

# **Five Seconds to the Ad: How Program-Induced Mood Affects Ad Countdown Effects**

Bryant University Honors Program  
Senior Capstone Project  
Student's Name: Tiffany Venmahavong  
Faculty Sponsor: Sukki Yoon, Ph.D.  
Editorial Reviewer: Michael Gravier, Ph.D.  
April 2017

## Table of Contents

<b>ABSTRACT</b> .....	- 2 -
<b>INTRODUCTION</b> .....	- 3 -
<b>LITERATURE REVIEW</b> .....	- 3 -
Introduction.....	- 3 -
Online Advertising Tools.....	- 4 -
Countdown Warning.....	- 5 -
Program-Induced Mood.....	- 6 -
Emotion Regulation .....	- 7 -
Negative State Relief Model.....	- 9 -
Hypothesis Development .....	- 10 -
<b>STUDY 1A</b> .....	- 11 -
Method .....	- 11 -
Results.....	- 13 -
Discussion.....	- 15 -
<b>STUDY 1B</b> .....	- 16 -
Methods.....	- 16 -
Results.....	- 16 -
Discussion.....	- 18 -
<b>STUDY 2</b> .....	- 18 -
Methods.....	- 18 -
Results.....	- 20 -
Discussion.....	- 21 -
<b>GENERAL DISCUSSION</b> .....	- 22 -
<b>APPENDIX</b> .....	- 25 -
Appendix A. – (Study 1A) .....	- 25 -
Appendix B. – (Study 1B) .....	- 28 -
Appendix C. – (Study 2).....	- 30 -
Appendix D. – (Survey Questions).....	- 33 -
<b>REFERENCES</b> .....	- 35 -

## **ABSTRACT**

The study examines what effects a five second countdown warning will have on consumer's attitudes towards the advertisement depending on the main program content. This study builds upon several theoretical models concerning program-induced moods in relation to viewer's judgment to commercial advertisements. Findings from two studies suggest that program-induced mood systematically influences attitude toward the inserted ad with (vs. without) a five-second countdown: for the negative-affect program, attitude toward the ad was *more positive* when the ad was preceded by the countdown than when the ad was not preceded by the countdown. However, for the positive-affect program, attitude toward the ad was *more negative* when the ad was preceded by the countdown than when the ad was not preceded by the countdown. A similar interaction was found with purchase intent.

## **INTRODUCTION**

Suppose that you are in the middle of watching an extremely tragic or comedic scene and, at the point of climax, you are interrupted by an advertisement. What would happen to your attitudes toward the advertisement as a result of the interruption? This scenario is not unfamiliar to many viewers as this is an often used technique at the end of many television shows to ensure that the audience will return to see how the character resolves the dilemma (a.k.a., cliffhanger effect). In contrast, suppose once more you are at the climatic point of an extremely tragic or comedic scene, but in this instance, a five-second countdown timer appears in the corner of the screen warning you of the upcoming advertisement. At this moment, what would happen to your attitude towards the ad as a result of the countdown? It is no surprise that consumers express frustration or anger to the intrusiveness of advertisements. Accordingly, it is of practical value for managers to seek ways to effectively convey the message of commercial advertisements to consumers while mitigating negative attitudes and preserving the viewer's experience.

By investigating viewers' behavioral responses, advertisers can identify which type of advertisement pairs best with what type of program and whether providing a five second warning prior to a commercial can improve, or possibly deteriorate, advertising effectiveness. To the best of our knowledge, there is no prior research on how countdown warnings affect viewer's reception of the commercial. To fill this gap, we draw on theoretical models of emotion and mood to understand how program-induced moods affect the viewer's perception of an advertisement with a preceding warning signal (e.g., 5 seconds countdown). The study contributes to the field of advertising and marketing by identifying another tool that may help advertisers better convey their messages, while giving viewers a sense of control over their viewing experience.

## **LITERATURE REVIEW**

### **Introduction**

This study draws upon two fields of advertising research. The first draws upon the recent popularity of online video advertising. This literature review attempts to explore a specific online

advertising tool known as the “countdown warning” and the associated behaviors that consumers undergo when confronted with a commercial. The second examines how moods affect a viewer’s judgment towards an advertisement. We integrate three theoretical models to explain the relationship between mood and advertising; the mood congruency model, the emotion self-regulation model and the negative-state relief model.

