attract consumers' attention, enhance memory, and increase liking (Eisend 2011; Gulas and Weinberger 2006; Hornik, Ofir, and Rachamim 2017; Weinberger, Gulas, and Weinberger 2015). Humorous advertising can elevate brands, such as Dollar Shave Club, from relative obscurity to competitive relevance. Humorous advertising is also a core part of the marketing tactics for established brands (e.g., Budweiser, Burger King, Old Spice, Geico). Research estimates that commercial, non-profit, and political organizations spend at least $20 billion each year trying to amuse audiences (Beard 2008). This estimate underreports the prevalence of humor in marketing communications, as it does not include instances of humor in interviews with CEO's, shareholder letters, press releases, and social media (Barry and Graça 2018; Söderlund and Oikarinen 2018; Tucker 2014).

Humorous advertisements are memorable and effectively engage consumers (Eisend 2018; Gulas and Weinberger 2006). However, a broad view of the results in the literature reveal that humorous advertisements do not always improve consumers' attitudes towards the advertised brand (Chattopadhyay and Basu 1990; Gulas and Weinberger 2006; Martin 2010). We propose that one reason why past studies have found inconsistent effects of humorous advertising on brand attitudes is because most of these studies have only measured whether an ad is humorous without considering the extent to which the ad also evokes negative reactions. Yet, as anyone who has told a dirty joke knows, humorous stimuli differ not only in the extent to which they are funny, but also in the extent to which they elicit negative feelings, like anger, disgust, or embarrassment (Ruch 1988; Ruch and Forabosco 1996).

Across four samples of print and television advertisements, we find that attitudes towards an advertised brand depend more on whether or not the ad triggers negative reactions than on whether or not the ad is humorous. Our inquiry suggests that in order to understand a humorous

ad's effects on brand attitudes, advertisers should measure consumers' negative reactions in addition to whether the ad is funny.

Humorous Advertising

Consumers like comedy, and thus, brands try to be funny. The pursuit of humor is worthwhile in many ways. Humorous ads typically are memorable, attract attention, induce positive emotion, create buzz, and entertain customers (Eisend 2009; Griese et al. 2018; Gulas and Weinberger 2006), but do they improve attitudes towards the advertised brand? The answer to this question has important theoretical and practical implications. Understanding how humorous advertisements influence brand attitudes is important because a purpose of advertising is to persuade consumers to like the advertised brand (Hornik et al. 2017; Park et al. 2010). Brand attitudes influence consideration sets, purchasing behavior, and receptivity to a range of marketing tactics, including brand extensions and persuasion attempts (Chattopadhyay and Basu 1990; Herr and Fazio 1993).

We define a humorous advertisement as an advertisement that consumers, on average, consider funnier or more amusing than a typical advertisement. We refer to consumers' assessment of the extent to which an ad is funny and amusing as perceived humor. Brand attitudes refer to the extent to which people, on average, like or dislike a brand (Eagly and Chaiken 1993; Herr and Fazio 1993).

Several studies have tested whether humorous advertisements improve brand attitudes by comparing customers' responses to a brand after exposing them to either a humorous version of an ad or a non-humorous version of an ad for the same brand (e.g., Basu and Chattopadhyay 1990; Cline and Kellaris 1999; Zhang 1996). Meta-analyses show that, on average, the humorous ads in these studies tend to improve brand attitudes relative to non-humorous ads (Eisend 2009;

2011; Hornik et al. 2017). However, the relationship between humor and brand attitudes varies. In some studies, a humorous ad improved brand attitudes relative to a less humorous ad (e.g., Michaels 1997), but in other studies it does not (e.g., Belch and Belch 1984; Duncan and Nelson 1985). Moreover, in some studies, a humorous ad improved brand attitudes for some consumers but not others (Chattopadhyay and Basu 1990; Zhang 1996). Scholars have thus suggested that the relationship between humorousness and brand attitudes depends on a number of factors, including the type of advertised product (Gulas and Weinberger 2006), the strength of the persuasive arguments in the message (Cline and Kellaris 1999), and whether the person viewing the advertisement is likely to think carefully about the message (Zhang 1996) or already holds a favorable attitude towards the advertised brand (Chattopadhyay and Basu 1990).

We propose that researchers have not tested another important factor that influences whether or not a humorous ad increases brand attitudes relative to a non-humorous ad: the extent to which the ad elicits negative emotional reactions independent of whether it seems funny.

Humor Attempts Can Cause Positive and Negative Responses

Historically, the advertising literature has predominantly focused on how humor helps advertisers often without explicitly mentioning how humorous ads might hurt consumer perceptions (Eisend 2009; Beard 2008). This approach is consistent with a pervasive "humor as halo" perspective present in the marketing literature (McGraw, Warren, and Kan 2015). Consistent with a focus on benefits without considering costs, most advertising studies measure consumers' affective reactions to humorous ads on a single continuum from *not funny* to *funny* without also measuring negative emotional reactions to the advertisement.

Recently, however, advertising research highlights how many humorous advertisements include a negative element, including violent, stereotypical, and potentially offensive content

(Blackford et al. 2011; Eisend, Plagemann, and Sollwedel 2014; Forster and Brantner 2016; Swani, Weinberger, and Gulas 2013; Yoon and Kim 2014). This work converges with research in the behavioral sciences and humanities, which illustrates that humor is closely associated with negative or otherwise threatening stimuli (Warren and McGraw 2015, 2016a). Scholars have argued that perceived humor can be triggered by disparagement (Ferguson and Ford 2008), the release of repressed, anti-social drives (Freud 1928), something demeaning happening to someone else (Gruner 1997), an initial impression being reinterpreted as less valued than it first seemed (i.e., diminishment; Wyer and Collins 1992), or something that threatens one's sense of how things should be (i.e., a violation; McGraw and Warren 2010; Warren and McGraw 2015; Veatch 1998).

The close link between threat and humor suggests that a stimulus that is intended to amuse may also evoke negative emotional reactions (e.g., Friedman and Kuipers 2013; McGraw and Warren 2010; McGraw et al. 2015). Indeed, humor researchers have long recognized that humor appreciation involves two orthogonal responses: perceived humor (i.e., funniness, amusement) and negative reactions (Ruch 1988; Ruch and Forabosco 1996). Negative reactions are a general category of unpleasant feelings, including offense, disgust, embarrassment, anger, annoyance, or boredom. Like perceived humor, negative reactions vary along an intensity continuum from non-existent to mild to severe.

Importantly, perceived humor and negative emotional reactions are not opposites but rather independent (Ruch 1988; Ruch and Forabosco 1996). A stimulus (person, joke, advertisement, etc.) can evoke perceived humor, negative emotional reactions, neither, or even both. For example, tickling tends to elicit both laughter and feelings of discomfort (Harris and Alvarado 2005), just as scatological comedy and harmless, immoral behavior can trigger both

amusement and disgust (Hemenover and Schimmack 2007; McGraw and Warren 2010). The observation that perceived humor and negative reactions are independent suggests that measuring humor on a single continuum from *not funny* to *funny* is problematic because it obscures (a) whether an advertisement judged "not funny" elicits a neutral or negative response, and (b) whether an advertisement judged "funny" elicits strictly positive feelings or mixed feelings of humor and negative emotion (Larsen et al. 2001; McGraw and Warren 2010).

