The Effects of Incongruity, Surprise and Positive Moderators on Perceived Humor in Television Advertising

Dana L. Alden, Ashesh Mukherjee and Wayne D. Hoyer

Few studies have tested models incorporating cognitive as well as affective mechanisms that help explain different levels of perceived humorosity in advertising (cf. Alden and Hoyer 1993; Speck 1991). In the first of two studies, an extended incongruity resolution model of humor perception in television advertising is proposed and tested. In that test, schema familiarity is found to moderate surprise resulting from ad content incongruity. Furthermore, playfulness of the ad, ease of resolution of the incongruity in the ad and warmth created by the ad moderate the effects of surprise on humor. Thus, surprise appears to be a necessary, but not sufficient, condition for humor in television advertising. In the second study, the role of surprise in generating humor is examined in more detail. Specifically, evidence supports the hypothesis that, following exposure to incongruity, surprise can be transformed into diverse affective outcomes such as fear and humor depending on the presence of different contextual moderators. Implications of the overall model are discussed from both theoretic and applied perspectives and directions for future research are suggested.

Introduction

Humor is one of the most commonly employed communication strategies in advertising. Researchers estimate that between 11% and 24% of television ads in the United States use humor (Speck 1991; Weinberger and Spotts 1989). Similar or higher usage has been reported in international studies of humor (Alden, Hoyer and Lee 1993; see also Unger 1995) and in other media such as radio (Weinberger and Campbell 1991). Despite its popularity, there are also clear risks associated with using humor as a central message strategy. For example, humorous effects are known to vary by target audience gender and ethnicity (Madden and Weinberger 1982) as well as culture (Unger 1996). In addition, humorous executions are more effective for low involvement products (Weinberger and Gulas 1992) and are more effective than non-humorous ads only when the target audience already has positive attitudes toward the brand ( Chattopadhyay and Basu 1990).

At the same time, humor that is appropriate for the product category and well-integrated with message themes has been shown to enhance attention, credibility, recall, evaluation and purchase intention (Cho 1994; Osterhouse and Brock 1970; Scott, Klein and Bryant 1990; Speck 1987; Zhang and Zinkhan 1991). It also appears to reduce counterargumentation (Krishnan and Chakravarti 1990; Scott, Klein and Bryant 1990), boost comprehension (Stewart and Furse 1986) and increase transfer of positive affect from the ad to the brand (Aaker, Stayman and Hagerty 1986; Zinkhan and Gelb 1990; see Weinberger and Gulas 1992 for a thorough review). Finally, researchers have identified several moderators of humor’s effect on processing outcomes, including: non-message factors (e.g., prior brand attitude; Chattopadhyay and Basu 1990), product characteristics (e.g., involvement; Weinberger and Campbell 1991) and audience characteristics (e.g., knowledge; Gelb and Zinkhan 1985).

Few studies in this area, however, have addressed the fact that ads attempting humor vary dramatically in consumer evaluations of humorous content (Speck 1991). Variations in humor evaluation are likely to have

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important consequences for advertising outcomes such as message credibility, recall, and attitude toward the ad and brand (Shimp 1997). Thus, researchers have begun building theory that helps explain how advertising content affects levels of perceived humor. For example, Speck (1991) identifies incongruity resolution, arousal-safety and humorous disparagement as methods used in advertising to generate humor. Past research in psychology (cf. Herzog and Larwin 1988) and linguistics (cf. Raskin 1985) indicates that incongruity-resolution is a particularly useful framework for understanding the process of humor generation. Working within this framework, Alden and Hoyer (1993) report that most of the television ads in their national sample used “incongruity from expectations” to generate humor. In addition, more than two-thirds of these ads featured either reality-based or fantasy-based incongruities, with the former rated as more humorous than the latter. More recently, Alden, Mukherjee and Hoyer (1999) found that incongruity type also influenced feelings of surprise which, in turn, were positively related to perceived humor.

Building on studies such as these, research on humorous evaluation in television advertising can be extended in at least two ways. First, the potential role of surprise as a mediator of the incongruity-humor relationship in television advertising would benefit from additional theoretical development and empirical testing. Second, previous research has not tested potential moderators that may enhance the positive affect associated with humorous evaluation. Seeking to increase understanding of this widely used but risky execution strategy, the following two studies propose and test an extended “incongruity resolution” model of humor in television advertising.

Theoretical Development

Model Overview

As mentioned above, one stream of research on humor has adopted an incongruity-resolution framework to explain how humor operates (Speck 1991). In the present study, we extend this work by proposing a model of humor in television advertising (see Figure 1) that incorporates content incongruity (an ad stimulus characteristic), surprise (a primary viewer response) and perceived humor (a secondary viewer response). Viewer familiarity with the situation presented in the ad is posited to moderate the degree of viewer surprise in response to an incongruent situation presented in the ad. Three affect-inducing factors (ad playfulness, ease of resolution of the incongruent situation and ad warmth) are proposed to moderate the subsequent humorous evaluation. Perceived humor in turn is hypothesized to result in positive attitude toward the ad.

In the model shown in Figure 1, surprise is hypothesized to play a central role in the generation of a humorous response. The role of surprise follows from past research in other areas. Such research has linked surprise with both schema incongruity as well as humor. For example, it has been empirically demonstrated that surprise is a primary reaction to perceiving “stimulus-schema” incongruity (Meyer 1986; see also Meyer et al. 1991). Hence, based on the incongruity-resolution model of humor, which posits “stimulus-schema” incongruity as a key condition for humor (cf. Raskin 1985; Suls 1983), feelings of surprise follow exposure to incongruity and should also be associated with a subsequent humorous evaluation. In the following sections, we hypothesize relationships between incongruity and surprise on one hand and surprise and humor on the other.

