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Gender Roles and Humor in Advertising:
The Occurrence of Stereotyping in Humorous and Non-humorous Advertising and Its
Consequences for Advertising Effectiveness

Martin Eisend, Julia Plagemann, Julia Sollwedel

Abstract

The advertising literature includes extensive research on the occurrence and effects of gender role portrayals in advertising. None of these studies have examined the ways in which humor affects depictions and the advertising effectiveness of these portrayals. This article reports the results of content-analytic and experimental studies that investigate the occurrence and effectiveness of gender stereotyping in humorous and non-humorous advertising. The findings from these studies are in line with the assumptions of information processing theories. They indicate that the way women and men are stereotyped in advertising is dependent on humor; in particular, traditional male stereotypes are more prevalent in humorous ads, whereas traditional female stereotypes are more prevalent in non-humorous ads. With respect to the influence of these stereotypes, humor improves consumers' attitudes, particularly if non-traditional stereotyping is utilized instead of traditional stereotyping. Furthermore, humor in stereotyped advertising influences women more than men. Women evaluate gender portrayals more favorably and as more credible in humorous ads than in non-humorous ads, particularly when non-traditional stereotyping instead of traditional stereotypes are used. These findings provide implications for gender role and humor research in advertising and for practitioners who wish to increase the effectiveness of ads that use stereotypes.

Advertising frequently uses gender roles to promote products. Gender role stereotyping has been a prominent topic in the advertising literature since the 1950s (Venkatesan and Losco 1975). The main motivation for this stream of research is the notion that gender stereotypes influence and strengthen stereotypical values in society, which can lead to negative consequences, particularly for women. As for advertising effectiveness, the extant research shows that stereotypes can be helpful or detrimental, depending on several factors such as the gender attitudes of the audience (Orth and Holancova 2004).

Several content analyses have been conducted to investigate gender role portrayals in advertising (for an overview: Eisend 2010; Wolin 2003), and a variety of studies have examined the advertising effectiveness of stereotyped advertising (e.g., Whipple and Courtney 1985; Zawisza and Cinnirella 2010). None of these previously published studies has assessed how the use of gender stereotyping in advertising and the effects of stereotypes in advertising are related to the use of humor in advertising. This is surprising because advertising initiatives commonly accompany stereotypical depictions with humor or utilize humor as playful and ironic methods of depicting men and women.

The current study analyzes the role of humor in gender stereotyping in advertising. The following main research questions are addressed. Is gender stereotyping the same in humorous vs. non-humorous ads? If not, how do humorous vs. non-humorous ads differ with respect to stereotyping? Do humorous depictions of gender stereotyping in advertising influence advertising effectiveness, and does this influence depend on the gender of the audience members?

The authors believe that the results of the current study help both practitioners and researchers in the following ways. First, these results reframe the findings of previous content-analytic studies on gender stereotyping that have addressed the occurrence and degree of this type of ste-

reotyping without considering the difference between humorous and non-humorous ads (e.g., Eisend 2010; Furnham and Paltzer 2010). Second, by referring to theories of information processing and elaboration (e.g., Attardo 1994; Eisend 2011; Meyers-Levi and Sternthal 1991) the findings from the current study explain how humor influences the effectiveness of advertising communications that include stereotypical depictions, thereby providing a new moderating variable that can explain some variability in advertising effectiveness of gender-stereotyped ads. In addition, the role of audience gender is identified as another important moderating variable of the advertising effectiveness of stereotyping, in line with suggestions from evolutionary psychology. Third, the results of this study provide better information to both consumer advocates and practitioners with respect to how these individuals should regard the effects of humor in stereotyped advertising as they attempt to evaluate and address objections to stereotyping and its possible discriminatory effects against social groups. The findings of this study inform advertisers about the effective application of humor in stereotyped ads.

The remainder of the article is organized as follows. First, we explain the phenomenon of stereotyping and explain how humor is related to the depiction of gender stereotypes in advertising. Second, we report the results of a content-analytical study that seeks to answer the research question of whether and how stereotyping differs for humorous versus non-humorous advertising. Third, we elaborate on these findings and provide a theoretical account of the effectiveness of humor and stereotyping in advertising by referring to processing theories; this reasoning includes the gender of the audience as a moderating factor of this effectiveness. Fourth, we investigate the advertising effectiveness of humor in stereotyped advertising through an experimental study. Finally, we discuss our findings and provide implications for researchers and practitioners.

Gender Stereotyping in Humorous Advertising

Gender stereotypes are beliefs that certain attributes, such as occupations or role behaviors, differentiate women and men (Ashmore and Del Boca 1981). There are masculine and feminine versions of each of these attributes (e.g., independent versus dependent roles in everyday life), and the masculine and feminine variants of each attribute are very strongly associated with males and females, respectively. Although stereotypes can provide useful orientations in everyday life, they can produce oversimplified conceptions and misapplied knowledge evaluations, thereby generating misleading evaluations of subjects from a particular social category. For instance, for situations in which evaluations of job applicants are strongly based on stereotypes, men are favored over women for jobs that men have traditionally performed (Tosi and Einbender 1985). Because gender stereotypes can produce a variety of negative consequences, particularly for women, public policy is concerned about marketing activities that promote these stereotypes (e.g., European Parliament 2008).

Several content analyses have been conducted to investigate the occurrence and degree of gender role stereotyping in advertising. This topic has generated a significant quantity of research over the course of the past four decades; the published studies have indicated that advertising uses stereotypical gender roles in a variety of ways (e.g., Courtney and Whipple 1983; Furnham and Mak 1999; Furnham and Paltzer 2010). However, previous content analyses have largely neglected the fact that gender stereotyping can (1) either be directly used as a source of humor in advertising or (2) may simply be combined with humor in advertising; both of these tactics are implemented by advertisers to enhance the effectiveness of advertising efforts.

The theoretical background for the generation of humor and how humor is possibly related to stereotyping refers to the concept of incongruity solution (e.g., Alden, Mukherjee, and Hoyer

2000). Humor generation is based on a cognitive process that requires two steps. First, some kind of incongruity that violates a predominating view has to be recognized and, second, if people cognitively resolve this incongruity, they experience humor. In other words, humor occurs when it seems that things are normal, while at the same time something goes wrong that breaks our expectations (Veatch 1998). These expectations are often based on social norms (Speck 1987).

As for (1), the use of gender stereotypes as a source of humor, humor occurs when it contrasts with expectations by defying social norms through nontraditional stereotypical depictions. Nontraditional stereotypical depictions imply changes in stereotypical roles; for instance, men could be depicted in domestic roles doing chores, whereas women would be presented in independent roles (Scharrer et al. 2006). Another method of using stereotyping as a source of humor and as a deviation from social norms is through the exaggeration of traditional gender roles. In modern societies, changing gender roles are causing ideals of gender equality to replace traditional gender-related norms (Ceci, Williams, and Barnett 2009); thus, exaggerated depictions of traditional gender roles can be regarded as non-normative and may therefore possess the potential to be sources of humorous incongruence. For instance, men could be depicted as philandering womanizers, whereas women may be portrayed as experiencing ardent desires to flirt with and obtain these men; this idea contradicts the norm of gender emancipation and may create the perception of humor.

As for (2), stereotypes may simply be combined with humor because advertisers use humor to enhance the effectiveness of their communications. In this case, humor is not related to stereotyping and stereotyping in ads does not differ from non-humorous advertising messages. Humor would not necessarily change stereotypical depictions of gender; instead, the use of humor is designed to change the evaluation of the advertised brand. However, if stereotypes are used as a

source of humor as described in the preceding paragraph, then gender role portrayals should differ from the traditional stereotyping of men and women that oftentimes occurs in non-humorous ads. This reasoning leads us to the following research question:

RQ: Is there a difference in the way women and men are stereotyped between humorous and non-humorous advertising?

Content Analysis

Sampling

The most popular private TV channels in Germany are RTL and Sat.1 (market shares in 2011: 14.1% (RTL) and 10.1% (Sat.1) (Weber 2012)). Both of these channels were selected for the content analysis. During a period of two weeks in December 2011, four non-consecutive days were chosen randomly for this analysis. We assessed whether a seasonal bias existed with respect to advertised products that might primarily be marketed during the Christmas season; however, we did not find any differences between ads that were related to the Christmas season and ads that were not related to this season for any of the stereotyping variables that were examined.