Revisiting the Relationship Between Humorous Advertising and Brand Attitudes

Assessing the extent to which an advertisement evokes negative emotional reactions is important because negative feelings influence brand attitudes (Holbrook and Batra 1987), especially when people viewing the ad are not carefully thinking about the message (Petty and Cacioppo 1986). Thus, we hypothesize that the effect of an advertisement on brand attitudes depends not only on whether the ad is perceived to be humorous, but also on whether it elicits negative reactions. Although recent advertising studies note the increasing use of negative elements (e.g., violence, offensive content) in humorous advertisements, these studies assess how different people (e.g., male vs. female) respond to violence or how different types of violence (e.g., high vs. low intensity) influence consumers' responses to the ad (Blackford et al. 2011; Kim and Yoon 2014; Swani, Weinberger, and Gulas 2013). Because they did not compare humorous ads involving violence to non-humorous ads, these studies do not examine (a) the relationship between humor and negative emotional reactions across a broad sample of advertisements, and (b) whether negative emotional reactions explain variance in brand attitudes over and above the effect of perceived humor.

Our studies test the following hypotheses. One, the extent to which consumers perceive humor and the extent to which they experience negative emotional reactions to advertisements

will be independent, rather than inversely related. Two, negative emotional reactions will be significantly related to brand attitudes. Three, measuring negative reactions independent of perceived humor will help explain (a) additional variance in brand attitudes, and, consequently (b) conflicting findings in the advertising literature. As an example, consider two advertisements used in prior research. One ad for chewing gum shows a statue of Julius Caesar blowing a large bubble (Cline and Kellaris 1999). The other ad for a toothbrush begins with a joke in which a dentist detects decay in a female patient and asks her, "What's a place like this doing in a girl like you?" (Brooker 1981). Both ads are more humorous than a control ad, but the gum ad results in more favorable brand attitudes whereas the toothbrush ad does not (Brooker 1981; Cline and Kellaris 1999). We examine whether being humorous appears to improve brand attitudes in the gum ad (and others like it) but not in the toothbrush ad (and others like it) because the latter ad simultaneously increases negative reactions in addition to perceived humor. In other words, we argue advertisers need to think not just about whether an ad is funny, but also about whether it evokes negative reactions, as ads that are offensive (or disgusting, embarrassing, upsetting, etc.) may end up hurting the advertised brand even when consumers also think the ad is funny.

Overview of Studies

To investigate how humorous advertising influences brand attitudes, we examine the relationship between perceived humor, negative emotional reactions, and brand attitudes across four samples of advertisements. We expected to conceptually replicate research on humor appreciation in jokes (e.g., Ruch 1988; Ruch and Forabosco 1996) by showing that advertisements can elicit negative reactions independent of whether or not they are considered funny. Furthermore, we predicted that negative reactions would be related to brand attitudes and that accounting for these reactions would explain variance in resulting brand attitudes over and

above what is explained by perceived humor alone. Finally, we expected that accounting for negative reactions would help explain why some humorous ads appear to help brand attitudes while others appear to hurt them.

We sample advertisements (rather than strictly sampling participants) in order to address a concern associated with comparing specific humorous and non-humorous advertisements, the methodological approach taken by previous studies reporting a relationship between humor and brand attitude (e.g., Chattopadhyay and Basu 1990; Cline and Kellaris 1999; Duncan and Nelson 1985; Gelb and Picket 1983; Zhang 1996). A limitation of comparing a specific humorous ad with a specific non-humorous ad is that both humorous and non-humorous ads vary considerably along dimensions other than the extent to which the ad is humorous. Consequently, one humorous ad may help brand attitudes relative to a non-humorous ad but a different humorous ad may hurt brand attitudes (see Warren and McGraw 2016b). Sampling across advertisements affords a more general test of the relationship between perceived humor, negative reactions, and brand attitudes than studies that examine the relationship using only one ad or specific pairs of ads (Wells and Windschitl 1999).

Instead of attempting to identify ads that were categorically humorous or not humorous, we treated the extent to which an ad is humorous as a subjective, continuous variable by measuring the extent to which a sample of respondents consider the ad to be funny and amusing (i.e., perceived humor). We used a similar method to measure negative reactions and attitudes towards the advertised brands. We could thus assess the relationship between the extent to which an ad seemed humorous (on average), the extent to which it evoked negative reactions (on average), and its influence on brand attitudes (on average) across both advertisements and respondents (see Judd, Westfall, and Kenny 2012).

It is impossible to acquire a true probabilistic sample that allows for statistical generalization across both different types of ads and consumers (much less across time; Lynch 1982). The best evidence that results from any study will generalize is to show that the results are similar across different samples that vary along a variety of dimensions (Cook and Campbell 1979; Lynch 1982). Therefore, we tested our hypotheses across advertisements that varied in terms of sampling criteria (Google Image searches vs. marketing students vs. the Super Bowl vs. prior academic studies), ad medium (print vs. television), and the audience evaluating the ad (MTurk vs. marketing students).

We found similar results across the four samples of advertisements. First, perceptions of humor and negative reactions were relatively independent. That is, being funny did not prevent some of the ads from also evoking negative emotional reactions. Second, negative emotional reactions were significantly related to brand attitudes. Moreover, this relationship was stronger than the relationship we observed between perceived humor and brand attitudes. Although we did not anticipate this asymmetry, it is consistent with the negativity bias broadly documented in psychology (Baumeister et al. 2001; Rozin and Roysman 2001) and provides a plausible explanation for the inconsistent relationship between humorous advertising and brand attitudes. Humorous ads appear to help brand attitudes when they decrease negative emotional reactions but hurt brand attitudes when they increase negative reactions.

Studies 1a and 1b

Our first two studies tested whether negative emotional reactions to advertisements would explain variance in people's attitudes towards the advertised brands over and above the effect of perceived humor across two samples of print advertisements. Study 1a used Google Image searches to identify a sample of real print ads that would be likely to vary in the extent to

which they evoked perceived humor and negative reactions in respondents recruited from Amazon's Mechanical Turk (MTurk). By leveraging a different sample of advertisements and respondents, study 1b addressed two potential concerns with Study 1a. One, because we do not know whether the real ads in study 1a were attempting to be humorous, it is possible that some of the ads in study 1a were not trying to be funny, which could result in a relatively weak relationship between perceived humor and brand attitudes. Two, the target audience for the real print ads in study 1b could have been different than the MTurk respondents who evaluated the ads in our study. Study 1b addressed both of these concerns by having marketing undergraduate students create a sample of advertisements that (a) were intended to be humorous, and (b) targeted other undergraduate marketing students.

Study 1a Design. We assembled a sample of 60 print advertisements using Google Images searches. In order to identify a sample of ads that (a) would not be influenced by our own potential selection biases, (b) our respondents would be likely to encounter and comprehend, and (c) could potentially elicit a range of affective reactions, we asked a research assistant who was unaware of our hypotheses to conduct three searches on Google Images using a "moderate" filter and the following search words: "funny print advertisement," "offensive print advertisement," and "print advertisement." The assistant identified the first twenty ads in each of the three search categories that met the following requirements: (1) the image was a print advertisement for a product or service; (2) the advertisement was in English; (3) the advertisement appeared to be published in either the United States or Europe; (4) the ad was legible; and (5) the ad was not obviously outdated (e.g., not historical). To avoid repeats, the research assistant selected only one advertisement for any brand. (See Appendix 1 for examples of the ads; electronic copies of the full sample are available from the authors upon request.)