The Influence of Incongruity on Surprise

As mentioned earlier, past research suggests that surprise is a primary individual-level response to “stimulus-schema” incongruity (Izard 1977; Meyer 1986; Meyer et al. 1991; Meyer and Niepel 1994). In the current context of television advertising, the degree of “stimulus-schema” incongruity can be viewed as the extent to which ad content differs from generally expected beliefs, attitudes and/or behaviors. For example, consider an ad that shows a man walking down a street who then begins to skip like a child. Since grown people are generally not expected to skip while walking, it is likely that analysts would label this sequence of behaviors at least moderately incongruent with typical adult behavior.

However, stimulus incongruity is unlikely to perfectly correlate with viewer feelings of surprise. This might occur, for example, when ad content is incongruent with a schema that is not well-formed due to lack of experience. In such cases, high levels of surprise seem less likely. Thus, an ad might initially cue the generally familiar “shopping in a supermarket” schema and then show an unexpected event within the context of that schema (e.g., a father with rambunctious twins trying to get through the checkout stand). Alternatively, an ad may cue a generally less familiar schema (e.g., a military staff meeting) as the background for an incongruous execution (e.g., a colonel sneaking a potato chip snack during the formal meeting).
The spreading activation model of memory proposed by Anderson (1983) predicts that more rapid and widespread activation of nodes in working memory will be associated with more familiar schemas. Each node is viewed as a distinct source of arousal. Thus, the total arousal associated with an ad that presents an incongruity in the context of a familiar schema is likely to be higher than that associated with an ad that cues a less familiar schema (Berlyne 1960; Grunert 1996). Given that arousal is a defining characteristic of surprise (see Larsen and Diener 1992; Oliver 1994; Russell, Suzuki and Ishida 1993), the effect of incongruity on surprise is likely to be magnified as familiarity with the situation presented in the ad increases. This leads to our first hypothesis:

H1: Higher levels of incongruity will result in stronger viewer surprise when viewers have high familiarity with the situation presented in the ad than when they have low familiarity.

The Role of Surprise in Generating Humor

There is considerable evidence that surprise is a primary reaction to stimulus-schema incongruity (Meyer 1986; see also Meyer et al. 1991). What is the nature of this surprise reaction? Based on a sorting task of 135 emotion labels by large numbers of subjects, Shaver, Wu and Schwartz (1992) found evidence for a “surprise emotion cluster” among six basic-level emotions. Furthermore, Izard (1977) identified surprise as an emotion characterized by a transitory feeling of uncertainty following any sudden, unexpected event. Finally, surprise is described by Meyer and Niepel (1994, p. 353) as:

...an emotional entity that can be observed from three classes of hypothetical events: specific physiological changes, behavior patterns, and verbal reports about subjective experience. Surprise is elicited by unexpected events, that is, events that deviate from a schema.
Hence, *surprise* is similar to other emotions in that it usually involves physiological arousal. However, surprise also differs from most other emotions in that a specific “tone” or valence is not necessarily associated with that arousal (Batson, Shaw and Oleson 1992; Frijda et al. 1992). For example, *joy* is inherently pleasant and *fear* is inherently unpleasant, while surprise can result in pleasant, unpleasant or limited feelings depending on contextual factors.

The “self-report affect circumplex model” of emotion (Larsen and Diener 1992) supports a valence-neutral conceptualization of surprise. Based on empirical data, it arrays different emotions on a two dimensional grid. “Pleasant-unpleasant” were found to be located along one dimension and “high-low activation” on the other. Surprise was located in the valence-neutral quadrant of the pleasant-unpleasant dimension along with such terms as “aroused,” “astonished,” and “stimulated.” Similarly, in a factor analysis of 16 affects, Oliver (1994) found that surprise was best categorized as an emotion with a neutral valence, along with “active” and “lively.”

Thus, there is considerable evidence for conceptualizing surprise as relatively neutral arousal. This view in turn suggests that the effect of surprise on perceived humor (a positive emotion; Aaker, Stayman and Hagerty 1988) may be related to the presence of contextual moderators that induce positive affect in the consumer and facilitate a humorous evaluation (see also Rothbart 1976). Three potential affect-inducing moderators are now discussed in detail.

**Playfulness**

One construct that is likely to serve as a moderator of the surprise-humor relationship is *playfulness* (see Barnett 1990; Costa and McCrae 1988). Gunn and Webster (1992, p. 85) propose the following individual-level definition of playfulness:

...a propensity to define (or redefine) an activity in an imaginative, nonserious or metaphoric manner so as to enhance intrinsic enjoyment, involvement and satisfaction.

In marketing, playfulness has been primarily studied as a “feeling” response to advertising rather than as an individual difference characteristic. For example, it emerges as one of 69 feelings associated with advertising by Edell and Burke (1987) and is found to load on a factor described as “upbeat” rather than “negative” or “warm.” It is also identified by Holbrook and Batra (1987) as one of 94 emotional content indicators in advertising based on their review of prior research (see also Batra and Holbrook 1990). Finally, Aaker, Stayman and Hagerty (1988) identify a feeling cluster in response to TV advertising which they label “playful/childish.” This cluster is comprised of the following items: playful, childish, silly, mischievous, zany, youthful and spunky. Although separate from the “friendly/humorous” cluster, the researchers suggest that the two sets of clusters “may be related to humor” in advertising (Aaker, Stayman and Hagerty 1988, p. 13).