All ads that aired between 6 p.m. and 10 p.m. on these days were recorded; this approach is in accordance with the methodology that was used in previously published studies of ads, which have frequently focused on the analysis of prime-time commercials (Eisend 2010). Prime-time TV presents certain advantages over other advertising samples for the analysis of gender-related issues; in particular, it has been demonstrated that the sex and age of viewing audiences is more evenly distributed during prime time than during other times of the day (Craig 1992). Similarly to previous content analyses, repeated TV ads were discarded to ensure that the full scope of unique ads using gender stereotypes was elucidated. Ads with unidentifiable central figures or

with central figures that were either children or cartoon characters were also excluded from the analysis. In accordance with previously published approaches, up to two adults were coded as central figures for each ad; to be coded as central figures for an ad, these adults must have played the most distinguishable roles in the ad in question and appeared for at least three seconds of this ad. After completing these procedures, 186 ads that provided a total of 259 central figures were retained for detailed analysis.

Coding Scheme and Procedure

The coding procedure uses stereotyping categories from a well-established coding scheme that was originally modeled by Manstead and McCulloch (1981) and McArthur and Resko (1975). Many other content analysis studies have followed the original coding categories that were used by these authors (for reviews, see Furnham and Mak 1999; Furnham and Paltzer 2010). The following stereotyping variables were chosen for our content analysis: age, argument, background, credibility, hierarchy, location, product type, role, and voice-over. Each of these variables was coded with two values following the procedure that was used by Eisend (2010). Furthermore, all ads were coded to indicate whether they were perceived as humorous, following the coding procedure in previous content analysis studies (e.g., Furnham and Spencer-Bowdage 2002; Harris and Stobart 1986; Weinberger and Campbell 1991). Table 1 provides an overview of the variables, their definitions, and their coding values. The column next to the definition of each variable includes a description how the variable values have to be combined with gender to depict traditional stereotyping (e.g., women are shown at home rather than at work and the opposite holds for men).

In accordance with the procedure that was used in Eisend's (2010) meta-analysis, ads that could not be assigned to either stereotyping value (e.g., ads that used neither male nor female voice-overs) were not considered during the analysis of a particular stereotyping variable. All ads were coded independently by a female and a male coder. Inter-coder reliability was assessed by Krippendorff's α that can be easily compared to standard reliability measures (Hayes and Krippendorff 2007). The reliability coefficients in Table 1 indicate a satisfactory inter-coder agreement. Differences in coded values were discussed with a third coder and reconciled.

PLACE TABLE 1 ABOUT HERE

Results

Table 2 reports the results of the content analysis. Fifty-four percent of the central figures (140 out of 259 central figures) were women. Forty-five percent of the central figures (117 out of 259 central figures) were acting in humorous ads. The gender distribution differs significantly between humorous and non-humorous ads, indicating that men are more likely than women to be depicted in humorous ads ($\chi^2 = 9.67, p < .01$).

We provide results for both values of each stereotyping variable for the humorous and non-humorous ads. Through this approach, we can determine whether stereotyping differs for humorous and non-humorous ads and assess whether this difference involves traditional stereotyping of either men or women. For instance, if the likelihood that women (compared to men) are presented as product users is higher in non-humorous advertising than in humorous advertising, then we can conclude that the traditional stereotyping of women with respect to this variable is more likely to occur in non-humorous advertising than in humorous advertising in our data set. The chi-

square statistic in Table 2 indicates whether there is a significant difference between humorous and non-humorous advertising for each stereotyping category. If the chi-square statistic indicates significance, then the last column in Table 2 describes whether traditional stereotyping regarding the particular stereotyping value of interest is more likely to occur in humorous or in non-humorous ads.

The results show that the traditional stereotyping of women is more likely to occur in non-humorous ads than in humorous ads, as indicated by the significant differences between these two types of ads with respect to the following variables (with variable category in parentheses): credibility (product user), location (at home/domestic), and product type (domestic products). The traditional stereotyping of men is more likely in humorous ads than in non-humorous ads, as indicated by the significant differences between these two types of ads with respect to the following variables (with variable category in parentheses): age (middle-aged/old), hierarchy (primary character), location (at work/occupational), role (independent/autonomous), and voice-over (male voice-over).

We additionally perform the analysis for the humorous ads that feature humor that relates to the central figure, dropping all of the other types of humorous ads (see Appendix). This selection of ads resembles the subset of ads for which gender role depictions contribute to the production of humor. The results for this new analysis remained stable with the exception of three changes: (1) the results for product user (credibility) decreased below the tested significance levels and so did (2) the results for at home/domestic (location) ; while (3) the results for opinion-based and non-scientific arguments became marginally significant ($\chi^2 = 3.16$, $df = 1$, $p < .09$), indicating again that the traditional stereotyping of women is stronger in non-humorous ads than in humorous ads. On the whole, these results strengthen the finding that traditional female stereotyping

occurs in non-humorous ads, whereas traditional male stereotyping occurs more often in humorous ads.

PLACE TABLE 2 ABOUT HERE

Discussion

The results of this content analysis answer our research question by revealing that gender role stereotyping in advertising depends on the use of humor. In particular, compared with humorous ads, non-humorous ads primarily employ traditional stereotyping of women by more frequently depicting them as product users, at home, and with domestic products. Relative to non-humorous ads, humorous ads employ the traditional stereotyping of men by more frequently depicting men in independent roles, at work, as middle-aged or older individuals, and in commercials with male voice-overs. The results suggest that humorous advertising primarily exaggerate traditional stereotyping for men.

The coding scheme that we used primarily considers traditional stereotyping variables. In the following section, we elaborate on the advertising effectiveness of traditional stereotyping and compare it with non-traditional stereotyping in advertising that has received less attention in research on stereotyping in advertising. We refer to processing theories and evolutionary psychology and focus on the following questions: Does humor help to increase the advertising effectiveness of both traditionally and non-traditionally stereotyped ads? Do the effects of humor and stereotyping differ between women and men?

The Advertising Effects of Stereotyping, Humor, and Gender

From a theoretical point of view, the literature suggests that divergence from the normative element of stereotypes might be evaluated negatively (Brescoll and Uhlmann 2005; Eagly, Mladanic, and Otto 1991). Studies that examine the effectiveness of gender-stereotyped advertising have provided mixed results, though. Whipple and Courtney (1985) have reviewed studies on female role portrayals and their effects on attitudes towards the ad and purchase intention amongst other effectiveness measures. They generalized that for a female audience, non-traditional role depictions are more effective than traditional ones, a result that was supported by several authors (e.g., Jaffe and Berger 1994; Orth and Holancova 2004; Whipple and Courtney 1980). However, progressive portrayals of women (or men) may be ineffective because they strike irritating and offensive, resulting in negative attitude towards the ad and the brand (Whipple and Courtney 1985). Early advertising studies demonstrated that although study participants frequently stated that they did not prefer stereotypical depictions of men and women, these participants demonstrated not only reactions to ads and commercial spokespersons but also purchase intentions and behaviors that were more favorable in response to traditional gender stereotypes than to non-traditional gender stereotypes in advertising (e.g., Courtney and Whipple 1983). The differences in effects of stereotypes in advertising might be explained by moderating variables. In this study, we explain how humor, portrayal type and audience gender interact and can produce variations in advertising effectiveness.

How does humor influence the effectiveness of stereotyped portrayals in advertising? It has been shown that humor positively influences cognitive, affective, and behavioral responses (e.g., Cline, Altsech, and Kellaris 2003; Eisend 2009; Weinberger and Gulas 1992; Zinkhan and Gelb 1987). Next to affective models that are based on simple evaluative conditioning or affect transfer, implying that humor triggers positive affect that favorably influence attitudes and behavior,

the main humor theories refer to cognitive processing models. These are the information processing model (i.e., humor attracts attention, enhances elaboration, and thus positively influences attitudes and cognitions), the distraction effect (i.e., humor distracts consumer from processing counterarguments, positively influencing attitudes), and the vampire effect (i.e., humor distracts from processing brand-related cognitions) (Eisend 2011).