Participants recruited on MTurk (56% female, M_{Age} = 38; all in the US) rated each of the 60 advertisements[1] on one of the following: perceptions of humor (n = 24), negative emotional reactions (n = 25), or their attitude towards the advertised brand (n = 26). Participants completed only one of the measures (perceived humor, negative reactions, or brand attitudes) in order to reduce concerns related to shared methods variance that occur when the same respondent completes multiple measures (Holbrook and Batra 1987; Pham et al. 2013; Podsakoff et al. 2012). We measured perceived humor by averaging responses to three seven-point scales anchored by "Not humorous/Humorous", "Not funny/Funny," and "Not amusing/Amusing." We measured negative reactions by averaging responses to three seven-point scales anchored by "No negative feelings/Strong negative feelings," "No negative emotions/Strong negative emotions," and "No negative reactions/Strong negative reactions." Finally, we measured brand attitude by averaging responses to three seven-point scales anchored by "Negative/Positive," "Bad/Good," and "Unfavorable/Favorable."

Study 1b Design. Undergraduate marketing students (N = 36) spent up to ten minutes writing a print advertisement headline for a fictional clothing retailer named Thriftonline.com. We told participants, "Your only objective is to make target consumers [other students at the university] laugh." Participants received a color image of two haphazardly attired young adults accompanied by the brand name. A separate group of 106 students (79% male) from the same university viewed the ads and rated perceptions of humor (n = 27), negative reactions (n = 26), or their attitude towards the advertised brand (n = 27) using the scale measures described in study 1. Study 1b additionally measured respondents' attitudes towards the advertisement itself (n = 26)

[1] Because of a programming error, we were not able to collect the negative reactions for one of the advertisements. Our analysis, therefore, includes the remaining 59 ads.

by averaging responses to three seven-point scales: "Negative/Positive," "Bad/Good," and "Unfavorable/Favorable". Research shows that humorous ads typically improve consumers' attitude towards the advertisement (e.g., Eisend 2009), which indirectly improves brand attitudes (MacKenzie, Lutz, and Belch 1986; Mitchell and Olson 1981). In study 1b, we could thus examine the relationship between perceived humor and both ad attitude and brand attitude.

Results. We computed mean scores for each of the advertisements by averaging the ratings of perceived humor, negative reactions, brand attitudes, and ad attitudes (study 1b only) across participants (see table 1 for descriptive statistics). Using the advertisements as the unit of analysis, we first tested the relationship between perceived humor and negative reactions to the ad. Consistent with research investigating humor appreciation for jokes (Ruch 1988; Ruch and Forabosco 1996), the ratings were not significantly correlated ($r_{Study1a} = .10$; $r_{study1b} = -.12$).

[Insert Table 1 near here]

Next, we assessed the extent to which brand attitudes correlated with both perceived humor and negative reactions. Although perceived humor was not significantly related to brand attitudes (study 1a: $r = .21$, $p = .11$; study 1b: $r = .26$, $p = .13$), negative reactions were (study 1a: $r = -.85$, $p < .001$; study 1b: $r = -.61$, $p < .001$). To examine whether accounting for negative reactions to the ad would improve predictions of its effect on brand attitudes, we regressed brand attitudes on both perceived humor and negative reactions. Negative reactions helped explain brand attitudes better than perceived humor alone. In fact, brand attitudes were better predicted by the extent to which the ad evoked negative emotional reactions (study 1a: $\beta = -.87$, $t = -14.42$, $p < .001$; study 1b: $\beta = -.57$, $t = -4.31$, $p < .001$) than by the extent it evoked perceived humor (study 1a: $\beta = .29$, $t = 4.69$, $p < .001$; study 1b: $\beta = .19$, $t = 1.42$, $p = .17$). Accounting for the extent to which the ad evoked negative reactions increased the explained variance in brand

attitudes from 4% to 80% in study 1a and from 7% to 40% in study 1b.

As robustness checks, we assessed whether the effects on brand attitudes were similar for the different search keywords (i.e., funny print ad, offensive print ad, print ad) used to find the ads in study 1a. As illustrated in table 2, the correlations between perceived humor, negative reactions, and brand attitudes were similar for all three of the search keywords. This indicates that negative reactions had a stronger effect than perceived humor on brand attitudes regardless of whether the search keywords used to find the ad was (a) funny print ads, (b) offensive print ads, or simply (c) print ads (see table 2).

In study 1b, we were also able to test the relationship between perceived humor, negative reactions, and attitudes towards the advertisement. Although negative reactions were more closely related to brand attitudes better than perceived humor, this was not the case for ad attitudes. Perceived humor was strongly associated with ad attitudes (r = .60; β = .54, t = 4.87, p < .001) as were negative reactions (r = -.61; β = -.50, t = -4.56, p < .001). Ad attitudes were also strongly associated with brand attitudes (r = .73; β = .71, t = 4.02, p < .001), an observation that makes the asymmetry in the effects of perceived humor and negative emotional reactions on brand attitudes that much more remarkable. The effect on ad attitudes replicates previous research that shows that consumers generally like humorous advertisements (e.g., Alden, Mukherjee, and Hoyer 2000; Duncan and Nelson 1985; Eisend 2009). Moreover, finding that perceived humor predicts ad attitudes suggests that the weaker effect of perceived humor on brand attitudes cannot be attributed to a lack of discriminant validity between the measures of negative reactions and attitudes. If negative reactions were merely a better indicator of attitudes than perceived humor and not a distinct construct, then the asymmetry should have also occurred for ad attitudes.

[Insert Table 2 around here]

Discussion. The results of our first two studies show that perceptions of humor and negative emotional reactions to advertisements are relatively independent. Moreover, negative reactions accounted for far more variance in brand attitudes than perceptions of humor, which suggests that an advertisement's effect on brand attitudes depends less on whether the ad is humorous than on whether it is evokes negative reactions. The results suggest advertisers who attempt humor need to be careful not to use risqué ads that trigger negative reactions in addition to perceived humor. However, in order to be more confident in these results, we will need to address two limitations with the initial studies: (a) the studies exclusively sampled print advertisements, a medium in which the effects of humor tend to be smaller (Eisend 2009); and (b) the reported effects may be inflated because the study designs did not let us account for random variance due to individual differences between participants rating the ads. Our next study addresses both of these concerns.

Study 2

Study 2 investigated whether the results from studies 1a and 1b would replicate in a sample of television ads that originally aired during the 2018 Super Bowl. The study also extends our inquiry by measuring humor, negative emotional reactions, and brand attitudes within-subjects. Measuring these constructs within-subjects allows us to analyze the data while accounting for random effects of both advertisements and participants[2].

