

Effectiveness of Humorous versus Non-Humorous Commercials in
Happy versus Sad Program Environments

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Abstract

A 2 x 2 factorial experiment was conducted to examine effects of mood congruency and mood intensity on effectiveness of humorous and non-humorous commercials in happy and sad program environments using dependent variables of recall, likeability and purchase intent. Humorous commercials performed better than non-humorous commercials in recall and attitude toward the ad. Non-humorous commercials performed better on attitude toward the brand and purchase intent.

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Introduction

For decades social scientists have studied how program environments affect the moods of viewers and how commercial type affects ad recall, likeability and purchase intent. Indeed scholars have considered the effectiveness of humorous versus non-humorous commercials in various programs (Duncan and Nelson, 1985; Murphy, Cunningham, Wilcox, 1979), and they have measured effectiveness of different types of advertising in happy and sad programs (Goldberg and Gorn, 1987). However, it does not appear that any research has been done combining happy and sad programming and humorous and non-humorous commercials. In this experiment, we examine the effectiveness of happy and sad television programming on mood congruency when combined with humorous and non-humorous commercials, and how this in turn affects recall, likeability and purchase intent.

Background

Mood-Thematic Congruency

Mood-thematic congruency is the thematic similarity between a mood-inducing event and later processed information (Howard & Barry, 1994). In this study, television programming is the mood-inducing event and the commercials are the stimuli that will be processed following the event.

The theory suggests, “When a mood is used to cue memory, the most recently processed mood associated should be the most available and the most likely to be retrieved” (Howard & Barry, 1994, p. 3). Therefore, when subjects view a happy

program, their minds should cue happy thoughts, ideas and memories associated with the positive mood.

Happy/Sad Programs

With dozens of channels and hundreds of programs, it's difficult to make conclusions about television programming with regard to advertising. Typical television genres include situation comedies, dramatic shows, news, sports, daytime serials, cartoons and music videos. In addition, there are combinations of genres like "dramadies" that include drama and comedy and *The Simpsons*, which is a cartoon and a sitcom (Budd, Craig & Steinman, 1999).

Goldberg and Gorn looked at bipolar feelings of happy and sad instead of genres in their 1987 study on mood effects. They hypothesized that the mood induced by happy or sad programs would continue to be experienced during commercials within the program. They predicted that this mood congruency would lead viewers to evaluate the commercials in happy programs as more effective and that happy programs would lead to better commercial recall (Goldberg & Gorn, 1987).

Goldberg and Gorn found that mood congruency was present and that the program environment influenced respondents' evaluations of commercials. In support of their hypothesis, it was determined that those who viewed happy programs evaluated the commercials as more effective. Happy programs also led to improved commercial recall (Goldberg & Gorn, 1987).

Humorous/Non-Humorous Commercials

Murphy, Cunningham and Wilcox (1979) tested recall in program environments as well, however they manipulated the moods in the commercials as humorous and non-

humorous. The two types of ads were placed in three prime time program environments: situation comedy, documentary and action/adventure (Murphy, et. al, 1979).

Their results suggested that program environments had an effect on the unaided recall of humorous commercials and the products promoted. However, program environments did not affect aided recall or descriptive abilities in humorous ads. Recall of products and services promoted was much higher for non-humorous ads (Murphy, Cunningham & Wilcox, 1979).

Duncan and Nelson (1985) controlled for the program environment to test strictly the differences in humorous and non-humorous ads in radio programming. Subjects were exposed to an announcer, five minutes of music, the announcer again, a 60-second controlled commercial, a 60-second humorous or serious commercial and four more minutes of music (Duncan & Nelson, 1985).

The researchers tested for eight dependent variables using a nine-step Likert scale ranging from “strongly agree” to “strongly disagree”:

1. Attention paid to the commercial
2. Positive beliefs about the product
3. Liking the product
4. Irritation experienced from the commercial
5. Intention to buy the product
6. Liking the commercial
7. Distraction experienced during the commercial
8. Number of selling points recalled (aided).

They found that humor appeared to increase attention paid to the commercial, reduce irritation experienced from the commercial and increase likeability of the product. Humor did not appear to increase product-related beliefs, purchase intent or recall of selling points, and it did not appear to produce distraction (Duncan & Nelson, 1985).