Stereotypes in advertising are processed differently when humor is added. This is suggested by the cognitive mechanism of distraction: humor reduces the negative effects of advertising by distracting consumers from unfavorably evaluated content in a particular ad and by leading them to focus on the humorous part (Duncan and Nelson 1985; Nelson, Duncan, and Frontczak 1985). This enhances ad liking and, thus, brand attitudes – two major advertising effectiveness measures. Beyond mere distraction, humor serves as an adaptive communicative signal that everything is ok as suggested by the false alarm theory by Ramachandran (1998). This theory states that humor signals that an anomaly is of trivial consequences. Previous research has provided evidence that comedy can take the sting out of otherwise offensive content such as racial stereotypes in movies (Park, Gabbadon, and Chernin 2006). Furthermore, linguistic theory suggests that humor changes the way information is processed, too. When presented with humor, consumers do not evaluate the message with the standard serious mode of information processing (Attardo 1994; Groza and Cuesta 2011). Consumers apply a less critical mindset and a higher tolerance towards otherwise offensive or even unacceptable content, that is, content that strongly deviates from the norm. Although attitudes towards non-traditional stereotyping in advertising may be less favorable than attitudes towards traditional stereotyping in advertising because the former type of advertising deviates strongly from societal norms and might therefore produce negative reactions, this deviation from the norm is considered as less critical when humor is add-

ed. Very often the deviation from the norm as triggered by non-traditional advertising is the source of humor that produces stronger advertising effectiveness than traditional stereotyping in advertising, which deviate less greatly from societal norms than non-traditional stereotyping in advertising. Even for situations in which non-traditional stereotypes are not inherently a source of humor, any negative effects of non-traditional stereotyping might be rectified through the addition of a humorous stimulus.

H1: Humor (compared to non-humor) in ads increases the favorability of (a) attitudes toward the ad, and (b) attitudes toward the brand, and this effect is stronger for non-traditional stereotyping than for traditional stereotyping.

Men and women react differently to gender role portrayals in advertising due to differences in processing strategies as suggested by the selectivity hypothesis (e.g., Meyers-Levi and Maheswaran 1991; Meyers-Levi and Sternthal 1991). Women apply a detailed processing strategy and process advertising information more comprehensively and more elaborately than men who are selective information processors. Research has shown that women are therefore more aware of stereotypes in advertising than men (Lull, Hanson, and Marx 1977). Because the negative consequences of stereotyping primarily affect women, they develop less favorable a priori attitudes towards stereotyping and evaluate stereotyping in advertising more negatively than men (Lyonski and Pollay 1990). Compared with traditional stereotyping in advertising, non-traditional stereotypes are an effective way to counter unfavorable gender depictions and they have been found to be perceived as more credible by women than traditional stereotypes (Power, Murphy, and Coover 1996). They should therefore be evaluated more favorably by women than by men. The effects on portrayal acceptance and credibility do not necessarily depend on the

gender of the portrayal because the depiction of either gender is mirrored for the other gender: a non-traditional depiction of women implies a non-traditional gender role of men and vice versa.

H2: Non-traditional stereotyping compared to traditional stereotyping increases (a) portrayal acceptance and (b) credibility and this effect is stronger for women than for men.

Evolutionary psychologists argue that the distribution of humor production and the appreciation of humor differs between men and women. In essence, females value humor abilities more than men and tend to like a man who will make them laugh; by contrast, men prefer women who will laugh at their humor (Bressler, Martin, and Balshine 2006). Sexual differences in reproductive strategies explain these differences in the humor perception and humor production of women and men. Women have higher costs for reproduction than men (e.g., pregnancy) and therefore are choosier than men with respect to mating behavior. Men must impress women to succeed in mating; one method of achieving this success is through the development of a good sense of humor. Humor requires and enhances verbal creativity and therefore has even higher potential benefits than general intelligent conversation, which is a common fitness indicator that is used for mating (Li et al. 2009). Thus, humor makes men attractive and allows them to display good genes when selecting mates. In accordance with the reasoning that humor production is more likely for individuals who demonstrate higher interest in a relationship and that men are typically more interested than women in pursuing sexual partners, we found in the content analysis of this paper that men are more likely than women to be central figures in humorous ads. The assumption of gender differences in humor processing has recently been supported by neuro imaging studies that show that women reveal more and different brain activities than men when processing humor, leading to higher subjective ratings of funniness by women (Azim et al. 2005;

Kohn et al. 2011). The findings are explained by differences in emotional processing; women perform better in detecting, generating and appraising emotions than men.

If humor perception is stronger for women than for men, we expect these two genders to react differently to humor in stereotyped advertising; in particular, women should evince stronger reactions to humorous advertising communications in terms of attitudes.

H3: Humor (compared to non-humor) in ads produces a greater increase in (a) attitudes toward the ad and (b) attitude toward the brand for women than for men.

As for the relationship between the dependent variable, processing approaches and empirical findings in the extant literature both suggest that portrayal evaluation and credibility influences effects on attitudes (e.g., Goldsmith, Lafferty, and Newell 2000; Yilmaz et al. 2011). We will explore whether these relationships hold when differentiating between genders and traditional vs. non-traditional stereotyping.

Experiment

Method

Stimulus and Pretests. The four stimulus print ads for the experiment with a 2 (humorous versus non-humorous ad) by 2 (traditional versus non-traditional stereotyping) design all contain the product description of a couch that is offered by IKEA (see Appendix for the stimulus material). IKEA was chosen because it is a well-known brand that is purchased by both genders.

The tested ads depict a couple in a living room. In each ad, one character is cleaning the room, whereas the other partner is relaxing. The stereotype manipulation was achieved by having either the woman cleaning and the man relaxing (traditional stereotypes) or the opposite phe-

nomenon (non-traditional stereotyping). Humor was manipulated by providing different depictions of the cleaning behavior of the central figure in each ad and by adding a headline to each of the humorous ads. In the non-humorous condition, no headline was added and the character that cleans the room is depicted by holding a feather duster. In the humorous condition, the character that is cleaning the room is depicted with a vacuum cleaner. While she/he is vacuuming the room, she/he is lifting the couch on which the other character is relaxing. The headline for both humorous ads states: “Life is brilliant – only your old furniture sucks?”. The stimulus ads were original IKEA ads that were changed by means of a professional picture editing software. To make sure that the ads were perceived as realistic, we performed a pretest with 28 students who had to decide whether the ads are realistic on a seven point scale. The findings indicate figures all well above the scale midpoint (all means > 4.7). Thee four stimuli did not differ from each other in terms of perceived realism (all t 's < 1.3, all p 's > .21).

The manipulations were further pretested with a sample of 74 student participants (55.4% female, average age of 23.9 years). These participants indicated how humorous they perceived each ad to be on a seven point scale (ranging from “not humorous at all” to “very humorous”). Furthermore, for each adult character in the ad that they viewed, the students used a seven point scale (ranging from “does not apply” to “fully applies”) to indicate whether the character represents a typical gender role portrayal. To ensure that prior attitudes towards IKEA did not differ between the genders of the respondents and does not confound the results, participants reported their attitudes towards IKEA on four-item seven point scales (which ranged from “dislike” to “like”, “bad” to “good”, “inferior” to “superior”, and “negative” to “positive”; $\alpha = .86$). Because we noticed that the gender role portrayals in the tested ads produced depictions that might be regarded as less clear, harder to understand and less artful, which could influence advertising

outcomes, participants also rated the ads with different stereotypes on several seven point scales (which ranged from “not informative” to “informative”, “unimportant” to “important”, “not clear” to “clear”, “hard to follow” to “easy to follow”, and “artless” to “artful”).

The results of an ANOVA with two factors (humor and stereotyping) reveal that the humorous ads were perceived to be significantly more humorous than the non-humorous ads ($M = 4.32$ vs. 3.14 ; $F(1,70) = 8.96$; $p < .01$). We further found that both female and male characters in the ads are regarded as representative of more traditional stereotyping in the traditional stereotyping condition than in the non-traditional stereotyping condition (female character: $M = 5.90$ vs. 2.71 ; $F(1,70) = 87.26$; $p < .01$; male character: $M = 5.82$ vs. 2.11 ; $F(1,70) = 164.62$; $p < .01$). No other effects (main or interaction) were significant. We further found that participants’ attitudes towards IKEA did not differ between women and men ($M = 5.49$ vs. 5.68 ; $F(1,72) = .61$; $p > .43$). With respect to the evaluation criteria of the ads in terms of comprehension and design, we found no significant differences (all F values < 1.1 ; all p ’s $> .30$). Hence, the pretest results verify that the chosen stimuli are appropriate for our experiment.