Design. We assembled a sample of television ads that aired February 4, 2018 during Super Bowl 52. We found videos for 66 ads that ran during the event. Because our dependent

[2] Because studies 1a and 1b only took one measure from each participant, we were only able to account for variance due to ad, not participant, in these studies.

variable was brand attitudes, we excluded 16 ads that previewed movies and TV programs and two ads that promoted multiple brands. Finally, to avoid multiple ads by the same brand, we excluded 10 ads from brands that had previously aired another ad during the event. The final sample included 38 ads.

Participants recruited on MTurk (N = 868; 48% female, M_{Age} = 40; all in the US) were randomly assigned to watch one of the 38 ads. After viewing the ad, participants indicated perceived humor (α = .97), negative emotional reactions (α = .98), attitude towards the ad (α = .98), and attitude towards the advertised brand (α = .98) using the measures described in studies 1a and 1b. The order of the measures was counterbalanced. Because a majority of our sample (54%) reported watching the 2018 Super Bowl, we subsequently measured whether participants remembered seeing the ad using a four-point recognitions scale: "Yes, I'm sure I've seen this ad before" (3), "I think I've seen this ad before" (2), "I don't think I've seen this ad before (1)," and "No, I haven't seen this ad before" (0). Finally, participants reported whether they watched the 2018 Super Bowl as well as their gender, age, and native language.

Results. The relationships between the average levels of perceived humor, negative emotional reactions, ad attitudes, and brand attitudes across advertisements was similar to studies 1a and 1b. The extent to which an ad was perceived to be humorous was not significantly correlated with the extent to which it evoked negative emotional reactions (r = -.24, p = .15). Moreover, the extent to which the ad seemed humorous was not significantly correlated with brand attitudes (r = .28, p = .09), but the extent to which the ad evoked negative reactions was (r = -.62, p < .001). Although perceived humor was not significantly correlated with brand attitudes, it was closely related to both ad attitudes (r = .42, p < .01) and the average level of recognition for the ad (r = .49, p < .01). In fact, perceived humor predicted ad recognition better

than negative emotional reactions to the ad, which were not significantly correlated with recognition (r = -.25, p = .14).

A limitation with our methodology thus far (i.e., assessing the relationship between average ratings of an advertisement) is that we are unable to account for random variance due to differences between participants who evaluate the ad. To address this limitation, we used a mixed effects model, which allowed us to account for both random effects of individual advertisements and of individual participants (Judd, Westfall, and Kenny 2012). Again, negative emotional reactions helped explain brand attitudes better than perceived humor alone. Both perceived humor (β = .56, t = 14.48, p < .001) and negative emotional reactions (β = - .47, t = -15.92, p < .001) significantly predicted brand attitudes. Adding negative reactions increased the variance explained by fixed effects from 26% to 35%[3].

We also used mixed effects models to examine the effects of perceived humor and negative reactions on attitudes towards the advertisement. Both perceived humor (β = .71, t =19.79, p < .001) and negative reactions (β = -.56, t = -20.54, p < .001) had strong effects on ad attitudes. Ad attitudes were also strongly associated with brand attitudes (β = .81, t = 40.50, p < .001), an observation that makes the asymmetry in the effects of perceived humor and negative emotional reactions on brand attitudes more remarkable. Finally, we ran another mixed effects model to examine the effects of perceived humor and negative reactions on ad recognition. Interestingly, perceived humor significantly predicted ad recognition (β = .16, t = .42, p < .001), but negative reactions did not (β = .05, t = 1.53, p =.13). Thus, although negative reactions better

[3] One reason why negative emotional reactions explained less variance in Super Bowl ads than the ads in our other samples is because Super Bowl ads are carefully vetted by advertisers. As a result, the ads evoked relatively few negative emotional reactions across the sample (M = 1.93 out of 7; STDev = .41).

explain which ads are persuasive, perceived humor better explains which ads are memorable.

Discussion. Similar to humorous print advertisements, humorous television advertisements do not always result in more favorable brand attitudes. Although consumers enjoyed watching and were more likely to recognize Super Bowl ads that were more humorous, consumers' attitudes towards the advertising brand also depended on the extent to which the ad evoked negative emotions. This suggests that accounting for negative emotional reactions might help explain why prior studies investigating the effect of humorous advertising on brand attitudes have produced inconsistent results. Our third study directly explores this possibility.

Study 3

Study 3 investigated whether the results from the previous studies would replicate in a sample of ads from previous academic studies. We expected that when a humorous ad evoked less negative reactions than a non-humorous ad, humor would correspond with more favorable brand attitudes. Conversely, when a humorous ad evoked more negative reactions than a non-humorous ad, we expected humor to correspond with less favorable brand attitudes. Similar to study 2, we measured perceived humor, negative reactions, and brand attitudes within-subjects, which allowed us to account for random variation due to both differences in the advertisement and the participant evaluating the ad.

Method. We identified print advertisements from published studies that report a relationship between humor and brand attitude. Our search yielded a sample of 21 advertisements originally published in articles by Brooker (1981), Cline and Kellaris (1999), Gelb and Picket (1983), and Zhang (1996). We were unable to acquire ads from the remaining studies either because the authors had not retained their stimuli or did not respond to our request. Our sample included 12 ads originally intended to be humorous and 9 ads intended to be (non-

humorous) controls. Participants recruited on MTurk (N = 308; 60% female; M_{Age} = 35.2; all currently in the US) rated their perceptions of humor, negative reactions, and brand attitudes for one of the 21 advertisements. We randomized the order of the measures, which used the same scales as the previous studies.

Results. The relationships between the average levels of perceived humor, negative reactions, and brand attitudes across advertisements was similar to the previous studies. The extent to which an ad was perceived to be humorous was not significantly correlated with the extent to which it evoked negative emotional reactions (r = .22, p = .35). Moreover, brand attitudes were significantly related to the extent to which the ad evoked negative reactions (r = -.80, p < .001), but not to the extent to which the ad seemed humorous (r = -.05, p = .83).

To account for random variation due to both participants and ads, we analyzed the data using mixed effects models accounting for the random effects of both the advertisement and participant, controlling for the fixed effect of whether or not the ad was intended to be humorous[4] (Judd, Westfall, & Kenny, 2012). As in the previous studies, negative emotional reactions helped explain brand attitudes better than perceived humor alone. Both perceived humor (β = .29, t = 4.75, p < .001) and negative emotional reactions (β = - .60, t = -13.30, p < .001) significantly predicted brand attitudes. Moreover, accounting for negative reactions and perceived humor increased the variance explained by fixed effects from 3.5% to 23.4%.