These studies suggest that mood congruency and mood intensity have an impact on effectiveness of commercials. This study will examine the variables of recall, ad and brand likeability, and purchase intent of brand/services in humorous and non-humorous ads inserted happy and sad programs.

Dependent Variables and Hypotheses

Recall

Recall is used to measure one's memory of advertising. Previous work in this field suggests that positive affect leads to better processing of information (Isen, 1984; Goldberg and Gorn, 1987). Consistent with these findings, we hypothesize:

H₁: Commercials in happy programs will have increased recall as opposed to those viewed in sad programs regardless of the ad type.

Additionally, Duncan and Nelson (1985) suggested that humor appeared to increase recall. Consistent with their findings, we hypothesize:

H₂: Humorous commercials will have higher recall regardless of the program type.

Attitude toward the ad

One variable commonly tested in advertising research is attitude toward the ad (A_{ad}). Researchers have tested A_{ad} as a measure of liking of an ad. Zhang (1996, p. 17) stated:

Humor has been widely acknowledged and employed as an executional element in advertisements, primarily to engender affective response, such as liking (see Weinberger and Gulas 1992 for a summary of the literature on this role of humor). As such, humor is expected to drive A_{ad} when viewers are exposed to humorous advertising, much as background music drives A_{ad} when low involvement viewers are exposed to ads containing background music (Park and Young 1986).

Therefore, we hypothesize:

H₃: Attitude toward the humorous commercials will be higher than non-humorous commercials regardless of the program type.

Additionally:

H₄: Attitude toward the ads will be higher when shown during happy programs than sad programs regardless of the ad type.

Attitude toward the brand

Based on previous studies, positive affect should also lead to better attitude toward the brand (A_{br}). Duncan and Nelson (1985) found A_{ad} influenced A_{br} , which in turn influenced purchase intent. Zhang (1996) notes that A_{br} can be affected directly by humor without effecting A_{ad} . In accordance with the mood congruency theory, we hypothesize:

H₅: Attitude toward the brands/services in humorous commercials will be higher when shown in happy programs than sad programs.

Purchase Intent

Because prior researchers (Duncan and Nelson, 1985; Goldberg and Gorn, 1987) have continuously found that happy/sad programs and humorous/non-humorous commercials have no significant influence on purchase intent, we further hypothesize:

H₆: Purchase intent will not be influenced by happy or sad program type.

H₇: Purchase intent will not be influenced by humorous or non-humorous commercials regardless of the program type.

Table 1 – Variables

| Independent Variables | Dependent Variables |
|---|---|
| Program Type - Happy program - Sad program | Recall - Aided - Unaided |
| Commercial Type - Humorous Commercial - Non-humorous Commercial | Attitude - Towards the Ad - Towards the brand |
| | Purchase Intent |

Methodology

Pretest

We used a 2 x 2 (program environment: happy versus sad; commercial type: humorous versus non-humorous) factorial experiment design to examine how the type of a program and the type of commercials affected the dependent variables. In order to set up our experiment, we developed reliable program environment and commercial type stimuli through pretesting.

We viewed several styles of programming including sitcoms, documentaries and news programs, which could qualify for program environment stimulus. Out of these we selected two programs similar in program style. The sad program was about a plane crash and was recorded from the Discovery Channel. The happy program was about water parks and was recorded from the Travel Channel. Both were edited to 20 minutes in length.

We followed the methodology used by Goldberg and Gorn (1987) to pretest our happy and sad programs. A group of 30 students from entry-level journalism classes viewed the sad program and 31 viewed the happy program. Each group evaluated the program they viewed on a five-point scale (see Table 2): “happy/sad, pleasant/not pleasant, not unusual/unusual, interesting/not interesting.” We found significant

differences in happy/sad scales ($M_H = 4.65$, $M_S = 1.53$, $t(59) = 21.66$, $p < .0001$), pleasant/not pleasant scales ($M_H = 4.65$, $M_S = 1.87$, $t(59) = 16.17$, $p < .0001$) and interesting/not interesting scales ($M_H = 3.52$, $M_S = 4.17$, $t(59) = -2.56$, $p = 0.006$). The scale for not unusual/unusual was not significant ($M_H = 3$, $M_S = 2.93$, $t(59) = 0.23$, $p = 0.410$).

Similar to the Goldberg and Gorn study, we tested whether the information content in the two programs was similar. Participants responded to a fifth scale of informative/not informative. A t-test confirmed that there was no significant difference in the program content in terms of the level of information provided ($M_H = 4.06$, $M_S = 4.37$, $t(59) = -1.49$, $p = 0.07$).