In humor theory, the concept of playfulness appears fairly central to the generation of a humorous response. For example, Suls (1983) argues that a playful context is one factor that allows “problem-solving” following incongruity to result in a humorous evaluation. This assumption is widely shared among humor theorists as evidenced by the presence of seventeen references to “play” in a recent bibliography on humor scholarship (Nilsen 1993). Within advertising, Speck (1991) refers to the “play signal” as a necessary component of the humor generation processes in advertising (see also McGhee, 1979, p. 71).

While there is widespread agreement concerning the importance of playful feelings to humorous evaluation in general (Nilsen 1993), the role of playfulness in generating humor within an advertising context appears to be untested. The present study is interested in examining the role of playfulness as a moderator of the surprise-humor relationship. Given its affect-inducing nature, playfulness is likely to contribute to a positive, low risk context in which surprise-related arousal can be transformed into humor. Thus, surprise is likely to have a stronger relationship to humor when playfulness is high than when it is low. This leads to the following hypothesis:

H2: The effect of surprise on perceived humor will be stronger when playfulness is high than when it is low.

**Ease of Resolution**

*Ease of resolution* refers to the effort required by individuals to resolve an incongruent situation shown in an ad. Suls (1972) argues that successful resolution of the incongruity underlying a humorous message is a necessary condition for experiencing a humorous response. A similar argument is made in Raskins’ (1985) contrast-resolution model where resolution is posited as a necessary condition for humorous evaluation. In addition, these theorists have suggested that humorous messages vary in terms of how easily the incongruity can be resolved. Above a certain threshold level, messages that are more easily resolved should engender a stronger sense of closure,
facilitating a stronger “I get it” or “Aha” cognitive response (Krishnan and Chakravarti, 1998).

Theory also suggests that ease of resolution is a source of positive affect that helps the consumer place a positive valence label on the surprise emotion (Mandler 1982; Meyers-Levy and Tybout 1989). Such positive affect is thought to result from increased feelings of control and self-efficacy accompanying the “I get it” response (see Bandura 1977). Positive feelings (possibly in combination with a continued cognitive appreciation of resolution) are then likely to enhance humorous evaluation of the advertisement. Based on this logic, ease of resolution is hypothesized to moderate the surprise-humor relationship, with surprise being effectively transformed into humor when ease of resolution is high, but not when it is low. This argument is now formalized:

H3: The positive effect of surprise on humor will be stronger when ease of incongruity resolution is high than when it is low.

Warmth

Warmth generated by the ad is proposed as a third affect-inducing moderator of the surprise-humor relationship. Warmth is defined as a type of positive affective reaction characterized by a sense of well-being and tenderness (Aaker, Stayman and Hagerty 1986). Past research has found that feelings of warmth frequently evoked by advertising strongly influence ad liking, brand beliefs, brand attitudes and purchase likelihood (Edell and Burke 1987; Holbrooke and Batra 1987). The potential importance of warmth to humorous evaluation is noted by Forabosco (1992, p. 63) when he states that “stimuli with emotional meaning contribute to enjoyment (of humor) not just through their own inherent effect but also because they enhance the incongruity-resolution effect.” In a related vein, Rothbart (1976, p.40) notes that such positive emotional contextual factors are important predictors of a humor response.

Warmth can moderate the surprise-humor relationship in much the same way as playfulness, namely by providing the positive affective tone that transforms an essentially neutral surprise reaction into positively valenced humor. Furthermore, high levels of warmth may also contribute to a low-risk environment where multiple resolutions of the incongruity can be considered. For example, a cartoon character in a humorous ad may act in a playful manner and thereby create the positive risk-free context conducive to humor. At the same time, that character could express warmth towards another character, thereby heightening the viewer's overall positive affect, increasing humorous evaluation of the ad. It is important to note that, although often associated with positive emotions, playfulness does not necessarily imply warmth. For example, it is easy to imagine children acting playfully without expressing warm, empathetic feelings, (e.g., playing superhero “conflict and rescue” games). Furthermore, research referred to earlier has found that warmth and playfulness are distinct constructs (Aaker, Stayman and Hagerty 1988). Our next hypothesis expresses the relationship between warmth, surprise and humor:

H4: The effect of surprise on humor will be stronger when warmth is high than when it is low.

Mediating Role of Surprise

As stated earlier, a central proposition of the present paper is that surprise plays a mediating role in the incongruity-humor relationship. In other words, it is proposed that a key link between an ad’s “objective” incongruity and a humorous response is the degree of surprise generated by the ad. If the incongruity in an ad generates an adequate level of viewer surprise, then a humorous response is more likely to occur. If, on the other hand, incongruity does not produce surprise-related arousal (e.g., the incongruent stimulus is unfamiliar or nonsensical), then humor is less likely to occur. This is formally stated as follows:

H5: Surprise will mediate the effect of degree of objective ad incongruity on perceived humor.