Finally, we made pair-wise comparisons of ads that attempted humor to control ads that did not attempt humor. We examined the effect of attempting humor on perceived humor, negative emotional reactions, and brand attitudes. On average, the ads attempting humor were

[4] The ad was nested within a factor capturing whether previous work used the ad as a humorous ad or a non-humorous control ad. The interpretation of the results is unchanged if we do not account for whether previous work categorized the ads as humorous versus non-humorous.

successful, eliciting a higher level of perceived humor than the control ads. The increase in perceived humor was highly significant overall (M_{Humor} = 3.33, $M_{Control}$ = 1.84; $F_{1,19}$ = 14.3, p < .001), directional for each of the eleven humorous ads, and significant for eight of the ads (see table 3). Conversely, the effect of attempting humor on negative reactions varied considerably. Five of the ads attempting humor significantly increased negative reactions relative to the comparative control ad, whereas six had no effect on negative reactions (overall: M_{Humor} = 2.74, $M_{Control}$ = 2.73; $F_{1,19}$ = .02, p > .8). The effect of attempting humor on brand attitudes was also inconsistent (table 3). Four of the ads attempting humor significantly lowered brand attitudes, two significantly improved brand attitudes, and five had no effect (overall: M_{Humor} = 4.84, $M_{Control}$ = 4.42; $F_{1,19}$ = .92, p > .3). Importantly, however, accounting for negative reactions helped explain inconsistencies in the effect of humorous advertisements on brand attitudes. All four of the humorous ads that hurt brand attitudes also significantly increased negative reactions (ps < .05). Conversely, both of the humorous ads that improved brand attitudes directionally decreased negative reactions relative to the control ad (ps > .1). In sum, the results of study 3 show that humorous advertisements do not have a consistent effect on brand attitudes in part because perceived humor influences brand attitudes less than negative emotional reactions. Whether an ad appears to help or hurt brand attitudes relative to another ad depends not on which ad is funnier but on which ad evokes more negative reactions.

[Insert Table 3 near here]

General Discussion

By focusing on the extent to which consumers find advertising humorous, the marketing literature has not examined a risk of humorous advertising: the extent to which the ads also evoke negative emotional reactions. Whereas most of the advertising humor literature uses a

single, continuous measure of humor appreciation ranging from *funny* to *not funny*, we allowed participants to separately report perceived humor and negative emotional reactions. By separately assessing funniness and negative reactions, our studies revealed that perceived humor and negative reactions are orthogonal, not mutually exclusive. Moreover, negative reactions to an ad predict brand attitudes better than the extent to which the ad is actually funny. We observed this result across samples of real print advertisements (study 1a), print advertisements created explicitly to be funny (study 1b), Super Bowl ads (study 2), and ads used in previous academic studies (study 3).

Our findings help explain the inconsistent relationship between humorous ads and brand attitudes reported in the literature. Advertisements that evoke humor but that also increase negative emotional reactions tend to hurt brand attitudes, whereas ads that evoke humor while decreasing negative reactions tend to help brand attitudes (study 3). Thus, humorous advertisements can help or hurt brand attitudes, but the direction of the effect depends primarily on whether the ad evokes negative reactions rather than on whether it is funny.

A Caution Against Risqué Ads

Our studies show that the funniest messages may not be the most persuasive. Although humorous ads generally are memorable and entertaining, they can also elicit negative reactions, which make the advertising brand less likable. Thus, advertisers must consider not only whether consumers think that an ad is funny, but also how likely they are to be embarrassed, offended, disgusted, or upset by it. This implication is especially pertinent given the trend towards using increasingly edgy and controversial humor in ads (Blackford et al. 2011; Swani et al. 2013). By relying on risqué forms of humor (see Gulas et al. 2010), advertisers may be turning towards increasingly aversive ads that risk damaging attitudes towards the advertised brand.

Which Humorous Ads Risk Being Aversive?

Because perceptions of humor and negative emotional reactions are independent, some ads risk damaging brand attitudes even when they are funny. However, the independence between perceived humor and negative reactions also means that it is possible to use humor to create memorable and likable ads (important advertising objectives in their own right), without hurting brand attitudes. Indeed, the data from study 2 found that humorous Super Bowl ads were both more liked and better remembered than less humorous ads. A key to success is to create an ad that seems humorous but that also reduces (or at least doesn't increase) negative reactions.

In order to create advertisements that seem funny without also evoking negative reactions, advertisers would benefit from paying attention to the way that an ad attempts to be amusing. The humor literature outlines four different styles of creating comedy (i.e., humor styles; Martin et al. 2003). Two styles, aggressive and self-defeating humor, are more likely to evoke negative reactions. Aggressive humor evokes laughter by making fun of or disparaging another person or group, whereas self-defeating humor evokes laughter by making fun of or disparaging oneself. The other two humor styles, self-enhancing and affiliative humor – which are aimed at improving personal well-being and group cohesion, respectively – are more positive. Studies find that the effects of humor on health, emotions, and social outcomes depends on humor style and that positive humor styles tend to be associated with more favorable outcomes than negative humor styles (Kuiper et al. 2004; Martin et al. 2003; Samson and Gross 2012; Warren, Barsky, and McGraw 2018). Although humor styles have not explicitly been linked to the extent to which a humorous stimulus evokes negative emotional reactions, it seems probable that advertisements that rely on aggressive and self-defeating humor will be more likely to elicit negative reactions.

The benign violation theory of humor (McGraw and Warren 2010; Warren and McGraw 2015, 2016a) offers a complimentary explanation of when humorous advertisements are likely to trigger negative reactions. This perspective suggests that humor is perceived when a violation — something that threatens a person's well-being, identity, or normative belief structure — is simultaneously appraised to be okay, safe, or acceptable (i.e., benign). According to the benign violation theory, humorous advertisements include one or more violations. However, these violations vary in their severity, or the degree to which they seem threatening (McGraw et al. 2012; McGraw et al. 2014). For example, Budweiser's classic Super Bowl ad in which frogs croak out "Bud…" "Weis…" "Er…" creates humor using a mild logic violation (i.e., talking frogs), whereas a classic Reebok Super Bowl ad features a more severe violation of office etiquette by showing Terry Tate, an "office linebacker," tackling disobedient workers. The severity of a violation in a humorous advertisement is likely to be closely related to the extent to which the ad evokes negative reactions. Indeed, recent experiments illustrate that humorous ads are more likely to elicit negative reactions, and thus hurt brand attitudes, when they depict severe rather than mild violations (Warren and McGraw 2016b).

Limitations

Our studies have limitations that we hope future research will address. One, our respondents, who were recruited from MTurk, do not perfectly represent the consumers targeted in the print ads in study 1a or the TV ads in study 2. Two, it is possible that the fictitious brand in study 1b, "Thriftonline," could have primed positive or negative reactions independent of the ad itself. We aren't sure how this could explain the results of the study, but ideally, we would have pretested how participants responded to the brand name. Three, because we did not pretest whether the funny print ads, offensive print ads, and print ads in study 1a were actually perceived

to be funny, offensive, or neither, we cannot be sure that the different search criteria yielded categorically different types of ads. Although the purpose of the study was not to test differences between these categories, future researchers attempting to manipulate the extent to which an ad is funny vs. offensive vs. neither will need to pretest the ads in their sample.

Conclusion

Being comedic is a popular and potentially effective way to entertain consumers, but funny ads do not guarantee favorable attitudes towards the advertised brand (Gulas and Weinberger 2006). There are many other factors aside from funniness that predict whether an ad will be successful (Schlinger 1979; Stewert and Furse 1986). In particular, if marketers want to know whether a humorous ad will help or hurt brand attitudes, they need to recognize that ads differ not only in the extent to which they are humorous, but also in the extent to which they evoke negative reactions, including embarrassment, offense, disgust, and annoyance. Ads that evoke negative reactions hurt brand attitudes regardless of how much they amuse viewers. Thus, future literature should develop a better understanding of how the effects of humorous ads depend on humor style (Martin et al. 2003; Martin 2010) and the characteristics (structure, content, severity, etc.) of the humorous stimulus (Ruch 1988; Speck 1987; Warren and McGraw 2016b).