Participants. A total of 196 subjects participated in the main experiment that was conducted online. Students at a German university were invited to participate via e-mail. Most of these participants were students at a German university (67.9% female; average age of 25.7 years; 70.4% of participants possessed a high school or bachelor’s degree, 29.6 % of participants possessed at least a master’s degree). These participants were randomly assigned to the conditions of the experiment. Gender showed the same distribution in the four conditions of the experiment and therefore the unequal sample sizes of both gender do not affect the findings.

Procedure and Measures. The online questionnaire in the main survey begins with an introduction in which participants are instructed that the study is about evaluating print ads. Subse-

quently, the stimulus ad was presented, followed by the dependent variables, manipulation assessment measurements, and demographic variables.

Attitude metrics were obtained from the published literature (e.g., Mitchell and Olson 1981). Participants reported their attitudes toward the advertised message on five-item seven point scales (which ranged from “unpleasant” to “pleasant”, “unlikeable” to “likeable”, “bad” to “good”, “boring” to “interesting”, and “unfavorable” to “favorable”; $\alpha = .94$). To assess the participants’ attitudes towards the brand, the same four-item seven point scales that were applied in the pretest were used once again (these scales ranged from “dislike” to “like”, “bad” to “good”, “inferior” to “superior”, and “negative” to “positive”; $\alpha = .93$). The evaluation of the portrayals in the ad was measured by two-item seven point scales (each of which ranged from “strongly disagree” to “strongly agree”; $r = .62$) that were developed for this study. The scales asked participants to characterize their levels of agreement with the following two statements: “The portrayals of the actors in the ad are acceptable” and “The portrayals of the actors in the ad are contemporary and appropriate”. Credibility was measured with three item seven point scales (“unconvincing” to “convincing”, “unbelievable” to “believable”, and “dishonest” to “honest”; $\alpha = .82$; e.g., MacKenzie and Lutz 1989).

To verify the manipulations, we used the same questions that were applied in the pretest. Participants indicated how humorous they perceived the ad to be on a seven point scale (which ranged from “not humorous at all” to “very humorous”). Furthermore, for both of the characters in the ad, each participant was asked to evaluate whether the character represented a typical gender role portrayal on a four-point scale (which ranged from “does not apply” to “fully applies”).

Results

Because the sample was not a homogenous student sample, we checked whether education and age of participants was related to gender or any of the dependent variables. Education was not related to any of the dependent variables (all F 's < 1.61 , all p 's $> .20$) nor to gender ($\chi^2 = 1.97$, $p = .16$). Age was not related to the dependent variables (all r 's $< .06$, all p 's $> .38$), but to gender ($t = 4.50$, $p < .01$): women were on average younger than men ($M = 24.74$ vs. 27.37). Therefore, we decided to keep age as a covariate in the following analysis. We ran an ANCOVA with three factors (humor, stereotype, and gender) for the manipulation check measures and the dependent variables. Table 3 presents the mean and standard deviations of the dependent variables and the manipulation assessment measurements for each experimental condition.

PLACE TABLE 3 ABOUT HERE

With respect to the manipulation assessments, we found a main effect of the humorous ad on the participants' perceptions of the humorousness of the ad that they viewed, indicating that the attempts to introduce humor into the ad significantly enhanced these perceptions of humorousness ($M = 2.43$ vs. 4.50 ; $F(1,187) = 72.10$; $p < .01$). We further found that both the female and the male characters in the ad are considered to represent more traditional stereotyping in the traditional stereotyping condition than in the non-traditional stereotyping condition (female character: $M = 2.74$ vs. 2.22 ; $F(1,181) = 12.18$; $p < .01$; male character: $M = 2.76$ vs. 2.17 ; $F(1,180) = 15.43$; $p < .01$). No other main or interaction effects were significant in the ANCOVA model, supporting the notion that successful manipulation of humor and stereotyping was achieved in this experiment.

With respect to attitude toward the ad, the results revealed a positive main effect of humor ($M = 3.20$ vs. 4.62 ; $F(1,182) = 46.85$; $p < .01$) that was qualified by two significant interaction effects of humor with stereotyping ($F(1,182) = 4.07$; $p < .05$) and humor with gender ($F(1,182) = 7.20$; $p < .01$). These interaction effects are depicted in Figure 1. We found a significant positive effect from humor for both non-traditional stereotyping ($M = 3.36$ vs. 4.29 ; $F(1,87) = 12.55$; $p < .01$) and traditional stereotyping ($M = 3.06$ vs. 4.90 ; $F(1,100) = 55.20$; $p < .01$); however, this effect is stronger for non-traditional stereotyping than for traditional stereotyping ($z = 2.15$; $p < .04$). We found a positive effect of humor both for women ($M = 2.91$ vs. 4.72 ; $F(1,119) = 71.74$; $p < .01$) and for men ($M = 3.64$ vs. 4.41 ; $F(1,68) = 5.65$; $p < .02$). This effect was stronger for women than for men ($z = 2.80$; $p < .01$). The findings support H1a and H3a.

With respect to attitude towards the brand, the results revealed the existence of a positive main effect of humor ($M = 4.47$ vs. 5.34 ; $F(1,187) = 15.60$; $p < .01$) and a marginally significant main effect of gender ($M = 4.70$ vs. 5.05 ; $F(1,187) = 3.42$; $p < .07$). These effects are qualified by two significant interaction effects of humor with stereotyping ($F(1,187) = 4.39$, $p < .05$) and humor with gender ($F(1,187) = 10.73$, $p < .01$). The positive effect of humor was significant for non-traditional stereotyping ($M = 4.35$ vs. 5.54 ; $F(1,104) = 23.36$; $p < .01$) and for traditional stereotyping ($M = 4.71$ vs. 5.19 ; $F(1,88) = 3.98$; $p < .05$); the first effect tends to be stronger than the second one ($z = 1.69$; $p < .10$; two-tailed test). Furthermore, we identified a positive and significant effect of humor for women ($M = 4.42$ vs. 5.70 ; $F(1,120) = 51.13$; $p < .01$), but not for men ($M = 4.65$ vs. 4.77 ; $F(1,71) = .95$; $p > .33$). The findings support H1b and H3b.

With respect to the evaluation of the portrayed characters, the results showed a positive main effect of humor ($M = 3.55$ vs. 4.24 ; $F(1,186) = 10.85$; $p < .01$) and of stereotyping ($M = 3.29$ vs. 4.36 ; $F(1,186) = 35.72$, $p < .01$), revealing that the character portrayals in the ads with

non-traditional stereotypes were evaluated more favorably than the traditional character portrayals. In addition, we found a significant interaction effect of stereotyping with gender ($F(1,186) = 4.20, p < .05$). We found an effect of stereotyping for both genders, but this effect tends to be stronger for women ($M = 3.05$ vs. 4.56 ; $F(1,120) = 38.47; p < .01$) than for men ($M = 3.43$ vs. 4.22 ; $F(1,71) = 6.45; p < .02$) ($z = 1.66; p < .10$). The findings support H2a.

Regarding credibility of the portrayed characters, the results showed a positive main effect of humor ($M = 2.81$ vs. 3.83 ; $F(1,186) = 25.31; p < .01$) and of stereotyping ($M = 3.10$ vs. 3.53 ; $F(1,186) = 4.81, p < .03$), revealing that the character portrayals in the ads with non-traditional stereotypes were more credible than the traditional character portrayals. In addition, we found a significant interaction effect of humor with gender ($F(1,186) = 11.20, p < .01$) and a marginal significant interaction effect of stereotyping with gender ($F(1,186) = 3.47, p < .07$). We found a positive and significant effect of humor for women ($M = 3.48$ vs. 4.34 ; $F(1,120) = 51.13; p < .01$), but not for men ($M = 3.66$ vs. 4.05 ; $F(1,71) = .95; p > .33$). We found an effect of stereotyping for women ($M = 2.99$ vs. 3.64 ; $F(1,120) = 7.76; p < .01$), but not for men ($M = 3.15$ vs. 3.21 ; $F(1,71) = .04; p > .84$). This finding provides weak support for H3b, considering that the effect is only marginal significant.