Attitude towards the Ad

Prior research has shown that attitude towards the ad (Aad) is an important advertising outcome that has significant direct effects on attitude towards the brand (Abr) and indirect effects on brand cognitions (Brown and Stayman 1992; McKenzie, Lutz and Belch 1986). Under lower levels of involvement typical of most advertising exposure (Krugman 1965), we expect that peripheral cues such as humor will have a significant effect on Aad (Petty and Cacioppo 1986). Consistent with this hypothesis, Unger (1995) found a direct relationship between humor and ad liking in a study with a limited sample size (ten ads). In addition, Weinberger and Gulas (1992) report that several experimental studies have found a link between humor and Aad. The present study employs a much larger sample of 60 actual television commercials to test for a positive effect of humor on attitude toward the ad. This objective is reflected in the following hypothesis:
H6: The higher the level of perceived humor, the more favorable will be attitude towards the ad.

As demonstrated earlier, there is strong theoretical grounding and empirical evidence in support of modeling surprise as an affectively neutral construct that is a necessary but insufficient condition for perceived humor. However, it is also possible that at some level below active cognition, surprise resulting from moderate incongruity is intrinsically interesting and generates some positive affect irrespective of contextual cues (Mandler 1982; Meyers-Levy and Tybout 1989; Stayman, Alden and Smith 1992). In addition, affect-inducing moderators may exist that have not been included in this study, e.g., timing of the surprise reaction. For both of these reasons, in addition to the interactive effects hypothesized previously, a surprise main effect on perceived humor appears possible.

It is also possible that warmth, ease of resolution and playfulness have direct effects on humor. Past research on affect suggests that pleasure and arousal are two fundamental dimensions of all complex affective reactions, including humor (Larson and Diener 1992; Russell 1980). Since warmth, ease of resolution and playfulness are all likely to engender positive or pleasurable feelings (Aaker, Stayman and Vezina 1988), these variables may directly influence humor through its pleasure dimension. However, given this study's focus on interactive effects, we will not offer formal main effect hypotheses. Instead, we view examination of direct effects for surprise, warmth, ease of resolution and playfulness on humor as exploratory.

Study One: Method

Design and Sample

Most studies on humor in advertising have employed an experimental approach with print ads and a humor present/absent condition. While this approach has led to important insights, it tends to emphasize internal validity over external validity. Seeking to enhance external validity while maintaining an acceptable level of internal validity, a correlation design with a large random sample of television advertisements as the units of analysis was judged as appropriate for this study (Calder, Phillips and Tybout 1982). It may be noted that similar designs have been used in past research on affective responses to advertising (e.g., Batra and Ray 1986; Olney, Holbrook and Batra 1991).

A two-step process was used to collect the random sample of television ads. First, randomized cluster samples of national brand ads shown on the four largest U.S. networks were recorded over a period of four randomly selected days of the week. Each day was split into three time spans of eight hours and a different time span was randomly assigned to each day for the purpose of recording the ads. Duplicate ads were eliminated but different ads for the same brand were retained. This resulted in an unduplicated representative sample of 488 national brand ads. Following a series of pre-evaluation exercises to minimize personal biases, three coders determined whether or not humor was intended in each ad (yes/no). At least two coders judged 119 ads as attempting humor (all three agreed on 104 of these or 87% of the total). From the total set of 119 ads, 60 were randomly selected to test the proposed hypotheses. This process resulted in one ad for 45 brands, two ads for six brands and three ads for one brand. Sixty ads in all appeared to represent a reasonable tradeoff between statistical power and respondent fatigue.

Measurement of Variables

The large number of ads and evaluation tasks meant that respondents would be required to make a substantial number of judgments. Hence, respondent fatigue was an important concern, since even funny ads may be seen as less humorous if rating them is too taxing. To minimize this potential confound, two steps were taken. First, pre-tests had indicated that multi-item scales caused subjects to lose interest in the rating task as the number of ads increased. To lessen the potential impact of fatigue on validity, single-item scales were used for content evaluation by subjects. Second, rating tasks were divided between subjects and coders. Undergraduate student subjects provided evaluations for less complex variables: surprise, ease of resolution, evoked warmth, familiarity of thematic content, perceived humor and Aad. "Expert" graduate student coders provided measures of playfulness and degree of incongruity, since these variables required more sophisticated judgments based on training and in-depth analysis of ad execution. It may be noted that a combination of coders and student respondents has been successfully used in past advertising research, and is said to reduce biases associated with halo effects (see Batra and Ray 1986; Edell and Burke 1987).

Subject Measures

Measures for variables assessed by subjects were taken in two phases. In the first phase, 52 under-
graduate business students from a southwestern university received class credit for evaluating the 60 test ads on surprise, humor and attitude towards the ad. In the second phase, another group of 48 students rated the same ads on warmth, ease of resolution and familiarity of ad content. A standard, blank interval was placed between ads to allow subjects sufficient time to record their evaluations immediately following each advertisement.

The ads were shown in two random orders to control for order effects. Seven-point semantic differential scales were used for subject measures in both phases of data collection. The scales were anchored by: not at all surprising/very surprising; not at all funny/very funny; dislike a lot/like a lot; not at all familiar situation/very familiar situation; very little warm feeling/a lot of warm feeling; and very easy to understand/very difficult to understand. Means computed across subjects for each ad were used in subsequent analysis. Attitude towards the brand (Abr) in each ad and brand familiarity were also measured for each brand featured in the 60 ads as potential covariates. These data were collected from the first set of subjects two weeks before their initial ad rating task.