References

Alden, Dana L., Ashesh Mukherjee, and Wayne D. Hoyer (2000), “The Effects of Incongruity, Surprise and Positive Moderators on Perceived Humor in Television Advertising,” *Journal of Advertising,* 29 (2), 1-15.

Barry, James M., and Sandra S. Graça (2018), "Humor Effectiveness in Social Video Engagement," *Journal of Marketing Theory and Practice,* 26(1-2), 158-180.

Baumeister, Roy F., Ellen Bratslavsky, Catrin Finkenauer, and Kathleen D. Vohs (2001), "Bad Is Stronger Than Good," *Review of General Psychology,* 5 (4), 323.

Beard, Fred K. (2008), *Humor in the Advertising Business: Theory, Practice, and Wit*, Rowman & Littlefield.

Belch, George E., and Michael A. Belch (1984), "An Investigation of the Effects of Repetition on Cognitive and Affective Reactions to Humorous and Serious Television Commercials," *Advances in Consumer Research,* 11, 4-10.

Blackford, Benjamin J., James Gentry, Robert L. Harrison, and Les Carlson (2011), "The Prevalence and Influence of the Combination of Humor and Violence in Super Bowl Commercials," *Journal of Advertising,* 40 (4), 123-134.

Brooker Jr, George (1981), "A Comparison of the Persuasive Effects of Mild Humor and Mild Fear Appeals," *Journal of Advertising,* 10 (4), 29-40.

Chattopadhyay, Amitava, and Kunal Basu (1990), "Humor in Advertising: The Moderating Role of Prior Brand Evaluation," *Journal of Marketing Research,* 27 (4), 466-476.

Cline, Thomas W., and James J. Kellaris (1999), "The Joint Impact of Humor and Argument Strength in a Print Advertising Context: A Case for Weaker Arguments," *Psychology & Marketing,* 16 (1), 69-86.

Cook, Thomas D., and Donald Thomas Campbell (1979), *Quasi-experimentation: Design and Analysis for Field Settings*, Vol. 3. Chicago: Rand McNally.

Duncan, Calvin P., and James E. Nelson (1985), "Effects of Humor in a Radio Advertising Experiment," *Journal of Advertising,* 14 (2), 33-64.

Eagly, Alice H., and Shelly Chaiken (1993), *The Psychology of Attitudes*, Orlando, FL: Harcourt Brace Jovanovich College Publishers.

Eisend, Martin (2009), “A Meta-Analysis of Humor in Advertising,” *Journal of the Academy of Marketing Science,* 37 (2), 191-203.

_____ (2011), “How humor in advertising works: A meta-analytic test of alternative models,” *Marketing Letters,* 22 (2), 115-132.

_____ (2018), "Explaining the Use and Effects of Humour in Advertising: An Evolutionary Perspective," *International Journal of Advertising,* 37(4), 526-547.

_____, Julia Plagemann, and Julia Sollwedel (2014), "Gender Roles and Humor in Advertising: The Occurrence of Stereotyping in Humorous and Nonhumorous Advertising and its Consequences for Advertising Effectiveness," *Journal of Advertising* 43(3), 256-273.

Ferguson, Mark A., and Thomas E. Ford (2008), “Disparagement Humor: A Theoretical and Empirical Review of Psychoanalytic, Superiority, and Social Identity Theories,” *Humor-International Journal of Humor Research,* 21 (3), 283-312.

Förster, Kati, and Cornelia Brantner, (2016), "Masking the Offense? An Ethical View on Humor in Advertising," *Journal of Media Ethics*, 31(3), 146-161.

Freud, Sigmund (1928), “Humour,” *The International Journal of Psychoanalysis,* 9, 1-6.

Friedman, Sam, and Giselinde Kuipers (2013), “The Divisive Power of Humour: Comedy, Taste and Symbolic Boundaries,” *Cultural Sociology,* 7 (2), 179-195.

Gelb, Betsy D., and Charles M. Pickett (1983), “Attitude-toward-the-ad: Links to Humor and to Advertising Effectiveness,” *Journal of Advertising,* 12 (2). 34-42.

Griese, Kai-Michael, Aliosha Alexandrov, Christian Michaelis, and Bryan Lilly (2018), Examining the Effect of Humor in Environmentally-Friendly Advertising,” *Marketing Management Journal*, 28(1), 30-47.

Gruner, Charles R. (2000), *The Game of Humor: A Comprehensive Theory of Why We Laugh*,

Piscataway, NJ: Transaction Publishers.

Gulas, Charles S., and Marc G. Weinberger, (2006), *Humor in Advertising: A Comprehensive Analysis,* Armonk, NY: ME Sharpe.

_____, Kim K. McKeage, and Marc G. Weinberger (2010), "It's Just a Joke," *Journal of Advertising,* 39 (4), 109-120.

Harris, Christine, and Nancy Alvarado (2005), "Facial Expressions, Smile Types, and Self-Report During Humour, Tickle, and Pain," *Cognition & Emotion,* 19 (5), 655-669.

Hemenover, Scott H., and Ulrich Schimmack (2007), "That's Disgusting!…, but Very Amusing: Mixed Feelings of Amusement and Disgust," *Cognition and Emotion,* 21 (5), 1102-1113.

Herr, Paul M., and Russell H. Fazio, (1993), "The Attitude-to-behavior Process: Implications for Consumer Behavior," *Advertising Exposure, Memory, and Choice*, 119-140.

Holbrook, Morris B., and Rajeev Batra (1987), "Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising," *Journal of Consumer Research,* 14 (3), 404-420.

Hornik, Jacob, Chezy Ofir, and Matti Rachamim (2017), "Advertising Appeals, Moderators, and Impact on Persuasion: A Quantitative Assessment Creates a Hierarchy of Appeals," *Journal of Advertising Research,* 57(3), 305-318.

Kuiper, Nicholas A., Melissa Grimshaw, Catherine Leite, and Gillian Kirsh (2004), "Humor Is Not Always the Best Medicine: Specific Components of Sense of Humor and Psychological Well-Being," *Humor,* 17 (1/2), 135-168.

Larsen, Jeff T., A. Peter McGraw, and John T. Cacioppo (2001), "Can People Feel Happy and Sad at the Same Time?" *Journal of Personality and Social Psychology,* 81 (4), 684.

Lynch Jr, John G., (1982), "On the External Validity of Experiments in Consumer Research," *Journal of Consumer Research*, *9*(3), 225-239.

MacKenzie, Scott B., Richard J. Lutz, and George E. Belch (1986), "The Role of Attitude Toward the Ad as a Mediator of Advertising Effectiveness: A Test of Competing Explanations," *Journal of Marketing Research*, 23(2), 130-143.

Martin, Rod A. (2010), *The Psychology of Humor: An Integrative Approach*, Cambridge, MA: Academic Press.

_____, Patricia Puhlik-Doris, Gwen Larsen, Jeanette Gray, and Kelly Weir (2003), "Individual Differences in Uses of Humor and Their Relation to Psychological Well-Being: Development of the Humor Styles Questionnaire," *Journal of Research in Personality,* 37 (1), 48-75.