Table 2 – Program Evaluation Statistics for Happy and Sad Programs

| Scale (5 point) | Mean Happy Program | Mean Sad Program | t-value | p-value |
|---------------------------------|---------------------------|-------------------------|----------------|----------------|
| Happy vs. Sad | 4.65 | 1.53 | 21.66 | <.0001 |
| Pleasant vs. Not pleasant | 4.65 | 1.87 | 16.17 | <.0001 |
| Interesting vs. Not interesting | 3.52 | 4.17 | -2.56 | .006 |
| Unusual vs. Not unusual | 3 | 2.93 | 0.23 | 0.410 |
| Informative vs. not informative | 4.06 | 4.37 | -1.49 | 0.07 |

In order to pretest humorous and non-humorous commercials, we followed the methodology presented by Murphy, Cunningham and Wilcox (1979). We selected products that college students would be likely to use and chose commercials equal in length in order to control for obvious extraneous variables. Initially, eight ads (four humorous and four non-humorous) were selected for rating by a panel of judges comprised of four mass communication graduate students and one professor (see

appendix 1). The ads were selected from advertising awards tapes to balance the creativity parameter. After watching four humorous ads, judges ranked them on a seven-point semantic differential scale to describe their reaction to the level of humor. Then, each panel member selected the two most humorous ads. The same procedure was applied to selection of non-humorous commercials.

The two non-humorous commercials with the highest means were selected (Healthy Choice frozen dinners and Phillips 66 gasoline). The selection process for the humorous ads involved an additional step of ranking four humorous ads from most humorous to least humorous. The two humorous commercials with the highest means and the highest rankings were selected (Agfa disposable underwater cameras and Mybasics.com, a website used for purchasing health and beauty supplies).

After the programs and commercials were selected, the two humorous and two non-humorous commercials, as well as a television news promotion and a television movie preview, were incorporated into the programming in two pods. The additional promotion and preview were added to help simulate an actual program viewing environment. We counterbalanced the order of commercials to control for primacy and recency effects, which resulted in eight conditions; four for happy and four for sad (see appendix 2).

Main Experiment

A total of 89 subjects from entry-level courses in mass communication at a midwestern university participated in the main experiment, and they were given extra credit for participating. Fifty-four percent of the subjects were mass communication

majors or pre-majors and 77.5 percent were female. Seventy-four percent of the subjects were freshmen and sophomores.

Subjects were exposed to the stimuli in small groups in a classroom setting on weekday evenings. Following the viewing of either the happy or sad program, subjects completed a questionnaire that consisted of a series of questions on unaided and aided recall, A_{ad} , A_{br} and purchase intent. They were also asked questions about the programming and demographics.

Unaided recall was tested with the following statement, "Thinking about the advertisements that you saw during the program segment, list the advertisements you remember." If the participants listed a product category, brand name or scene from an ad, that ad was considered recalled. For aided recall, participants were asked if they remembered viewing the four ads shown in the program segment. Two foils were also included to help control for guessing. Questions about commercials were presented in the same order as they appeared in the programming.

Attitude toward the ad was measured using four seven-point semantic differential scales taken from Bradley, Meeds and Gupta (2001). The scales were as follows: I dislike the ad/I like the ad, I react favorably to the ad/I react unfavorably to the ad, I feel positive toward the ad/I feel negative toward the ad and the ad is bad/the ad is good. Attitude toward the brand was measured using five seven-point semantic differential scales taken from Holbrook and Batra (1987). The scales were as follows: bad/good, not likable/likable, high quality/low quality, satisfactory/unsatisfactory and well designed/poorly designed.

To test purchase intent, Goldberg and Gorn's (1987) "intention to purchase" scales were used for each product. Each product was measured with the following question, "If you were thinking of buying (product), how likely would you be to buy (brand)?" Participants were asked to respond on one five-point semantic differential scale for each brand. The scale was as follows: very unlikely/likely.

All of the above scales were tested using factor analysis and all scales loaded on a single factor.