PLACE FIGURE 1 ABOUT HERE

We run moderated mediation analysis (Preacher, Rucker, and Hayes 2007) to test whether portrayal evaluation and credibility function as mediators for the interaction effect of stereotyping by humor and of humor by gender on both kinds of attitudes (toward ad and toward brand). We apply the process macro by Andrew Hayes; the macro tests the significance of the indirect

effects by bootstrapping (here: by repeating the resampling 1000 times). Table 4 presents the findings of the mediation analysis. Following the advice by Zhao, Lynch, and Chen (2010), we report the bootstrapping results (mean effect, SE, and confidence intervals) for the conditional significant paths, that is, for the significant indirect effects at different values of the moderator variables. A significant result suffices to establish mediation.

PLACE TABLE 4 ABOUT HERE

The findings show that portrayal evaluation serves as a mediator for the effect of the interaction of humor by stereotyping on attitude towards the ad; this mediation effect is strongest for women who are exposed to the humorous ad version. Credibility serves as a mediator for this interaction effect on both attitude toward ad and brand, but only for female participants who are exposed to humorous ads. The influence of the interaction of humor by gender on attitude toward the ad is mediated by credibility, but only for women. Overall, these findings support the notion that the effects are particularly strong for women who are exposed to the humorous and non-traditional stereotyping ad.

Discussion

The main results of this experiment are as follows. Humorous stereotyping increases consumers' attitudes toward both the ad and the brand that is promoted by the ad in question, particularly if non-traditional stereotyping is applied instead of traditional stereotyping. Humorous stereotyped advertising produces stronger effects for women than for men. The character portrayals in the ad are evaluated more favorably and perceived as more credible in situations in-

volving non-traditional stereotyping than in situations involving traditional stereotyping, particularly by female participants in this study. The findings essentially support our hypotheses and provide evidence for the role of humor in increasing the effectiveness of stereotyped advertising. These effects are dependent on the type of stereotyping that is used and the gender of an ad's audience.

General Discussion

This study reveals that stereotyping in advertising exists but that consumers' perceptions of this stereotyping might be less serious than previous research has assumed, as sometimes stereotypes are either applied in humorous ads as a source of humor production or stereotyped advertising is simply enriched by humorous stimuli in an ad. Stereotyping differs between humorous and non-humorous ads and demonstrates a particular pattern; namely, male stereotypes are more prevalent in humorous ads, whereas female stereotypes are more prevalent in non-humorous ads.

The investigation of advertising effects of stereotyping and of humor indicates that (1) humor positively influences attitudes towards an ad and the brand that this ad promotes in stereotyped advertising, particularly if non-traditional stereotyping rather than traditional stereotyping is utilized; (2) humor in stereotyped advertising produces stronger effects for female viewers than for male viewers; and (3) portrayals in ads are evaluated more favorably and perceived as more credible in cases of non-traditional stereotyping than in cases of traditional stereotyping, and this effect is stronger in female evaluators than in male evaluators. The findings contribute to both research and practice.

Implications for Research and Practice

The findings of our content analysis provide a novel contribution to research, because they show that the results of previous content-analytic gender role studies must be put into perspective. Gender role portrayals should be evaluated separately for humorous versus non-humorous ads to yield meaningful findings about the occurrence, the degree, and the severity of gender stereotyping in ads. Because humorous depictions lead to perceptions and effects of stereotyping that differ from those of non-humorous gender role portrayals, the distinction is important not only for research but also for policy. Gender role portrayals in advertising are less serious if these portrayals are used as sources of humor.

The findings of the experimental study provide a contribution to research by extending previous research on stereotyping effects in advertising through the inclusion of moderating variables whose influence can be explained by information processing theories. Several studies have investigated the advertising effects of stereotyping and have obtained mixed results, suggesting that moderating variables must be considered to explain the variability of findings. The current study extends this line of research by adding three new moderating variables that partially interact: type of stereotyping, humor and gender of the ad's audience. Their effects are explained by information processing theories and evolutionary psychology.

With respect to the moderating effect of the type of stereotyping, this study extends previous findings that indicate that responses to advertising depend on whether traditional or non-traditional stereotyping is used (e.g., Orth and Holancova 2004; Zawisza and Cinnirella 2010). This effect is moderated by humor: humor provides positive reactions towards stereotyped advertising and reduces the possible negative consequences of stereotyping. This is because stereotypes are processed differently when humor is added: humor reduces the negative effects of advertising by distracting consumers from unfavorably evaluated content (Duncan and Nelson

1985; Nelson et al. 1985). Humor also serves as an adaptive communicative signal that everything is ok; this signal takes the sting out of otherwise offensive content. Furthermore, when presented with humor, consumers do not evaluate the message with the standard serious mode of information processing (Attardo 1994; Groza and Cuesta 2011). Consumers are less critical towards content that deviates from the norm. Therefore, non-traditional stereotyping benefits to a greater extent than traditional stereotyping from humor, because attitudes towards non-traditional stereotyping tend to be less positive as they deviate more strongly from societal norms. If humor is added, this deviation from the norm can be an (additional) source of humor, leading to greater advertising effectiveness for these ads than for ads that utilize traditional stereotyping, which is more likely to correspond to societal norms.

Differences in information processing explain the moderating influence of gender on stereotyping effects on portrayal evaluation and credibility. The reason is that men and women apply different processing strategies according to the selectivity hypothesis (e.g., Meyers-Levi and Maheswaran 1991; Meyers-Levi and Sternthal 1991). Women apply a detailed processing strategy and are more aware of stereotypes in advertising than men (Lull et al. 1977). At the same time, women are more affected by consequences of traditional stereotyping. In line with this reasoning, our findings show that women evaluate non-traditional stereotypes more favorably.

With respect to the moderating effect of gender, we find that humor leads to stronger effects on the responses of women than on the responses of men and apparently reduces the negative effects of stereotyping. This observation is an interesting finding for research on humor in advertising. Although gender differences in responses to humor in advertising have been recognized (e.g., Madden and Weinberger 1982; Whipple and Courtney 1981), this study is the first to explain these differences using an evolutionary argument; moreover, this investigation demon-

strates that humor appreciation and production differ between women and men. Women respond more strongly to humorous appeals, whereas men are more likely to be humor producers due to the differences in reproductive strategies between the genders (Bressler et al. 2006). Indeed, our content analysis supports the idea that men are more frequently producers of humor, whereas the experimental study shows greater responsiveness to humor and greater advertising effects of humor for women. The findings are in line with gender differences in emotional processing as evidenced by recent neuro imaging studies (Azim et al. 2005; Kohn et al. 2011): women perform better in detecting, generating and appraising emotions than men.

The information processing perspective is a feasible approach that can be used to explain the advertising effectiveness of humor, stereotyping, and audience gender. This is further indicated by the mediation analysis that provides evidence that the attitudinal effects of humor and stereotyping in ads are mediated by portrayal evaluation and credibility and are particularly strong for women who are exposed to the humorous and non-traditional stereotyping ad version.

The third contribution of this study relates to practice. Managerially, the findings help advertisers that are facing objections from the public and consumer policymakers that are concerned about marketing activities that promote stereotypes. For instance, the European Parliament has issued a resolution on gender stereotyping in the media and has asked its member countries to take actions to avoid stereotypical depictions of women or men on TV (European Parliament 2008). The findings of our study suggest that stereotypical depictions are sometimes used in the creation of humorous ads and that the effects of these depictions differ from the effects of stereotypes in non-humorous advertising. As such, companies can more easily react to political objections against stereotyping in case they apply humorous ads.

Stereotyping can lead to negative reactions of consumers towards advertisers. However, advertising effectiveness is not necessarily reduced by stereotyping if this stereotyping is used in combination with humor. In particular, advertisers who utilize traditional stereotypes because their target group's gender attitudes are more conservative and traditional can apply humor to avoid negative effects. However, they should work with non-traditional stereotypes for target groups with more progressive gender attitudes.