### Online Advertising Tools

Commercial advertising is often presented as a zero-sum game as viewers may often ignore, abandon, or incur negative attitudes towards the advertisement. With the internet, consumers can easily use tools such as ad-blockers to circumvent advertisements. Yet with the rise in use of ad-blockers, some websites that rely on advertising to maintain their operations are demanding that viewers turn off their ad-blockers in order to access their website or to watch their videos. Thus, the study of online video advertising tools becomes increasingly relevant for consumers and the livelihood of websites that rely on advertising.

The most popular online advertising tool is the skip-ad function presented by YouTube. Skipping commercials is not a new phenomenon as viewers have been developing their own workarounds to circumvent advertisements since the invention of television advertising. One of the earlier studies conducted on consumer responses to commercials occurred with the development of the remote control and VCR which allowed viewers to zip or zap an ad. “Zipping” or “zapping” a commercial respectively referred to fast-forwarding through commercials previously recorded on video cassettes and the switching of a channel when a commercial appeared (Olney, Holbrook, & Batra, 1991, p. 440). Digital video recorders developed by companies such as TiVo have revolutionized modern day television viewing.

YouTube’s skip-ad function propelled into popularity when it was first introduced in 2010, liberalizing both marketers and viewers by only charging marketers advertising fees if their advertisement was watched for at least thirty seconds and by giving viewers the choice to skip an advertisement after five seconds. When the tool was launched, an online survey conducted on a participant group of 2,500 by teams from Google and YouTube found that,

“making all in-stream ads skippable reduces negative impact by ~30%” (Pashkevich, Dorai-Raj, Kellar, & Zigmond, 2012, p.68). A series of studies conducted on the absence or presence of a skip-ad button had similar findings (An & Yang, 2014; Olney, Holbrook & Batra, 1991; Pashkevish, Dorai-Raj, Kellar & Zigmond, 2012; Teixeira, Wedel & Pieters 2012).

In 2017, YouTube and Google also introduced “bumper ads” which are only available on mobile viewing applications. A bumper ad is a six second, un-skippable commercial on YouTube that viewers are presented before their main program. Although six seconds may seem short, these eye-catching, ephemeral ads often lead to improved ad recall. The 2016 pre-launch study conducted on over 300 bumper ad campaigns found that nine out of ten campaigns drove a significant lift in ad recall (Global, 2016). Another technique to reduce viewer’s perceived intrusiveness is to provide them warning as to how many advertisements they will see before they can resume their main program; however, few to no studies exist on this technique and its use in recent years has declined.

### Countdown Warning

Similar to the skip-ad button and bumper ads is the presence of a five second countdown warning. Prior to an advertisement interrupting a program, the five second warning appears to notify viewers that a commercial will be shown. Unlike studies conducted on the skip-ad button, there has been little to no research conducted on the effects of a countdown warning. Therefore, it is valuable for marketers and advertisers to understand the effectiveness of countdown warnings on attitudes toward advertisements. Expectation-confirmation theory offers a possible explanation for the usefulness of warning viewers of an impending commercial.

According to traditional expectation-confirmation theory, an individual’s expectations are either confirmed, positively disconfirmed or negatively disconfirmed. Confirmation occurs when the expected value of a product meets a consumer’s expectations, positive disconfirmation occurs when a product performs better than a consumer’s original expectations, and negative disconfirmation occurs when a product performs poorer than the consumer’s original

expectations (Churchill & Suprenant, 1982). Put simply, the disconfirmation model attempts to address the impact of expectations and actual product performance on a consumer's satisfaction.

In comparing expectations to actual product performance, the former can easily be influenced by the *adaption-level phenomenon*, in which a consumer's previous experiences serve as a frame of reference for future judgments. Helson's (1959) adaptation-level theory suggests that expectations are influenced by "(1) the product itself including one's prior experience, brand connotations, and symbolic elements, (2) the context including the content of communications from salespeople and social referents, and (3) individual characteristics including persuasibility and perceptual distortion."

In applying these two theories to a countdown warning tool, the expectation-confirmation model prepares the viewer, who is currently under the influence of the main video program, to expect an advertisement. When viewers are subject to a countdown warning, they will adapt to the expectation of an incoming advertisement, which may increase or decrease ad effectiveness. In conjunction with the adaptation-level phenomenon, the contextual effects from a main program has a large influence on the perceived effectiveness of an advertisement.