Results

Recall Tests

We used t-tests to test the first hypothesis: Commercials in happy programs will have increased recall as opposed to those viewed in sad programs regardless of the ad type. Unaided and aided recall were both tested (see Table 3). Unaided recall for commercials was not found to be significantly different in happy programs as compared to sad programs ($M_H = 1.82$, $M_S = 1.90$, $t(87) = -0.35$, $p = 0.36$). However, aided recall was found to be significantly different in happy programs as compared to sad programs ($M_H = 6.61$, $M_S = .6$, $t(87) = 1.67$, $p = 0.04$). These results contradict the conclusions made by Murphy, et. al (1979).

Table 3 – Recall Measures (Happy vs. Sad Program)

| Dependent Variable | Mean Happy Program | Mean Sad Program | t-value | p-value |
|---------------------------|---------------------------|-------------------------|----------------|----------------|
| Unaided recall | 1.82 | 1.90 | -0.35 | 0.36 |
| Aided recall | 6.61 | 0.6 | 1.67 | 0.04 |

We tested the second hypothesis: Humorous commercials will have higher recall regardless of the program type, using t-tests (see Table 4). We found that unaided and

aided recall for humorous commercials were higher than non-humorous commercials regardless of the program type (Unaided: $M_{\text{HUM}} = 1.16$, $M_{\text{NHUM}} = 0.72$, $t(176) = 4.19$, $p < .0001$, Aided: $M_{\text{HUM}} = 1.42$, $M_{\text{NHUM}} = 0.97$, $t(176) = 2.69$, $p = 0.0039$).

Table 4 – Recall Measures (Humorous vs. Non-Humorous Commercials)

| Dependent Variable | Mean Humorous Commercial | Mean Non-Humorous Commercial | t-value | p-value |
|---------------------------|---------------------------------|-------------------------------------|----------------|----------------|
| Unaided recall | 1.16 | 0.72 | 4.19 | <.0001 |
| Aided recall | 1.42 | 0.97 | 2.69 | 0.0039 |

Our hypothesis was supported, which is consistent with Isen's (1984, p. 535) statement:

Positive affect results in a change in cognitive organization that among other effects may enable...more efficient processing...Positive affect results in an organization of cognitive material, such that either more or broader, more integrated categories are primed and utilized than is the case under control conditions.

Attitude Toward the Ad

The third hypothesis, which stated, attitude toward the humorous commercials would be higher than non-humorous commercials regardless of the program type, was supported. A 2x2 ANOVA was performed to test for main effect and interaction effect on A_{ad} . We found a significant main effect ($F(1, 174) = 59.43$, $p < .0001$) for commercial type ($M_{\text{HUM}} = 5.18$, $M_{\text{NHUM}} = 3.65$), which indicates that A_{ad} was higher for humorous commercials than non-humorous commercials. We also found a significant main effect ($F(1, 174) = 4.03$, $p = 0.023$) for program type ($M_{\text{H}} = 4.61$, $M_{\text{S}} = 4.22$) on A_{ad} (see Table 5). This supports our fourth hypothesis: Attitude toward the ads will be higher when shown during happy programs than sad programs regardless of the ad type. Although not

hypothesized, we did not find any significant effect for interaction between program and commercial type.

Table 5 – Attitude Toward the Ad Measures

| Dependent Variable | Effect | Mean values | F-value | p-value |
|------------------------------------|---------------|---------------------------------------|----------------|----------------|
| Attitude towards the ad - A_{ad} | Main | $M_{HUM} = 5.18$ $M_{NHUM} = 3.65$ | 59.43 | <.0001 |
| | Main | $M_H = 4.61$ $M_S = 4.22$ | 4.03 | 0.023 |

Attitude Toward the Brand

We further hypothesized that attitude toward the brands/services in humorous commercials would be higher when shown in happy programs than sad programs. Again, a 2x2 ANOVA was performed. We found a significant interaction effect ($F(1, 174) = 4.23, p = 0.02$) for program and commercial type. However, the mean values were greater for non-humorous commercials than humorous commercials in both program types, which was in the opposite direction than we hypothesized.

Purchase Intent

As we hypothesized, purchase intent was not significantly influenced by happy or sad program type. We performed a 2x2 ANOVA and found that purchase intent was significantly influenced ($F(1, 174) = 9.32, p = 0.0013$) by commercial type, which was in the opposite direction than hypothesized in our seventh hypothesis. The mean value of purchase intent ($M_{HUM} = 3.06, M_{NHUM} = 3.51$) for non-humorous commercials was higher than humorous commercials.