Limitations and Suggestions for Future Research

A central limitation lies in the national context of both of the studies that are presented in this paper. Advertising on German television is a particularly interesting candidate for a content analysis on gender roles because of the size of the German advertising industry (Germany ranks second with respect to this metric in Europe, following the UK, and sixth worldwide (WARC 2007)) and the gender-related norms and values in Germany, which are average according to the results of gender-related country indices: Although Hofstede's index provides a value that indicates a slight tendency towards traditional gender norms (with a value of 66 out of a range from 5 to 95 over 50 countries) (Hofstede 2001), the more recent GLOBE-index shows that Germany is moving towards the middle of the scale. The previous differences between East and West Germany regarding gender values are almost negligible (East Germany: 4.77, West Germany: 4.90 out of a range from 3.18 to 5.17 over 61 countries, median 4.60) (House et al. 2004). (Hofstede 2001; House et al. 2004). Hence, the German context seems to provide an appropriate context to conduct a gender role study that is somewhat representative for other countries, as gender-related norms and values are at an average as indicated by gender-related country indices. However, the perceptions and advertising effectiveness of stereotypes vary across cultures (e.g., Lundstrom, White, and Chopoorian 1999), depending on the gender attitudes and values that

exist in different countries (Ford, LaTour, and Honeycutt 1997). Therefore, the current study should be replicated in other cultural contexts to investigate whether its findings are generalizable or are linked to the gender attitudes and values that exist in a national context. Emerging markets seem a particular interesting candidate for such research as most content-analytic studies on gender roles in advertising have been performed in developed markets (Eisend 2010).

It should further be extended to a wider range of age groups, because humor perception is related to age and cognitive development of people (McGhee 1986). In this vain, the humor variables – arguably the most important variables in our study – had acceptable, but low reliabilities, supporting the notion that perception of humor varies across individuals. Humor variables should be coded by multiple coders to take these differences into account.

The theoretical basis of this study refers processing of ad information as an explanation of the effects of humor and stereotyping in ads. To investigate these underlying processes in more detail, future studies should apply process measures such as open-ended responses on cognitions of consumers when processing ads. Future research might also consider measures of advertising effectiveness other than how much consumers like the ad and the brand, such as attention and memorability. Message-related humor increases attention and thus processing and memory of message claims (Cline and Kellaris 2007; Madden and Weinberger 1982). If these effects refer to humor and stereotyping, too, humor might help memorizing non-traditional stereotypes and related message claims.

Another issue that should be considered in future studies dealing with gender portrayals is the societal changes over time that ask for new coding schemes in order to provide a more up-to-date and complete description of the portrayals of women and men than the coding schemes that have been developed about forty years ago. For instance, in ads that portray the relationships

between both women and men, women are sometimes depicted as competent problem solvers that put up with their less-than competent male partners who do chores or try to cook. Such new descriptions have implications for how men and women are viewed in society and how effective advertising is nowadays.

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TABLE 1
VARIABLES AND CODINGS

Variable	Definition	Indication of traditional stereotyping: Traditional stereotyping occurs...	Codings	Intercoder reliability (Krippendorff's Alpha)
Gender	Captures the central figure's gender.	-	0 = female 1 = male	.85
Age	Describes the central figure's portrayed age.	If men are more frequently depicted as middle-aged/old than women, who are often characterized as young.	0 = young (under 35 years) 1 = middle-aged/old (35 years and older)	.80
Argument	Refers to the type of argument that the central figure provides on behalf of the advertised product.	If men present more factual and scientific arguments than women, who are often characterized as providing opinions and non-scientific arguments.	0 = opinion-based and/or non-scientific argument 1 = factual and/or scientific argument	.82
Credibility	Describes the basis of the central figure's credibility and distinguishes between product users and authorities.	If men are more frequently depicted as authorities than women, who are often presented as product users.	0 = product user (the central figure is a user of the advertised product) 1 = authority (the central figure is source of information about the product)	.79
Hierarchy	Refers to the hierarchy of central figures in ads with more than one central figure.	If men are more frequently depicted as primary characters than as secondary characters or if the opposite phenomenon holds true for women.	0 = secondary character 1 = primary character (only for ads with more than one central figure)	.88
Location	Describes the location in which the central characters appear.	If women are more frequently depicted at home than at work or if the opposite phenomenon holds true for men.	0 = at home/domestic environment 1 = at work/occupational environment	.86
Product type	Refers to the type of product with which the central figures were associated.	If women are depicted more often with domestic products than other products or if the opposite phenomenon holds true for men.	0 = domestic product (e.g., body, home, food) 1 = other product (e.g., auto, leisure, entertainment, service, finance)	.92
Role	Describes the central figure's role in everyday life.	If women are more often depicted in dependent roles or as relatives to others than as independent or autonomous roles; alternatively, stereotyping occurs if the opposite phenome-	0 = dependent role/relative to others (e.g., parent, spouse, home-maker) 1 = independent role/autonomous (e.g.,	.87

		non holds for men.	professional, worker, celebrity, narrator)	
Voice-over	Refers to the gender of the off-camera voice in the ad.	If women are more often depicted with female voice-overs than with male voice-overs or if the opposite phenomenon holds true for men.	0 = female voice-over 1 = male voice-over	.93
Humor	Refers to whether the ad includes some type of humorous elements.	-	0 = ad without humor 1 = ad with humor	.83
Humor relatedness	Refers to whether the humorous elements in a humorous ad relate to the central figure.	-	0 = humor is related to central figure 1 = humor is not related to central figure (only for ads with humor)	.83

TABLE 2
GENDER STEREOTYPING AND HUMOR IN ADVERTISING

Stereotyping variable	Stereotyping variable category	Gender of central figure	Humor n	Humor %	Non humor n	Non humor %	Total n	Total %	χ^2	Traditional stereotyping differs across humor conditions?
Gender		Female	49	41.9	87	61.3	140	52.5	9.67***	
		Male	68	58.1	55	38.7	119	47.5		
Age	Young	Female	28	71.8	35	76.1	63	74.1	.20	
		Male	11	28.2	11	23.9	22	25.9		
	Middle-aged/old	Female	21	26.9	52	54.2	73	42.0	13.12***	humor > non humor
		Male	57	73.1	44	45.8	101	58.0		
Argument	Opinion-based/non-scientific	Female	5	50.0	18	72.0	23	65.7	1.53	
		Male	5	50.0	7	28.0	12	34.3		
	Factual/scientific argument	Female	3	50.0	5	26.3	8	32.0	1.18	
		Male	3	50.0	14	73.7	17	68.0		
Credibility	Product user	Female	32	50.8	66	68.0	98	61.3	4.78**	non humor > humor
		Male	31	49.2	31	32.0	62	38.8		
	Authority	Female	2	20.0	8	38.1	10	32.3	1.02	
		Male	8	80.0	13	61.9	21	67.7		
Hierarchy	Secondary character	Female	18	52.9	13	68.4	29	54.7	2.25	
		Male	16	47.1	6	31.6	24	45.3		
	Primary character	Female	15	32.6	23	51.1	38	41.8	3.20*	humor > non humor
		Male	31	67.4	22	48.9	52	58.2		
Location	At home/domestic	Female	19	43.2	23	67.6	42	53.8	4.62**	non humor > humor
		Male	25	56.8	11	32.4	36	46.2		
	At work/occupational	Female	4	17.4	12	50.0	16	34.0	5.56**	humor > non humor
		Male	19	82.6	12	50.0	31	66.0		
Product type	Domestic	Female	24	47.1	70	67.3	94	60.6	5.88**	non humor > humor
		Male	27	52.9	34	32.7	61	39.4		
	Other	Female	25	37.9	17	44.7	42	40.4	.47	
		Male	41	62.1	21	55.3	62	59.6		
Role	Dependent/relative to others	Female	13	37.1	20	55.6	33	46.5	2.42	
		Male	22	62.9	16	44.4	38	53.5		
	Independent/autonomous	Female	8	22.2	27	50.0	35	38.9	7.01***	humor > non humor
		Male	28	77.8	27	50.0	55	61.1		
Voice-over	Female voice-over	Female	13	59.1	32	72.7	45	68.2	1.26	
		Male	9	40.9	12	27.3	21	31.8		
	Male voice-over	Female	26	34.2	31	52.5	57	42.2	4.58**	humor > non humor
		Male	50	65.8	28	47.5	78	57.8		

Note: For small cell sizes ($n < 5$), we applied Fisher's exact test next to the χ^2 -test to validate the test results.