### Program-Induced Mood

Program-induced mood is a term used to explain the emotions and feelings that you get from watching a certain video program, such as a comedy show or a tragedy. Emotions, feelings and moods are terms that are used interchangeably; however, there is a difference between the three. Emotions are chemical responses to a stimulus that last about six seconds. Once the chemical responses from emotions settle down, feelings begin to settle in. Feelings and emotions can influence moods in addition to a variety of other inputs such as temporal effects, the person's circumstances and health. Moods can last from several minutes to even days. Moods also have a positive and negative valence that can range in arousal level. Positive moods are often described as *happy*, but high and low positive arousal moods can range from *ecstatic* to *calm*. Negative moods can be described as *sad*, but high and low negative arousal moods can range from *nervous* to *bored*.

Moods can influence judgment and information processing. Under the mood congruency model, each mood has a specific memory node that associates specific feeling moods to similar events (Bower 1981). Therefore, when viewers watch a positive program, their moods from the positive program can “carry over” to the advertisement (Goldberg & Gorn, 1987). Their previous mood will act as a heuristic towards how viewers should react to the new stimulus of an advertisement. Therefore, positive-affect program-induced moods should carry over positive attitudes towards an advertisement and vice-versa. As viewers encode the program and advertisement into their memory nodes, they will most likely remember the positive aspects of the advertisement because they were in a positive mood state. The same should occur for negative-affect program-induced mood.

One study conducted on how happy and sad programs influenced viewer’s reactions to commercials found that, relative to a sad TV program, a happy program induced (1) a happier mood as viewers watched both program and commercials, (2) greater perceived commercial effectiveness, (3) more affectively positive cognitive responses, and (4) better recall. Accordingly, the mood induced by a preceding program plays an important role in shaping the viewer’s evaluation of the commercial, leading to a carryover effect. Therefore, the stream of moods that viewers experience from a video program should influence their perceptions towards the commercial that follows.

### Emotion Regulation

Emotional appeal is an advertising persuasion technique that is designed to create an emotional response and increase advertising effectiveness. When viewers are placed in emotion inducing situations, the feelings that remain afterwards can induce a mood state that can last for minutes to even days. Emotion regulation is the ability to respond to change by utilizing emotions that are directly responsive to the situation or that are socially appropriate for other situations. Under emotional regulation, it is believed that humans have an emotional spectrum in which they attempt to maintain a stable level of contentment. One study examines the use of emotional appeal in commercials and the likelihood that a viewer would skip or zap that commercial. In this study, Teixeira, Wedel & Pieters (2012) utilized 28 advertisements, 14 of



which elicited emotions of surprise and joy, and 14 that were perceived to be neutral. In order to understand the emotions and the behavioral responses that occur from an emotionally appealing advertisement, the study applied the Gross and Thomson (2007) model of emotion regulation. Under the model of emotion regulation, there is a stimulus that elicits a stream of emotions. The stimulus is a commercial that induces emotions of joy or surprise. After being induced an emotion from the commercial, attention deployment occurs as a way for viewers to regulate their emotions. Viewers will either deploy their attention to the first stimulus of the commercial or find distraction in order to regulate their emotions. If the viewer chooses to engage in the distraction, the behavioral response for viewers is to skip or zap the commercial. This study then utilized facial recognition to examine if a viewer was exhibiting emotions of joy or surprise and then examined whether the viewer's facial expressions could predict the likelihood that a viewer would zap the advertisement. They found that joy reduces zapping progressively across exposure. This means that viewers are less likely to zap in the later portion of a commercial than in the beginning when experiencing initial joy. In sum, the findings from Teixeira, Wedel & Pieters show that the emotions that arise from a commercial can have a significant effect on the viewer's decision to skip an ad.

Under the emotional regulation theory, consumers are believed to have a natural emotional spectrum in which they subconsciously maintain in order to return to a stable level of contentment or cheerfulness. Most people have an affinity towards more positive emotions such as joy, humor, and hedonism. They may take advantage of opportunities that increase these types of positive emotions. When under the influence of negative emotions, most people will attempt to release their negative feelings. For example, when someone is angry at another individual, natural instincts would permit the angry party to lash out at the infuriating party. Since this may not be the most socially appropriate method to regulate one's emotions, the angry party may deploy their attention or release their anger in other ways. For example, most people in disputes would negotiate or discuss the situation with others in order to reach a mutual agreement. Emotion regulation is relevant to the current study because it provides an explanation to how viewers may react to the presence or absence of a countdown warning.