McGraw, A. Peter, and Caleb Warren (2010), "Benign Violations Making Immoral Behavior Funny," *Psychological Science,* 21 (8), 1141-1149.

_____, Lawrence E. Williams, and Caleb Warren (2014), "The Rise and Fall of Humor Psychological Distance Modulates Humorous Responses to Tragedy," *Social Psychological and Personality Science*, 5 (5), 566-572.

_____, Caleb Warren, and Christina Kan (2015), "Humorous Complaining," *Journal of Consumer Research,* 41 (5), 1153-1171.

_____, Caleb Warren, Lawrence E. Williams, and Bridget Leonard (2012), "Too Close for Comfort, or Too Far to Care? Finding Humor in Distant Tragedies and Close Mishaps," *Psychological Science*, 23 (10), 1215-23.

Michaels, Steven L. (1997), *Cognitive and Affective Responses to Humorous Advertisements*, Detroit, MI: Wayne State University dissertation.

Mitchell, Andrew A., and Jerry C. Olson (1981), "Are Product Attribute Beliefs the Only Mediator of Advertising Effects on Brand Attitude?" *Journal of Marketing Research*, 18(3),

318-332.

Park, C. Whan, Deborah J. MacInnis, Joseph Priester, Andreas B. Eisingerich, and Dawn Iacobucci (2010), "Brand Attachment and Brand Attitude Strength: Conceptual and Empirical Differentiation of Two Critical Brand Equity Drivers," *Journal of Marketing,* 74 (6), 1-17.

Petty, Richard E., and John T. Cacioppo (1986), *The Elaboration Likelihood Model of Persuasion*, New York: Springer-Verlag.

Pham, Michel Tuan, Maggie Geuens, and Patrick De Pelsmacker (2013), "The Influence of Ad-Evoked Feelings On Brand Evaluations: Empirical Generalizations from Consumer Responses to More Than 1000 TV Commercials," *International Journal of Research in Marketing,* 30 (4), 383-394.

Podsakoff, Philip M., Scott B. MacKenzie, and Nathan P. Podsakoff (2012), "Sources of Method Bias in Social Science Research and Recommendations on How to Control It," *Annual Review of Psychology* 63, 539-569.

Rozin, Paul, and Edward B. Royzman (2001), "Negativity Bias, Negativity Dominance, and Contagion," *Personality and Social Psychology Review,* 5 (4), 296-320.

Ruch, Willibald (1988), "Sensation Seeking and the Enjoyment of Structure and Content of Humour: Stability of Findings Across Four Samples," *Personality and Individual Differences,* 9 (5), 861-871.

_____, Willibald, and Giovannantonio Forabosco (1996), "A Cross-Cultural Study of Humor Appreciation: Italy and Germany," *Humor-International Journal of Humor Research,* 9 (1). 1-18.

Samson, Andrea C., and James J. Gross (2012), "Humour as Emotion Regulation: The

Differential Consequences of Negative Versus Positive Humour," *Cognition & Emotion,* 26 (2), 375-384.

Schlinger, Mary Jane (1979), "A Profile of Responses to Commercials," Journal of Advertising Research, 19, 37-4.

Söderlund, Magnus, and Eeva-Liisa Oikarinen (2018), "Joking with Customers in the Service Encounter has a Negative Impact on Customer Satisfaction: Replication and Extension," *Journal of Retailing and Consumer Services,* 42, 55-64.

Speck, Paul Surgi (1987), *On Humor and Humor in Advertising*, Lubbock, TX: Texas Tech University dissertation.

Stewart, David W., and David H. Furse (1986), *Effective Television Advertising: A Study of 1000 Commercials*. Lexington, MA: D. C. Heath and Company, Chicago.

Swani, Kunal, Marc G. Weinberger, and Charles S. Gulas (2013), "The Impact of Violent Humor on Advertising Success: A Gender Perspective," *Journal of Advertising* 42 (4), 308-319.

Tucker, Catherine E. (2014), "The Reach and Persuasiveness of Viral Video Ads," *Marketing Science,* 34(2), 281-296.

Veatch, Thomas C (1998), "A Theory of Humor," *Humor-International Journal of Humor Research,* 11 (2), 161-215.

Warren, Caleb, Adam Barsky, and A. Peter McGraw (2018), "Humor, Comedy, and Consumer Behavior," *Journal of Consumer Research*, 45, 529-552.

_____, and A. Peter McGraw (2015), "Opinion: What Makes Things Humorous," *Proceedings of the National Academy of Sciences,* 112 (23), 7105-7106.

_____, and A. Peter McGraw (2016a), "Differentiating What Is Humorous from What Is Not,"

Journal of Personality and Social Psychology, 110 (3), 407-430.

_____, and A. Peter McGraw (2016b), "When Does Humorous Marketing Hurt Brands?" *Journal of Marketing Behavior*, 2, 39-67.

Weinberger, Marc G., Charles S. Gulas, and Michelle F. Weinberger (2015), "Looking in Through Outdoor: A Socio-cultural and Historical Perspective on the Evolution of Advertising Humour," *International Journal of Advertising,* 34(3), 447-472.

Wells, Gary L., and Paul D. Windschitl (1999), "Stimulus Sampling and Social Psychological Experimentation," *Personality and Social Psychology Bulletin,* 25 (9), 1115-1125.

Wyer, Robert S., and James E. Collins (1992), "A Theory of Humor Elicitation," *Psychological Review,* 99 (4), 663.

Yoon, Hye Jin, and Yeuseung Kim (2014), "The Moderating Role of Gender Identity in Responses to Comedic Violence Advertising," *Journal of Advertising,* 43(4), 382-396.

Zhang, Yong (1996), "Responses to Humorous Advertising: The Moderating Effect of Need for Cognition," *Journal of Advertising,* 25 (1), 15-32.

Table 1.
Results for studies 1a, 1b, 2, and 3. The column labeled "Mean" shows the descriptive statistics for the average ratings of humor, negative emotional reactions, ad attitude (studies 1b, and 2), and brand attitude. The next four columns indicate the correlations between average ratings of the ads, and the right-most column indicates the standardized regression coefficient for the effect of the variable on brand attitudes.

Sample	Measure	Mean (std)	r(negative)	r(Aad)	r(Abrand)	r(recog.)	β (Abrand)
Study 1a (Google)	Humor	2.90 (1.13)	.10	NA	.21	NA	.29*
	Negative	2.42 (1.06)		NA	-.85*	NA	-.87*
	Brand Attitude	4.19 (1.02)					
Study 1b (Students)	Humor	3.69 (.74)	-.12	.60*	.26	NA	.19
	Negative	3.39 (.60)		-.57*	-.61*	NA	-.57*
	Ad Attitude	3.21 (.54)			.73*	NA	.71*
	Brand Attitude	3.45 (.59)					
Study 2 (Super Bowl)	Humor	4.14 (1.59)	-.24	.42*	.28	.49*	.56*
	Negative	1.93 (.41)		-.62*	-.62*	-.25	-.47*
	Ad Attitude	5.57 (.55)			.87*	.17	.81*
	Brand Attitude	5.36 (.46)					
Study 3 (Academic)	Humor	2.77 (1.13)	.22	NA	-.05	NA	.29*
	Negative	2.74 (.81)		NA	-.80*	NA	-.60*
	Brand Attitude	4.68 (.96)					

Notes. Asterisks indicates the effect is significant at $p < .05$. NA indicates that the variable was not measured. The regression coefficients for perceived humor and negative reactions do not include ad attitude in the model.