* $p < .10$; ** $p < .05$; *** $p < .01$

TABLE 3

MEANS (AND STANDARD DEVIATIONS) OF MANIPULATION ASSESSMENT

MEASUREMENTS AND DEPENDENT VARIABLES

Manipulation assessment measure- ments/dependent vari- able		Gender of participants			
		Female		Male	
		Humor in advertising			
Type of stereotyping	NH	H	NH	H	
Perceived humor	Traditional	2.27 (1.00)	4.07 (1.46)	2.57 (1.50)	4.47 (1.81)
	Non-traditional	2.25 (1.27)	4.76 (1.44)	3.05 (1.96)	4.24 (1.39)
Traditional gender role: female character	Traditional	2.69 (1.16)	2.93 (1.00)	2.76 (1.04)	2.73 (1.03)
	Non-traditional	2.21 (1.04)	2.47 (1.22)	2.22 (1.44)	1.82 (1.13)
Traditional gender role: male character	Traditional	2.88 (1.33)	2.81 (1.11)	2.62 (1.16)	2.93 (.88)
	Non-traditional	2.21 (1.32)	2.44 (1.37)	1.95 (1.43)	1.67 (1.05)
Attitude toward the ad	Traditional	3.02 (1.07)	4.23 (1.17)	3.81 (1.28)	4.36 (1.46)
	Non-traditional	2.84 (1.37)	5.13 (.86)	3.45 (1.47)	4.45 (1.21)
Attitude toward the brand	Traditional	4.42 (1.55)	5.47 (.72)	5.07 (.69)	4.67 (1.71)
	Non-traditional	4.42 (1.60)	5.89 (.65)	4.21 (1.05)	4.85 (1.33)
Evaluation of portrayal	Traditional	2.65 (1.38)	3.43 (1.22)	3.24 (1.04)	3.70 (1.24)
	Non-traditional	4.07 (1.30)	5.09 (1.15)	4.10 (1.35)	4.35 (1.65)
Credibility	Traditional	2.29 (1.08)	3.65 (1.36)	3.06 (1.25)	3.27 (1.40)
	Non-traditional	2.91 (1.08)	4.44 (.83)	3.03 (1.25)	3.41 (1.32)

Note: NH = non-humorous, H = humorous.

All of the measurements in the table range from 1 to 7 with the exception of the traditional gender role measures, which range from 1 to 4.

TABLE 4

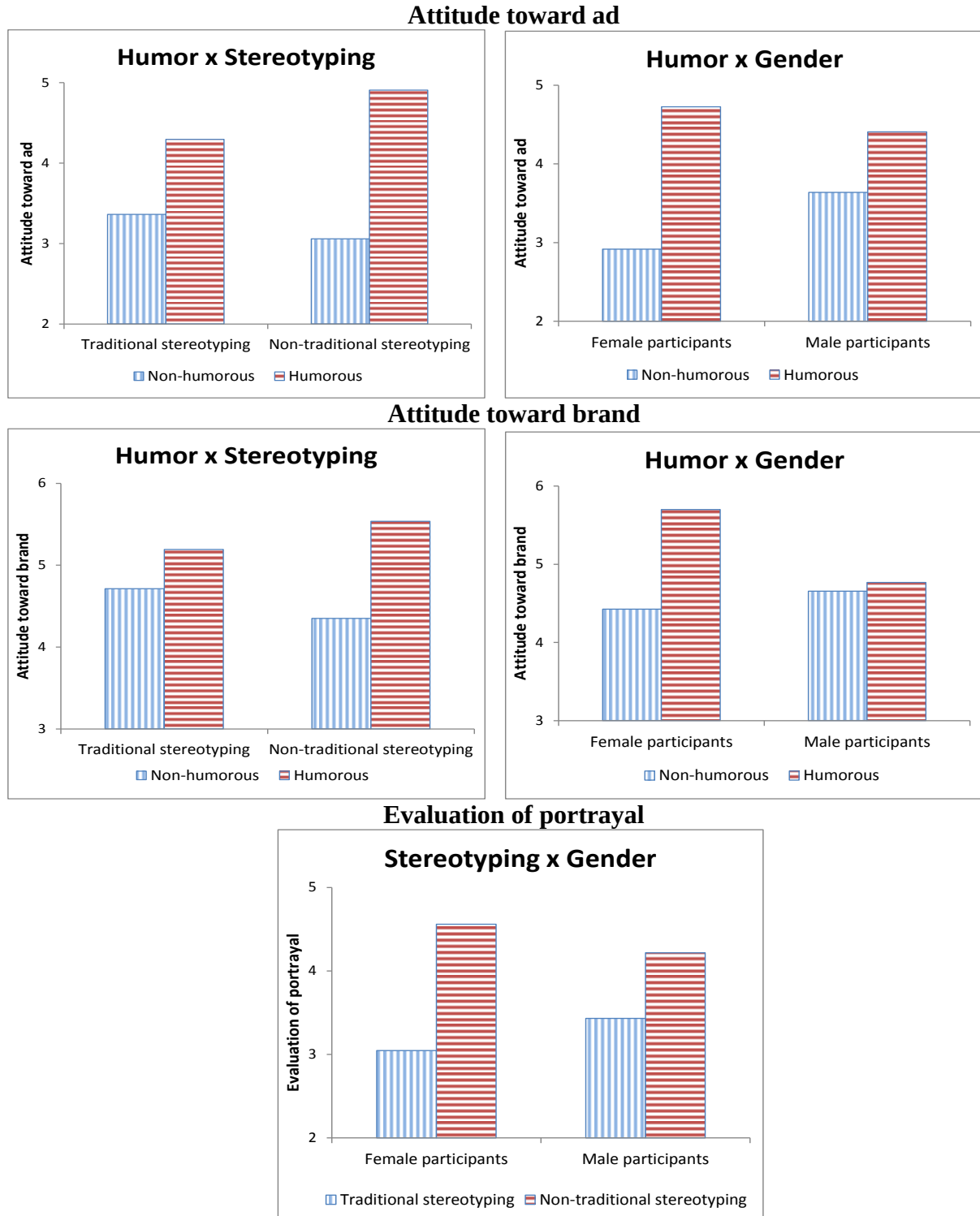
MEDIATION ANALYSIS

Independent variable (IV)	Dependent variable (DV)	Mediator (M)	Moderator IV → DV	Moderator IV → M	Direct effect (significant conditions)	Indirect effect (significant conditions)
Stereotyping	Attitude toward ad	Portrayal evaluation	Humor	Gender	Negative for male/non-humor ($c = -.55$, $SE = .32$, $t = 1.74$, $p < .09$) and female/non-humor ($c = -.52$, $SE = .29$, $t = 1.81$, $p < .07$)	Positive for all conditions: Female/humor ($ab = .37$, $SE = .14$, $LCI = .14$, $UCI = .70$) > female/non-humor ($ab = .33$, $SE = .14$, $LCI = .11$, $UCI = .65$) > male/humor ($ab = .19$, $SE = .11$, $LCI = .04$, $UCI = .48$) > male/non-humor ($ab = .15$, $SE = .10$, $LCI = .01$, $UCI = .38$)
Stereotyping	Attitude toward brand	Portrayal evaluation	Humor	Gender	-	-
Stereotyping	Attitude toward ad	Credibility	Humor	Gender	-	Positive for female/humor ($ab = .41$, $SE = .14$, $LCI = .18$, $UCI = .76$)
Stereotyping	Attitude toward brand	Credibility	Humor	Gender	-	Positive for female/humor ($ab = .14$, $SE = .10$, $LCI = .01$, $UCI = .40$) and female/non-humor ($ab = .10$, $SE = .07$, $LCI = .01$, $UCI = .32$); female/humor > female/non-humor
Humor	Attitude toward ad	Credibility	Gender	Gender	Positive for female ($c = 1.26$, $SE = .22$, $t = 5.58$, $p < .01$) and male ($c = .70$, $SE = .26$, $t = 2.72$, $p < .01$); female > male	Positive for female ($ab = .58$, $SE = .13$, $LCI = .36$, $UCI = .85$)
Humor	Attitude toward brand	Credibility	Gender	Gender	Positive for female ($c = 1.20$, $SE = .24$, $t = 5.10$, $p < .01$)	-