### Negative State Relief Model

Extending upon the emotional spectrum, the negative-state relief model suggests that people in negative-affect moods are motivated to reduce their negative feelings. This model arose from a group of studies that suggests individuals who are under a negative mood (particularly sad) tend to be more altruistic than those in a positive mood. Under the negative-state relief model, people use feel-good altruistic behaviors to reduce their sad feelings. They may also use altruistic behaviors as an attention deployment to switch the focus off of their own misfortune to the misfortune of others (Cialdini, et al. 1987; Rosenhan, Salovey, & Hargis, 1981; Thompson, Cowan, & Rosenhan, 1980). The significance between negative-affect states and the likelihood of altruistic behaviors is also applicable to the use of program induced moods in evaluating television commercials. A study conducted by Kamins, Marks & Skinner (1991), proposes a framework called mood consistency that expands from the negative-state relief model. They found that when pairing negative mood inducing programs with negative advertisements, viewers exhibited more positive attitudes towards the commercial. They also found that when subjects were exposed to a positive advertisement that was preceded by a positive program, the attitudes towards the advertisement were more positive versus when the happy advertisement was preceded by a negative program (Kamins, Marks, & Skinner, 1991, p. 10). This was because viewers under the sad program were motivated to reduce their negative feelings by deploying their attention to the misfortune of others in the negative-affect commercial. This study extends upon the negative-state relief model and may provide an explanation to why viewers may react a certain way to the presence or absence of a countdown warning in the context of a positive- or negative-affect program.

This view differs from the mood congruency model which states that program induced moods can have a “carryover effect”; instead, the mood consistency proposes an alternative explanation as to why those under negative-affect moods may react more positively to negative-affect advertisements and vice-versa (Kamins, Marks, & Skinner, 1991). Mood consistency will only apply if the mood induced by the program is the same (consistent) with the mood induced

by the advertisement. When a negative-affect program is paired with a neutral- or positive-affect advertisement, the “carryover effect” from the mood congruency model should apply.

### Hypothesis Development

Emotion regulation theory, the mood congruency and the negative-state relief model provides three different explanations of how program-induced moods can affect advertising effectiveness and viewer’s intention to purchase a product. The stream of studies conducted on program-induced moods in relation to advertising have used similar methods to influence viewer’s moods; however, they contribute their theoretical argument to different models (Teixeira, Wedel & Pieters, 2012; Goldberg & Gorn, 1987; Kamins, Marks & Skinner, 1991). The first model, mood congruency, suggests that program-induced moods have a “carryover effect” to commercials and this influences the subject’s perceptions and judgment of the commercial. When viewers watch either a positive- or negative-affect program, their mood states will influence whether they remember the positive or negative aspects of the commercial.

Under the emotion regulation theory, humans have a natural emotional spectrum in which they subconsciously maintain in order to return to a stable level of contentment. Therefore, if the commercial offers an opportunity to return to this the viewer’s preferred level of contentment, viewer’s attitudes towards the advertisement may be more positive. This will only apply if viewers have enough time to analyze a situation as an opportunity or a threat to their happiness.

In this study, a framework that is derived from Gross and Thomson’s (2007) model of emotion regulation is created. The initial stimulus will be a video program that will induce either positive or negative emotions. The viewer’s attention will be deployed by either a commercial or 5-second countdown warning. The behavioral response to the stimulus will result in attitudes towards the advertisement and purchase intent. With the 5-second countdown, viewers are able to evaluate a situation as either an opportunity or threat (see figure 1).