### Study One: Results

**Moderation of the Incongruity-Surprise Relationship (H1)**

To test H1, a 2x3 ANOVA was performed with ad incongruity and viewer familiarity with the ad situation as independent variables and viewer surprise as the dependent measure. Two levels of “ad situation familiarity” were based on a median split of subject ratings. Three levels of incongruity were created using coder ratings. In an initial test, Abr and brand familiarity were not significant as covariates and were dropped in the final model. The results of the ANOVA are summarized in Table 1.

As shown in Table 1, the overall F test for this ANOVA is significant ($\Omega^2=42.2\%$; $p<0.001$). There is also a significant, positive main effect for “degree of incongruity” on surprise ($p<0.001$). However, it is important to note that the relationship between incongruity and surprise is significantly moderated by viewer familiarity with the situation presented in the ad ($p<.05$). As shown in Table 2, the effect of high versus low incongruity is significant when familiarity is high ($p<.001$), but not when familiarity is low ($p<.11$). Hypothesis 1 is therefore supported.
Table 2
Means for Surprise

<table>
<thead>
<tr>
<th></th>
<th>High Incongruity</th>
<th>Moderate Incongruity</th>
<th>Low Incongruity</th>
<th>Overall Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Familiarity</td>
<td>3.54</td>
<td>3.31</td>
<td>3.10*</td>
<td>3.30</td>
</tr>
<tr>
<td>High Familiarity</td>
<td>4.29</td>
<td>3.43</td>
<td>2.83**</td>
<td>3.77</td>
</tr>
<tr>
<td>Overall Means</td>
<td>4.06</td>
<td>3.36</td>
<td>3.02</td>
<td></td>
</tr>
</tbody>
</table>

*Planned comparison for high versus low incongruity, n.s. (t(13)=1.7, p<0.11)

**Planned comparison for high versus low incongruity, significant (t(14)=3.83, p<.001)

Table 3
Intercorrelation Matrix: Stage 2

<table>
<thead>
<tr>
<th></th>
<th>Surprise</th>
<th>Playfulness</th>
<th>Ease of Resolution</th>
<th>Warmth</th>
<th>Humor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surprise</td>
<td>1.0</td>
<td>0.12</td>
<td>-0.17</td>
<td>-0.03</td>
<td>0.72</td>
</tr>
<tr>
<td>Playfulness</td>
<td>0.06</td>
<td>1.00</td>
<td></td>
<td>0.16</td>
<td>0.25</td>
</tr>
<tr>
<td>Ease of Resolution</td>
<td>1.00</td>
<td>1.00</td>
<td>-0.11</td>
<td></td>
<td>0.48</td>
</tr>
<tr>
<td>Warmth</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td>0.54</td>
</tr>
<tr>
<td>Humor</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Moderation of the Surprise-Humor Relationship (H2-H4)

Most of the variables involved in testing H2-H4 were continuous. Since regression analysis is a more effective technique for capturing information provided by continuous variables (see Hays 1996), a regression equation was used to test these hypotheses. Specifically, humor was regressed on the independent variables of surprise, ease of incongruity resolution, warmth and playfulness. In addition, multiplicative terms comprising pairs of these variables were included in the regression equation to test for one-way interactions (see Sharma, Durant and Gur-Arie 1981). Initially Abr and brand familiarity were used as covariates in the equation. However, the regression coefficients for these variables were not significant and they were dropped from further analyses. The threat of multicollinearity among the predictor variables was judged as unlikely since the variance inflation factors were all less than 10 (see Hair, Anderson, Tatham and Black 1992) and the correlations among the independent variables were relatively small (see Table 3).

The results of the regression equation (Adj. R²=81.2%; p<0.001) are summarized in Table 4. Warmth (p<.03), surprise (p<.03) and ease of resolution (p<.02) were significantly related to perceived humor. The playfulness main effect approached significance (p<.07). These findings are consistent with expectations described earlier. More importantly, all three hypothesized interactions were significant. Thus, consistent with H2, the playfulness and surprise interaction term was significant (p<0.04), indicating that playfulness moderates the surprise-humor link in a positive manner. Furthermore, as predicted by H3, ease of incongruity resolution emerged as a significant moderator of the surprise-humor link (p<0.05). Thus, the easier the resolution of incongruity in the ad, the stronger the relationship between surprise and humor. In addition, evidence of the moderating effect of warmth (H4) was found (p<0.01). Thus, when more warmth was evoked by the ad, the relationship between surprise and humor was stronger. Inspection of the beta coefficients in Table 4 indicates that the warmth by surprise interaction effect is substantially stronger than the other two interaction effects.

Mediation of the Incongruity-Humor Relationship (H5)

Mediation effects have traditionally been tested using a four-step procedure (see Baron and Kenny 1986). This procedure stipulates that a certain variable M mediates the relationship between two variables A and B if the following four conditions are met: (1) A has a direct effect on B, (2) A has a direct effect on M, (3) M has a direct effect on B, and (4) the direct effect of A on B is reduced significantly when M is included as a covariate. Applying this test, as predicted by H5, surprise was found to mediate the rela-
Table 4
Regression Coefficients: Stage 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Beta Coefficient</th>
<th>t-statistic</th>
<th>df</th>
<th>p&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playfulness</td>
<td>0.31</td>
<td>1.83</td>
<td>52</td>
<td>0.07</td>
</tr>
<tr>
<td>Warmth</td>
<td>0.64</td>
<td>2.28</td>
<td>52</td>
<td>0.03</td>
</tr>
<tr>
<td>Surprise</td>
<td>0.79</td>
<td>2.30</td>
<td>52</td>
<td>0.03</td>
</tr>
<tr>
<td>Ease of Resolution</td>
<td>0.63</td>
<td>2.41</td>
<td>52</td>
<td>0.02</td>
</tr>
<tr>
<td>Surprise X Playfulness</td>
<td>0.33</td>
<td>2.08</td>
<td>52</td>
<td>0.04</td>
</tr>
<tr>
<td>Surprise X Warmth</td>
<td>0.61</td>
<td>3.06</td>
<td>52</td>
<td>0.01</td>
</tr>
<tr>
<td>Surprise X Ease of Resolution</td>
<td>0.35</td>
<td>2.01</td>
<td>52</td>
<td>0.05</td>
</tr>
</tbody>
</table>