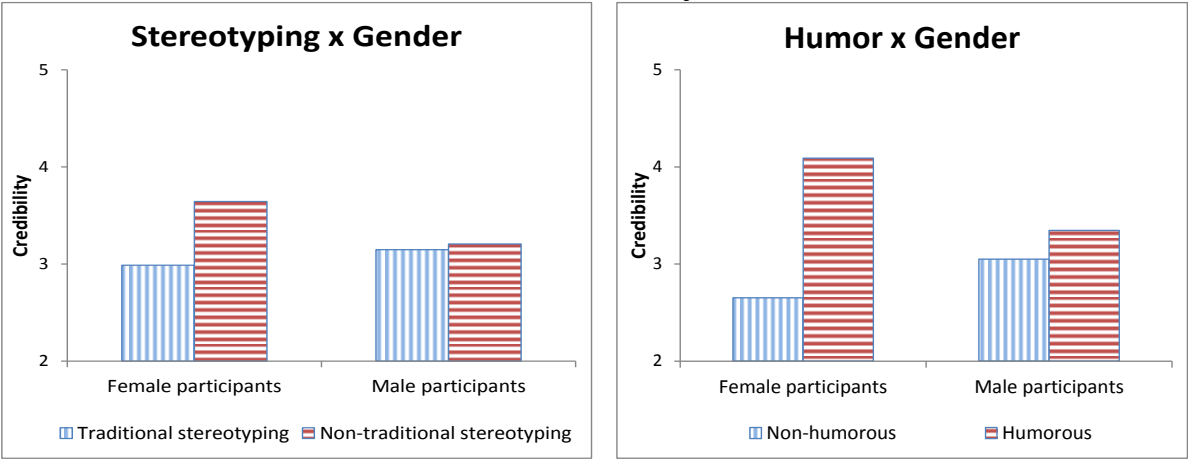
Note: For the indirect effects, we report the bootstrapping results (mean effect, SE, and lower and upper limit of the 95% confidence interval) for the values of the moderator that are significant.

FIGURE 1

INTERACTION EFFECTS



Credibility



APPENDIX

TABLE 1A

GENDER STEREOTYPING AND HUMOR IN ADVERTISING (FOR ADVERTISEMENTS IN WHICH THE HUMOR RELATES TO THE SPOKESPERSON)

Stereotyping variable	Stereotyping category	Gender of central figure	Humor n	%	Non humor n	%	total n	%	χ^2	The influence of humor on stereotyping	
Gender		Female	14	34.1	87	61.3	101	55.2	9.46***		
		Male	27	65.9	55	38.7	82	44.8			
Age	Young	Female	5	62.5	35	76.1	40	74.1	.66		
		Male	3	37.5	11	23.9	14	25.9			
	Middle-aged/old	Female	9	27.3	52	54.2	61	47.3	7.13***		humor > non humor
		Male	24	72.7	44	45.8	68	52.7			
Argument	Opinion/non-scientific	Female	2	66.7	18	72.0	20	64.5	3.16*	non humor > humor	
		Male	4	33.3	7	28.0	11	35.5			
	Factual/scientific argument	Female	0	0.0	5	26.3	5	25.0	.35		
		Male	1	100.0	14	73.7	15	75.0			
Credibility	Product user	Female	10	50.0	66	68.0	76	65.0	2.37		
		Male	10	50.0	31	32.0	41	35.0			
	Authority	Female	1	12.5	8	38.1	9	31.0	1.77		
		Male	7	87.5	13	61.9	20	69.0			
Hierarchy	Secondary character	Female	7	70.0	13	68.4	20	69.0	.01		
		Male	3	30.0	6	31.6	9	31.0			
	Primary character	Female	2	14.3	23	48.9	25	42.4	5.93**		humor > non humor
		Male	12	85.7	22	51.1	34	57.6			
Location	At home/domestic	Female	7	53.8	23	67.6	30	63.8	.78		
		Male	6	46.2	11	32.4	17	36.2			
	At work/occupational	Female	1	11.1	12	50.0	13	39.4	4.15**		humor > non humor
		Male	8	88.9	12	50.0	20	60.6			
Product type	Domestic	Female	6	35.3	70	67.3	76	62.8	6.41**	non humor > humor	
		Male	11	64.7	34	32.7	45	37.2			
	Other	Female	8	33.3	17	44.7	25	40.3	.80		
		Male	16	66.7	21	55.3	37	59.7			
Role	Dependent/ relative to others	Female	4	44.4	20	55.6	24	53.3	.36		
		Male	5	55.6	16	44.4	21	46.7			
	Independent/ autonomous	Female	3	17.6	27	50.0	30	42.3	5.55**		humor > non humor
		Male	14	82.4	27	50.0	41	57.7			
Voice-over	Female voice-over	Female	4	66.7	32	72.7	36	72.0	.10		
		Male	2	33.3	12	27.3	14	28.0			
	Male voice-over	Female	6	23.1	31	52.5	37	43.5	6.37**		humor > non humor
		Male	20	76.9	28	47.5	48	56.5			

Note: For small cell sizes ($n < 5$), we applied Fisher's exact test next to the χ^2 -test to validate the test results.

* $p < .10$; ** $p < .05$; *** $p < .01$

FIGURE 1A

EXPERIMENTAL STIMULUS 1: NON-HUMOROUS / TRADITIONAL STEREOTYPE



Description. The scene of the first stimulus IKEA ad shows a living room setting with an old-fashioned green couch in the center. The main actors are a man and a woman, who are presumably husband and wife. The wife holds a feather duster and thus appears in a typical gender role as the cleaning and caring housewife. By contrast, the husband is lying on the couch reading a book. He appears to have just returned home from work and is now taking time to relax. The brand 'IKEA' is depicted in the lower right corner. IKEA offers a wide range of modern and functional home furnishing products at low prices. The product advertised here is a new and modern IKEA couch named "Karlstad", which is depicted in the lower left corner. A headline is not used, only the slogan "Find a new couch at IKEA".

FIGURE 1B

EXPERIMENTAL STIMULUS 2: HUMOROUS / TRADITIONAL STEREOTYPE



Description. The scene of the second stimulus IKEA ad again shows the living room setting with the same old-fashioned green couch in the center. The main actors also remain the same. The only difference between this ad and the previous ad is that the cleaning housewife this time has a vacuum cleaner. The housewife furthermore appears to have superpowers, as she easily lifts the couch with a finger to vacuum the floor beneath this couch. This action is applied to evoke humor. The husband is lying on the couch reading a book and does not appear to notice his lifted position. The brand 'IKEA' again is depicted in the lower right corner. The product advertised has not changed and is depicted in the lower left corner. A headline is applied, saying "Life is brilliant – only your old furniture sucks?". The slogan "Find a new couch at IKEA" remains unchanged from the previous ad.

FIGURE 1C
EXPERIMENTAL STIMULUS 3: NON-HUMOROUS / NON-TRADITIONAL
STEREOTYPE



Description. The scene of the third stimulus IKEA ad again shows the living room setting with the same old-fashioned green couch in the center. The main actors also remain the same. The only difference between this ad and stimulus 1 is that the wife is now relaxing and sitting on the couch, whereas the husband wields the feather duster. This situation depicts a non-traditional gender role portrayal. The brand ‘IKEA’ is again depicted in the lower right corner. The product advertised has not changed and is depicted in the lower left corner. Similarly to stimulus 1, a headline is not used, only the slogan “Find a new couch at IKEA”.

FIGURE 1D

EXPERIMENTAL STIMULUS 4: HUMOROUS / NON-TRADITIONAL STEREOTYPE



Description. The scene of the fourth stimulus IKEA ad again shows the living room setting with the same couch in the center. The main actors also remain the same as in the previous stimuli. However, in this ad, the wife is relaxing with a glass of red wine and a book. She is lying on the couch and looking over at her husband with apparent amusement. He is easily lifting up the couch with her on it to vacuum underneath this item of furniture. He is smoking a pipe and playfully lifting his leg. The brand 'IKEA' is again depicted in the lower right corner. The product advertised has not changed from the previous stimuli and is depicted in the lower left corner. A headline is applied, saying "Life is brilliant – only your old furniture sucks?". In addition, the slogan "Find a new couch at IKEA" has remained unchanged from the other stimuli.