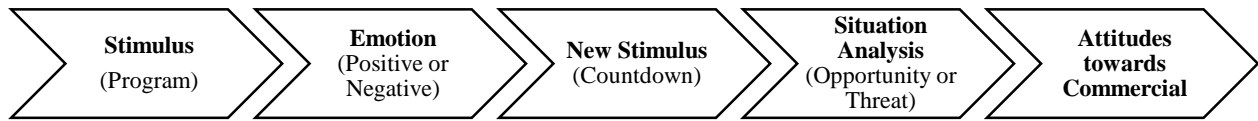


Figure 1 – Model of Emotion Regulation – Countdown

In addition, the negative-state relief model suggests that when people are in negative moods, they are more likely to empathize with others in order to shift the focus off of their misfortune to other people’s misfortune, and this may enhance their attitudes towards the advertisement. Since most people despise commercials, under a positive-affect mood, the commercial can be seen as a threat to the viewer’s enjoyment and therefore may incur negative attitudes. However, when the subject is viewing a negative program, a countdown warning may relieve the viewer since it give enough time for the viewer to subconsciously utilize the commercial as an opportunity to return to a state of content. Without a countdown warning, mood congruency should take place and viewers’ moods from the program will carry over to the advertisement. These three models will serve as a framework for the formation of the hypothesis:

**H1:** For the viewers who watch a *negative*-affect program, their attitude toward the interrupting advertisement and purchase intent will be *more positive* when the ad is preceded by a countdown than when it is not.

**H2:** For the viewers who watch a *positive*-affect program, their attitude toward the interrupting advertisement and purchase intent will be *more negative* when the ad is preceded by a countdown than when it is not.

## **STUDY 1A**

### Method

#### *Selection of Advertisement*

One thirty-second commercial was selected for inclusion in the study. Originally one-minute long, the commercial designed by Avromy Design, was edited to be thirty-seconds long. The commercial for the product, “Mom’s Coffee”, features a café scene and espresso being brewed as background music from “La Vie en Rose” by Louis Armstrong plays.

### *Selection of Program*

The program is a one-minute edited home video clip of a golden retriever puppy playing with a ball. The program was selected for its low volume and lack of distractions.

### *Participants and Experiment Design*

164 undergraduates from a northeastern university participated in exchange for extra credit (51% female). The study has a 2 (Positive-affect vs. Negative-affect) x 2 (Countdown vs. No-Countdown) between subject design.

### *Procedure*

Participants were brought into a behavioral computer laboratory where they read a brief introduction about the experiment, read a positive- or negative-affect prompt, watched the video clip, and completed the questionnaire concerning their mood from the video, attitudes towards the advertisement, and purchase intent. Prior to watching the puppy clip, viewers were presented with an instruction screen designed to induce positive or negative affect. Participants in the positive affect condition were led to believe that the puppy in the clip is having a birthday next week and then select a gift for its birthday (viz., the birthday puppy). On the other hand, participants in the negative-affect condition were led to believe that the puppy in the clip is expected to die in a week, due to the incurable disease it suffers from and then select a gift for its funeral (viz., the dying puppy; See Appendix A). The video played for one minute before a commercial interrupted the program. A five-second countdown warning appeared in the upper corner of the screen before the ad starts for the countdown condition, whereas no such countdown appeared for the no countdown condition, with a straight cut to the commercial.

Mood measures towards the video clip was measured using a seven-point bipolar scale anchored with unpleasant-pleasant, unlikeable-likeable, boring-interesting, unentertaining-entertaining, not exciting-exciting, not suspenseful-suspenseful, uninformative-informative, depressing-uplifting, uninspiring-inspiring, sad-happy. These ten items were averaged to produce an overall mood score where a higher score indicate more positive moods ( $\alpha = .91$ ). Attitude

toward the ad was measured using a seven-item measure with a seven-point bipolar scale anchored with good-bad, wise-foolish, positive-negative, favorable-unfavorable, necessary-unnecessary, beneficial-harmful, desirable-undesirable (Petty, Tormala, Brinol, 2002, p. 732). These seven items were averaged to produce an overall attitude score where a higher score indicated more positive attitude ( $\alpha = .94$ ). Purchase intent was measured using a two-item measure with a seven-point bipolar scale anchored with “not seek more information”-“seek more information” and “not purchase”-“purchase”. These two items were averaged to produce an overall attitude score where a higher score indicated more positive attitude ( $\alpha = .91$ ).

### Results

Regarding the affect manipulation, the birthday puppy clip ( $M_{birthday} = 5.29$ ) produced more positive-affect ( $f(162) = 3.49, p < .01$ ) than did the dying puppy clip ( $M_{dying} = 4.59$ ). The attitude measures were submitted to a 2 (BIRTHDAY PUPPY Positive-affect vs. DYING PUPPY Negative-affect) x 2 (Countdown vs. No-Countdown) fully factorial ANOVA. As shown in Figure 2, the analysis revealed a significant two-way interaction: ( $F(1, 160) = 16.32, p < .01$ ).