The Relationship between Humor and Aad

Finally, consistent with H6, there was a strong correlation between humor and Aad (r=0.90, p<0.001). Thus, as humor evaluation increases, so does the probability that the ad is liked.

Study One: Discussion

The results of Study One extend current understanding of the mechanisms of humorous perceptions in television advertising. When viewer familiarity with the situation presented in the ad was high, “objective” incongruity produced significantly stronger levels of viewer surprise than when familiarity was low. Higher levels of surprise were then found to play a critical role in producing humorous evaluations, particularly in the presence of playfulness, easily resolved incongruity and warm ad content. Finally, consistent with past research, attitude toward the ad was positively related to perceptions of humor.

The significant main effect for surprise obtained in this study was not expected. There are at least two potential explanations for this result. As noted earlier, exposure to moderate levels of incongruity has been found to produce positive affect (cf., Meyers-Levy and Tybout 1989; see also Nerhardt 1976 for evidence of direct incongruity effects using non-representational stimuli). In advertising, it is likely that many ads attempting humor employ moderate incongruity, given the context and consumer expectations (Goodstein 1993). Hence, despite the significant effects of affect-inducing moderators such as warmth, simple arousal of the Autonomic Nervous System associated with perception of moderate incongruity may directly produce a portion of the positive affect reflected in a humorous evaluation. A second possibility is the existence of moderators that were not specified in the model tested in this study, e.g., timing of the surprise reaction (Baumgartner, Sujan and Padgett 1997).

These possibilities suggest the importance of examining the hypothesized neutrality of surprise in greater detail. One approach to determining the validity of surprise as valence-neutral could involve demonstration of different outcomes depending on whether positive or negative affect-inducing factors moderate surprise-related arousal. For example, if surprise generated by incongruity can result in negative evaluations (e.g., fear) or positive evaluations (e.g., humor), depending on the type of moderators present in the ad, then the conceptualization of surprise as valence-neutral would have stronger support. Such evidence would also reinforce the importance of playfulness, resolution ease and warmth as affect-inducing moderators of the surprise-humor relationship. These are the goals of Study Two.

Study Two: Hypotheses

In this study, we attempt to show that surprise can lead to humor or fear depending on the levels of two contextual variables, playfulness and threat. As pre-
viously noted, we have conceptualized surprise as a “neutral” emotion that can be affectively colored by other factors in the advertisement. Thus, when surprise occurs in a playful (threatening) context, a humorous (fearful) evaluation is more likely. For example, the surprise that results from hearing frogs croak in a beer ad occurs within a playful context and, thus, is more likely to result in a humorous evaluation. On the other hand, the surprise that arises from seeing a car accident in an ad for insurance happens within a threatening context, i.e., possible physical harm from the accident. In this case, initial arousal stemming from surprise is likely to be moderated by threats to personal safety and is thus more likely to result in a fearful evaluation.

This relationship between surprise, threat and fear is supported by past advertising research, showing that “level of threat” (defined as perceived danger to valued goals or needs) and its perceived “probability of occurrence” are positively related to evoked fear (cf. Tanner, Hunt and Eppright 1991). These arguments are formally summarized in the following hypotheses:

H1a: When the level of playfulness in an ad is high, surprise generated by the ad is positively correlated with perceived humor.
H1b: When the level of threat in an ad is high, surprise generated by the ad is positively correlated with perceived fear.

Study Two: Method

Sampling of Incongruous Television Ads

The complete set of 488 television ads collected for Study One was used as the starting point for data collection in Study Two. Three new coders rated each ad on whether or not at least one unexpected event was shown (yes/no). Before rating, incongruity was defined for the coders as any content that deviated from what they expected as they watched the ad. Coders first practiced with a subset of the 488 ads. Thereafter, at least two coders found 294 contained one or more unexpected content items. From this set, 52 ads were randomly chosen for analysis. All of the ads in this sample were for different brands.

Measurement of Variables

As in Study One, both subjects and expert coders (all of whom differed from Study One participants) rated ads on variables of interest. Subjects provided measures of surprise, humor, fear and Aad, while experts provided measures of playfulness and threat. Expert coders evaluated ads on playfulness and threat, as a more detailed analysis of ad execution was required for these variables. Finally, as in the earlier study, each variable was measured using single-item scales to lessen the impact of fatigue.

Subject Measures

Subject measures were taken in four phases to avoid fatigue. In each phase, seventeen undergraduate business students from a large southwestern university received class credit for evaluating half of the 52 ads on two variables. Surprise and Aad were measured from the first two groups, while humorous and fearful evaluations were provided by the latter two. Ads were presented to each group in one of two random orders. Nine-point semantic differential scales were used to measure each variable. These scales were anchored by: not at all funny/very funny, not at all surprising/very surprising, very little fear/a lot of fear, and dislike a lot/like a lot. Means across subjects for each ad were used in subsequent analysis.