Table 2.
Correlations between perceived humor (humor), negative affective reactions (negative), and brand attitude (A_{brand}) in study 1a for each of the three search keywords used to identify the advertisement.

Search Keyword	Measure	Humor	Negative
Funny Print Advertisement	Negative	.11	
	A_{Brand}	.20	-.87*
Offensive Print Advertisement	Negative	-.02	
	A_{Brand}	.19	-.88*
Print Advertisement	Negative	.54*	
	A_{Brand}	.05	-.63*
Total	Negative	.10	
	A_{Brand}	.21	-.85*

Note. An asterisk indicates the correlation is significant at $p < .05$.

Table 3.
Mean ratings of perceived humor, negative emotion, and brand attitudes in study 3, which sampled humorous and (non-humorous) control ads from previously published studies.

Paper	Product	Condition	Humor	Negative	A_{Brand}	Rel.
Zhang 1996	Camera	Humor	4.62	2.09	5.22	NA
Gelb and Picket 1983	Anti-tobacco	Control	2.42	4.67	3.02	
		Humor	2.53	3.90	3.77	NS
Cline and Kellaris 1999	Chewing gum	Control (weak claims)	2.00	3.35	2.90	
		Humor (weak claims)	3.40**	2.64	4.13*	+
		Control (strong claims)	2.73	3.09	2.91	
		Humor (strong claims)	4.07*	3.00	4.78**	+
Brooker 1982	Toothbrush	Control	1.44	1.69	6.13	
		Humor (joke)	3.26**	3.31**	4.67**	-
		Humor (one-liner)	3.62**	1.81	5.14	NS
		Humor (pun)	2.33*	1.44	5.81	NS
		Humor (limerick)	4.38**	3.18**	4.38**	-
		Fear (physical)	1.62	1.98	5.76	NA
		Fear (social)	1.98	2.78**	4.92**	NA
	Vaccine	Control	1.08	1.82	5.69	
		Humor (joke)	3.04**	3.47**	4.09**	-
		Humor (one-liner)	3.38**	2.53	5.58	NS
		Humor (pun)	2.16**	3.06**	4.47**	-
		Humor (limerick)	4.79**	3.17**	5.17	NS
		Fear (physical)	1.33	2.49	4.41**	NA
		Fear (social)	1.73	2.00	5.42	NA

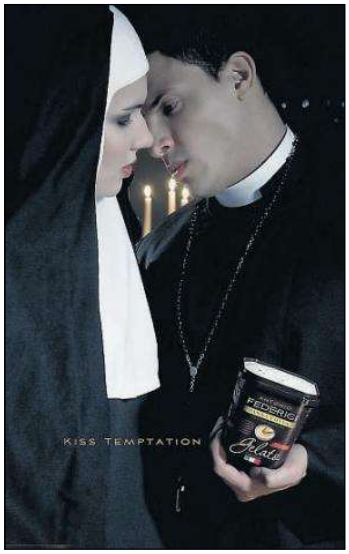
Note. Asterisks indicate a significant difference from the corresponding control condition (* for $p < .10$; ** for $p < .05$). The final column (Rel.) indicates the observed relationship between the humor manipulation and brand attitude (+ for positive; - for negative; NS for not significant; NA for not applicable).

Appendix 1: SAMPLE OF ADVERTISEMENTS IN STUDY 1a

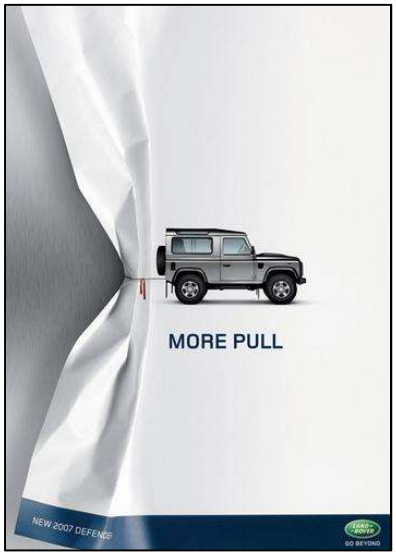
Sample advertisements from the three different searches:

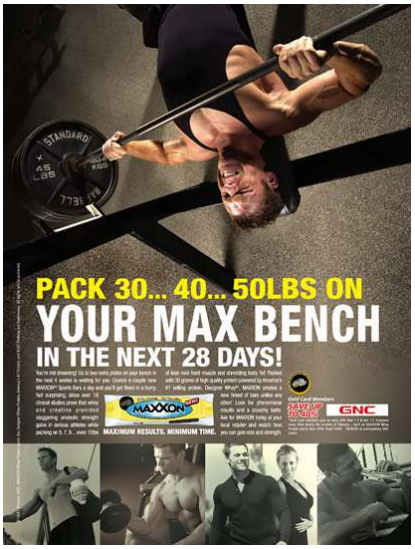
"Funny print advertisement"

"Offensive print advertisement"



"Print advertisement"





Appendix 2: RECRUITMENT DETAILS RELATED TO THE MTURK STUDIES

Participant Recruitment

We recruited participants to evaluate the ads in studies 1a, 2, and 3 through Amazon's Mechanical Turk (MTurk) platform. MTurk workers were eligible to participate in the studies if they were currently in the United States and had successfully completed at least 90% of their prior MTurk HITS (i.e., jobs). Participants decided whether or not to participate based on a brief description of the study, its length, and payment.

Study 1a Description:
"This HIT is for a short survey about consumer decisions from the [name of authors' university]. The survey will take 20 to 30 minutes to complete."

Study 2 Description:
"We are conducting this study to investigate what influences evaluations of and reactions to advertisements. In the study, you will be asked to watch 1 TV ad and rate your opinion of this ad on a few different measures. Please be sure that your volume is on and you are in a distraction-free environment before beginning the study. The study will take most people 2 or 3 minutes and you will complete it at your own pace."

Study 3 Description:
"In this HIT you have the opportunity to rate an advertisement as part of a research study for the [name of authors' university]. The task will take approximately 1 minute."

Exclusion Criteria

After beginning the survey, participants in study 2 were asked to complete a reading check question. At first glance, the question looked like a math problem, but the instructions actually told participants to ignore the math problem and instead write "human" into the text box to show that they are a human participant and are reading the instructions. 877 of 941 participants who opened the study successfully completed the reading check. Others were directed out of the survey before seeing or evaluating an advertisement. We did include reading checks nor did we exclude any participants from studies 1a or 3.

Demographic Characteristics of Participants

In each study, we measured the gender, age, and native language of the participants. The table below shows the demographic characteristics for each of the MTurk studies.

Study	Date	Gender		Age		Native Language	
		Male	Female	Average	Range	English	Other
1a	5/2011	33	42	37.0	18-61	74	1
2	12/2018	452	416	40.2	18-78	851	16
3	6/2011	124	184	35.2	18-81	302	6