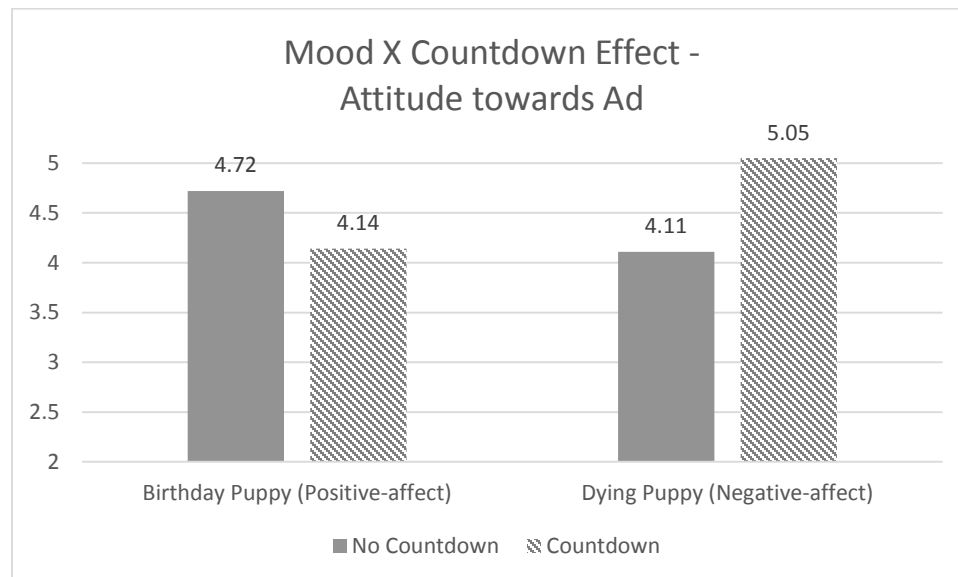
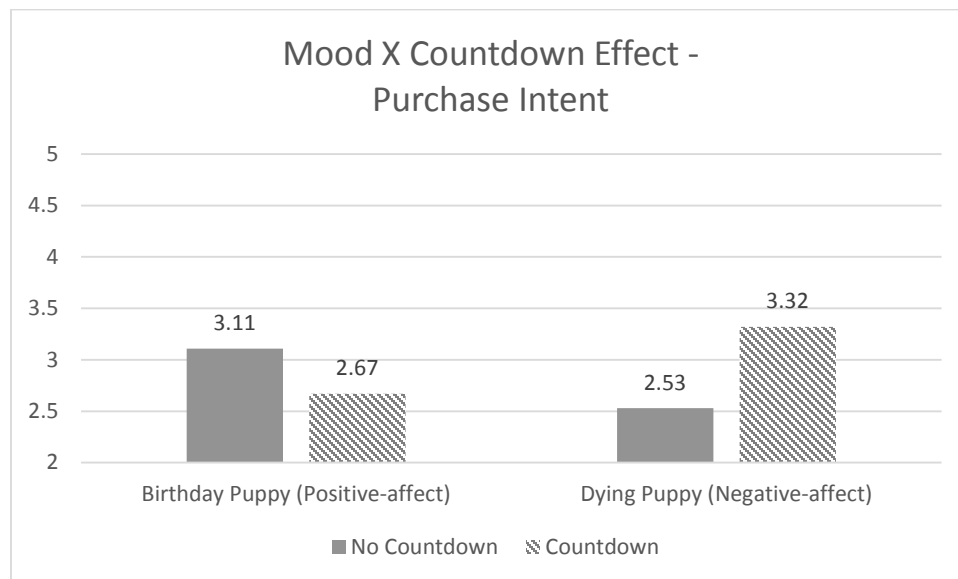


Figure 2 – Advertisement Attitude

Contrasts revealed that for the Dying Puppy (negative-affect) program, attitude toward the ad was *more positive* when the ad was preceded by the countdown ( $M_{countdown} = 5.05$ ) than

when the ad was not preceded by the countdown ( $M_{no-countdown} = 4.11$ ;  $t(80) = -3.19$ ,  $p < .01$ ); however, for the Birthday Puppy (positive-affect) program, attitude toward the ad was *more negative* when the ad was preceded by the countdown ( $M_{countdown} = 4.14$ ) than when the ad was not preceded by the countdown ( $M_{no-countdown} = 4.72$ ;  $t(80) = 2.47$ ,  $p < .05$ ).