Coder Measures

Three new expert coders rated each ad in terms of the remaining variables of playfulness (low-medium-high), severity of threat (not at all severe-somewhat severe-very severe) and probability of occurrence of the threat (not at all probable-somewhat probable-very probable). Coders were trained in a manner similar to Study One. Intercoder agreement rate was 85%, exceeding standards suggested by Kassarjian (1977). Most disagreements were resolved by discussion among the coders with researchers having to break a tie in three cases. Based on theory discussed previously, an index of threat was created by multiplying severity and probability ratings.

Study Two: Results

Supporting the validity of the single item indicators used in this study, measures of humor and fear were found to be negatively correlated (Pearson r = -0.49, p < 0.01, n = 52 ads). To test hypotheses H1a/b, correlation analysis was performed with the variables of surprise, humor, fear, playfulness and threat (see Table 5). Two levels of playfulness and threat (high/low) were first created using a median split. Next, a Pearson z-statistic was calculated to test the null hypothesis that the preceding variables have zero correlation. Consistent with hypothesis H1a, surprise
was found to positively correlate with humor when playfulness was high (r=0.37, p<0.04, n=26 ads). However, the correlation was negative when playfulness was low (r=-0.28, p<0.12, n=26 ads). In line with H1b, surprise correlated strongly with fear at high levels of threat (r=0.68, p<0.01, n=26 ads), but failed to reach significance when the threat was low (r=0.27, p<0.08, n=26 ads). Discussion of these results follows.

Study Two: Discussion

Study Two found that surprise-related arousal was strongly associated with a fearful evaluation when a negative affect-inducing factor (threat) was high, but not when it was low. On the other hand, surprise-related arousal was strongly associated with a humor evaluation when a positive affect-inducing factor (playfulness) was high, but not when it was low. These results support the conceptualization of surprise as valence-neutral arousal that leads to different affective outcomes depending on the presence of additional moderators. Verification of these possibilities awaits future research. In the meantime, Study Two enhances confidence in the centrality of affect-inducing moderators to the relationship between surprise and humor in advertising.

General Discussion

From Speck's (1991) comprehensive framework, it is clear that there are multiple pathways to generating humorous evaluations in advertising. The incongruity model of humor is one of those pathways. To date, the incongruity model has received considerable attention in psychology (cf. Suls 1972; Wicker et al. 1981) and linguistics (cf. Raskin 1985). However, only Speck (1991) and Alden and Hoyer (1993) appear to have applied this model in an advertising context. Furthermore, there appears to be no prior research that has specifically examined the role of surprise in humorous advertising.

Seeking to enhance our understanding of humor generation in television advertising, the first study reported in this paper provides evidence for an extended incongruity-resolution model that includes: surprise as a mediator and playfulness, ease of resolution and warmth as moderators. In line with the circumplex model of emotions (Larsen and Diener 1992), these results support the conceptualization of surprise as valence-neutral arousal that leads to humor in the presence of certain moderators. Thus surprise appears to be a necessary but insufficient condition for humorous evaluation in television advertising. A second study bolsters this conclusion by showing that surprise is associated with different affective outcomes depending on the presence of alternative moderators.

Given the volume of resources that managers expend on brand communications that attempt humor (Alden, Hoyer and Lee 1993; Weinberger and Spotts 1989), there is a pressing need for more detailed theoretical understanding of factors that increase humorous evaluation. As noted earlier, there are several risks associated with the use of humor in advertising (cf. Madden and Weinberger 1982; Unger 1996; Zhang 1996). Unfortunately, few systematic methods are available to ensure that a joke or message will actually be perceived as funny (i.e., it is entirely a creative rather than part creative, part scientific process). As a result, the development of humorous content appears often to be subjective, unstructured and, thus, "hit or miss."

The present findings provide guidance to advertisers by focusing their efforts on a parsimonious number of content-related constructs that appear important to generating humorous evaluations. For example, creative thinking in terms of situational incongruities and the levels of surprise resulting from
such incongruities should increase a humorous execution’s chance of being perceived as funny. Similarly, production of humorous content should be facilitated by the knowledge that: 1) surprise is enhanced by controllable factors such as “familiarity of the situation in the ad” and 2) surprise is more likely to result in humor when playfulness, ease of resolution and warmth are high.

Although affect-inducing factors such as playfulness have been discussed in the academic literature (cf. Nilsen 1993), incongruity theorists have tended to emphasize cognitive influences and processes in their models of humor (e.g., Raskin 1985). Paralleling other contemporary research streams that have emphasized the role of affect (cf. Oliver 1994), this paper is one of the first in advertising to report significant roles for affect-inducing moderators along the incongruity pathway to humorous evaluation (see also Speck 1987). As evidenced by a higher beta coefficient in Table 4, ad warmth appears to play a particularly important role in this regard. Future theorists will need to validate these relationships and determine optimal levels of each variable.