Conclusion

Overall, our results demonstrate that happy programs and humorous commercials lead to higher recall and liking of ads. Therefore with the advertising patterns as they are

today, we suggest advertisers develop humorous commercials or place their ads in happy programs to achieve higher recall and attitude toward the ad. We realize that these results may not hold true for all product categories, therefore, advertising professionals should apply these findings taking into consideration their specific product or campaign goal.

The dependent variables we used are common measures to determine effectiveness of ads. Although it cannot be generalized for all types of sad programming, indications from this experiment suggest that ads are more effective in happy programs. Again, advertising professionals should take this into consideration when placing ads.

Surprisingly, on measures of attitude toward the brand and purchase intent, non-humorous commercials performed better than humorous commercials in this study. This could be due to the greater availability and possible prior usage of Healthy Choice and Phillips 66 as compared to Agfa and Mybasics.com. We realize that this is a limitation of this study. Ideally, we would recommend selecting humorous and non-humorous commercials for products with similar availability and awareness. This could also be controlled through conducting a pretest on brand awareness and usage. We made every effort to select commercials with similar product availability.

Consistent with previous studies on happy and sad programs and humorous and non-humorous commercials, our findings suggest that many of the prior researchers' conclusions remain consistent when the independent variables are combined.

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Appendix 1

Humorous Commercials:

Agfa disposable underwater camera: A boy is in the ocean; three girls approach him and start laughing at him; they take off their swimsuit bottoms and wave them around—there is no nudity; you then here a click; the last shot shows the boy enjoying the pictures he took with his underwater camera.

Mybasics.com: Two children are fighting over toys; they start hollering obscenities at each other, which are bleeped out; the mother looks over appalled and the announcer says, “need soap.” Screen says, “never run out again,” then mybasics.com and flashing beauty supplies.

Non-Humorous Commercials

Healthy Choice frozen foods: A model talks about the choice of living a healthy life style. As part of this lifestyle she eats Healthy Choice frozen dinner. Shots of the dinner and the model are shown.

Phillips 66 gasoline: Black and white pictures of people in various settings are shown. The narrator is making statements about Phillips 66 being environmentally friendly. As the end the narrator asks viewers to buy Phillips 66 gasoline the next time they buy gas.

Appendix 2

Counterbalanced order of commercials in happy and sad programs

| Stimulus 1 (SAD) | Stimulus 1 (SAD) | Stimulus 1 (SAD) | Stimulus 1 (SAD) |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Tape 1 | Tape 2 | Tape 3 | Tape 4 |
| Program | Program | Program | Program |
| Humorous Ad (A) | Humorous Ad (B) | Non-Humorous Ad (C) | Non-Humorous Ad (D) |
| Promo | Promo | Promo | Promo |
| PSA | PSA | PSA | PSA |
| Humorous Ad (B) | Non-Humorous Ad (C) | Non-Humorous Ad (D) | Humorous Ad (A) |
| Program | Program | Program | Program |
| Non-Humorous Ad (C) | Non-Humorous Ad (D) | Humorous Ad (A) | Humorous Ad (B) |
| PSA | PSA | PSA | PSA |
| Promo | Promo | Promo | Promo |
| Non-Humorous Ad (D) | Humorous Ad (A) | Humorous Ad (B) | Non-Humorous Ad (C) |
| Program | Program | Program | Program |

| Stimulus 2 (HAPPY) | Stimulus 2 (HAPPY) | Stimulus 2 (HAPPY) | Stimulus 2 (HAPPY) |
|---------------------------|---------------------------|---------------------------|---------------------------|
| Tape 1 | Tape 2 | Tape 3 | Tape 4 |
| Program | Program | Program | Program |
| Humorous Ad (A) | Humorous Ad (B) | Non-Humorous Ad (C) | Non-Humorous Ad (D) |
| Promo | Promo | Promo | Promo |
| PSA | PSA | PSA | PSA |
| Humorous Ad (B) | Non-Humorous Ad (C) | Non-Humorous Ad (D) | Humorous Ad (A) |
| Program | Program | Program | Program |
| Non-Humorous Ad (C) | Non-Humorous Ad (D) | Humorous Ad (A) | Humorous Ad (B) |
| PSA | PSA | PSA | PSA |
| Promo | Promo | Promo | Promo |
| Non-Humorous Ad (D) | Humorous Ad (A) | Humorous Ad (B) | Non-Humorous Ad (C) |
| Program | Program | Program | Program |