The purchase intent measures were also subject to a 2 (BIRTHDAY PUPPY Positive-affect) vs. (DYING PUPPY Negative-affect) x 2 (Countdown vs. No-Countdown). As shown in figure 3 below, the analysis revealed a significant two-way interaction: ( $f(1, 160) = 4.84$ ,  $p < .01$ ).



*Figure 3 – Purchase Intent*

Contrasts also revealed that for the Dying Puppy (negative-affect) program, purchase intent was *higher* when the ad was preceded by the countdown ( $M_{countdown} = 3.32$ ) than when the ad was not preceded by the countdown ( $M_{no-countdown} = 2.53$ ;  $t(80) = -2.12$ ,  $p < .05$ ); however, for the Birthday Puppy (positive-affect) program, the purchase intent was *marginally less* when the ad was preceded by the countdown ( $M_{countdown} = 2.67$ ) than when the ad was not preceded by the countdown ( $M_{no-countdown} = 3.11$ ;  $t(80) = 1.05$ ,  $p < .05$ ).

## Discussion

The study found that in the Dying Puppy (Negative-affect) condition, attitudes towards the advertisement and purchase intent were higher when preceded by a countdown warning than when it was not. After watching the Dying Puppy program, participants were induced into a negative mood state. When participants under the countdown condition were presented with a warning, they have enough time to subconsciously evaluate the incoming commercial as an opportunity to return to a preferred level of content. Emotion regulation and the negative-state relief model apply the most in this scenario. Since viewers are motivated to reduce their negative feelings, they will use the commercial as an opportunity to return to a more positive state. However, when the viewers who watched the Dying Puppy (negative-affect) condition were not warned, their negative moods from the program carry over towards the advertisement and this decreases purchases intent.

For viewers who watch the Birthday Puppy (Positive-affect) condition, attitudes towards the advertisement and purchase intent were lower when the program was preceded by a countdown warning than when it was not. Since humans are motivated to maintain a stable level of contentment or cheerfulness, the Birthday Puppy participants had enough time to subconsciously evaluate the incoming commercial as a threat to their entertainment when presented with a countdown warning. However, when viewers under the Birthday Puppy condition were not warned, their attitudes towards the advertisement and purchase intent were higher than with the countdown. This phenomenon can be explained through the carryover effect. Mood congruency applies for advertisements that are not preceded by countdown warnings. This is because viewers do not have time to evaluate the incoming advertisement. Instead, they will utilize their preexisting moods as a heuristic to react to the new stimulus of a commercial. When viewers encode the program and commercial into their memories, they will have biased perceptions of the advertisement depending on their mood. Therefore, positive-affect programs will result in more positive attitudes about a commercial and negative-affect programs will result in more negative attitudes about a commercial.