For example, this study hypothesized and found a significant, positive linear interaction between surprise and “ease of resolution” with surprise exerting a stronger effect on humor at high versus low “ease of resolution” (H3). Berlyne’s (1960, 1972) theory regarding the effects of optimal stimulation level (OSL) on problem solving and learning suggests the possibility of a non-linear inverted U relationship with “ease of resolution” exerting its strongest interactive effect at moderate rather than low or high levels of complexity. However, recent studies involving OSL and sensation (Brocke, Beauducel and Tasche 1999; Kohler 1996) suggest that optimal stimulation is negatively skewed on the low side of the stimulation continuum for most people (i.e., the optimum is significantly closer to low than to high). Relatively low motivation to process television advertising (Shimp 1997) may magnify this negative skew. If this is the case, then one might expect low humor evaluations for humor that is moderately to very difficult to resolve. Furthermore, the positive linear relationship between the “ease of resolution/surprise” interaction and humor found in this study may hold generally in humorous television advertising. It will be important for future investigators to more fully examine this relationship, possibly using an experimental design rather than a real world sample of ads. Future researchers should also investigate other potential affect-inducing factors, such as empathy and romance that may aid in transforming surprise into humor.

Finally, the results of this study replicate the positive relationship between perceived humor and Aad found in past research (cf. Brown and Stayman 1992). As a result, advertising managers can be more confident that effective humorous attempts will result in stronger liking of the marketing communication. However, this study also shows clearly that ads attempting humor vary in successful generation of humorous evaluation. Managerial sensitivity to this result, coupled with greater use of the theory-based guidelines during the creative process, should help reduce the number of ads that fail in the attempt to generate humor. Such vigilance is important as it is quite possible that ads using humor that fails will produce more negative brand attitudes than ads that do not use humor at all (Shimp 1997).

Limitations and Future Research

Although the studies reported in this paper extend current understanding of humorous evaluation in advertising, certain limitations point to several opportunities for future research. First, the research design was correlational, i.e., levels of constructs in sample ads were measured rather than manipulated. As noted, this approach facilitates testing of a large number of variables and a wide variety of humorous messages, yielding greater external validity. However, it is likely that the commercial objectives of advertising limit naturally occurring variation in humor antecedents such as “ease of resolution.” More controlled studies with manipulated variables would help validate and extend the conclusions of this research.

Furthermore, other humor antecedents appear worthy of investigation. For example, mood could be an important moderator of the surprise-humor relationship (Gardner 1985). Another promising variable that could be examined in future research is “prior expectations.” Some brands (e.g., Miller Lite, Energizer, Pepsi, MetLife and Little Caesar’s) have acquired a reputation for airing humorous television advertising. As such, consumers could have a prior expectation for humor when they watch ads for these brands (Goodstein 1993). This expectation could have both a direct effect on perceived humor (via a hypothesis confirmation mechanism) as well as a moderating effect on the surprise-humor link (via higher involvement and hence, motivation to resolve even complex incongruities within the ad).

Third, additional evidence of the proposed role of surprise in generating humor could be provided through process tracing experiments that directly measure moment-to-moment changes in key variables.
during ad exposure (cf. Baumgartner, Sujan and Padgett 1997). For example, a central role of surprise in the generation of humor would be supported if a significant difference was noted between the times at which the audience experienced peak surprise and peak humor. Along similar lines, although convergent evidence from these two studies supports the contention that surprise generated by ad incongruity is initially neutral in tone, direct evidence for this argument could require simultaneous process measurements of surprise and positive affect. Such validation of the model proposed in this paper is left as a task for future research.

Fourth, the potential mechanisms through which humor impacts Aad were not fully investigated in these studies. However, the relatively low-involvement conditions during data collection, as well as the experimental method of measuring Aad immediately after viewing the ad would lend support to an affect transfer explanation (due to immediacy of the favorable affect), rather than a more cognitive mechanism working through enhanced recall and elaborated processing. An affect transfer explanation would also be consistent with the main effects of warmth and ease of resolution obtained in Study One, since positive affect associated with high values of these variables could be directly transferred to humor evaluations. Clearly, however, definitive identification of the mechanism underlying these effects is an important topic for future research.

Fifth, since respondent fatigue is a vital factor in the investigation of humor, several steps were taken to minimize its potential effects. However, use of single-item measures and a combination of coder and subject measures may have increased error variance. Fortunately, this also has the effect of making the statistical tests more conservative, leading to greater confidence in obtained significant results. In addition, as mentioned earlier, similar approaches have been successfully used in past advertising research (e.g., Batra and Ray 1986). Nevertheless, future research may seek to address this issue by conducting controlled studies with a limited number of variables and stimuli, where it would be possible to use more reliable measurement scales.

Finally, our studies examined antecedents to humorous evaluation for television advertising only. Hence, it will be important to determine whether the moderators we tested operate similarly in other media channels such as print, radio and the internet. For example, successful humorous executions may need to be generally more "cognitive" in print channels than on television (cf. Spotts, Weinberger and Parsons 1997). As such, successful print ads may rely to a greater extent on generating feelings of control and self-efficacy (Bandura 1977) during the incongruity resolution process as opposed to generating feelings of warmth and playfulness. In addition, the degree of resolution required to elicit a humorous evaluation may differ for print. Given print media's generally higher level of involvement, it may be that humor evaluations are better executed by posing more complex incongruities than typically found in television advertising. Finally, as noted by other researchers, individual difference variables such as "need for cognition" (Zhang 1996) and "tolerance of ambiguity" (Durrheim 1998; Tegano 1990) could well interact with predictors such as "ease of resolution" and "media channel" to affect humor evaluations. These types of issues are clearly important to theorists and advertising managers and suggest several interesting avenues for future research.

References


Berlyne, Daniel E. (1960), Biopsychological Bases and Behavioral Correlates of Sensation Seeking: Contributions to a Multilevel Validation, Personality & Individual Differences, 26 (6), 1103-1123.