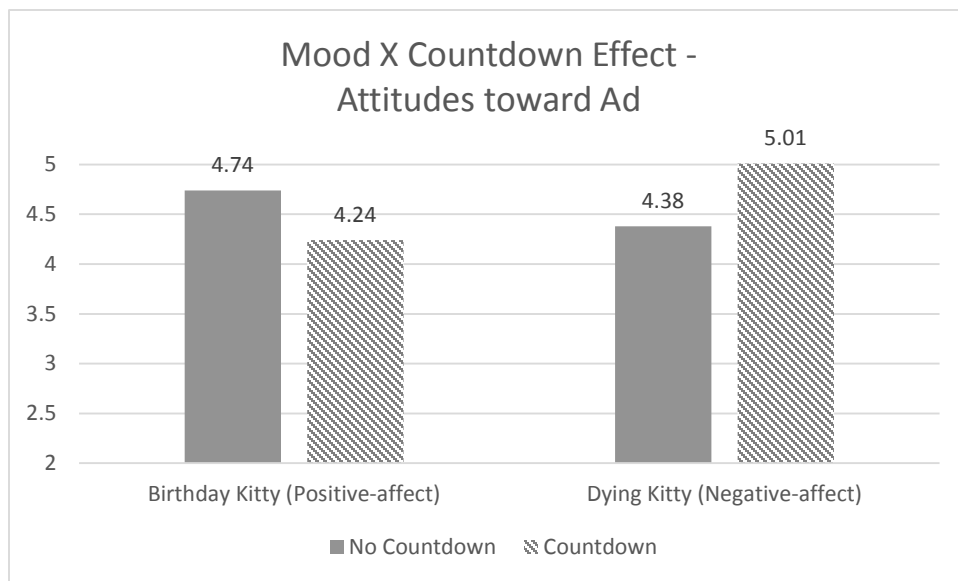
## **STUDY 1B**

### Methods

Study 1B was a conceptual replication of study 1A, using a video program of a kitten rather than a puppy. 164 undergraduates from a northeastern university participated in exchange for extra credit (51% female). Survey questions and methodology were identical to Study 1A with only slight adjustments to the prompt and to the selection of gifts for the kitten.

### Results

Regarding the affect manipulation, the birthday kitty clip ( $M_{birthday} = 4.59$ ) did not produce a significant positive-affect ( $f(162) = .633, p < .53$ ) than did the dying kitty clip ( $M_{dying} = 4.46$ ). The attitude measures were submitted to a 2 (BIRTHDAY KITTY Positive-affect vs. DYING KITTY Negative-affect) x 2 (Countdown vs. No-Countdown) fully factorial ANOVA. As shown in Figure 4, the analysis revealed a significant two-way interaction: ( $F(1, 159) = 9.39, p < .01$ ).

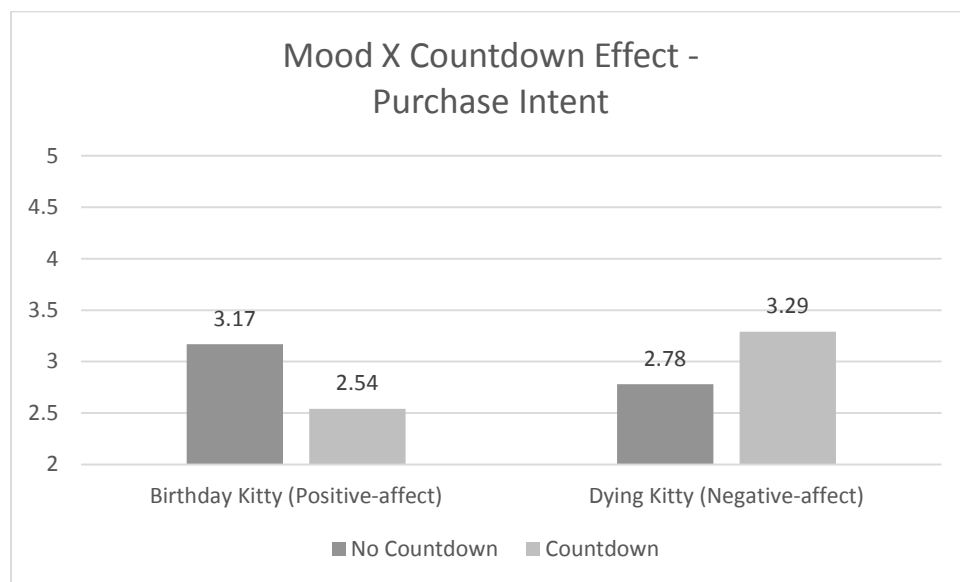


*Figure 4 – Advertisement Attitudes*

Contrasts revealed that for the Dying Kitty (negative-affect) program, attitude toward the ad was *more positive* when the ad was preceded by the countdown ( $M_{countdown} = 5.01$ ) than when the ad was not preceded by the countdown ( $M_{no-countdown} = 4.38; t(80) = -2.33, p < .05$ ); however,

for the Birthday Kitty (positive-affect) program, attitude toward the ad was *more negative* when the ad was preceded by the countdown ( $M_{\text{countdown}} = 4.24$ ) than when the ad was not preceded by the countdown ( $M_{\text{no-countdown}} = 4.74$ ;  $t(80) = 1.99$ ,  $p < .05$ ). This is similar to the findings in Study 1A.

The purchase intent measures were also subject to a 2 (Positive-affect vs. Negative-affect) x 2 (Countdown vs. No-Countdown). As shown in figure 5 below, the analysis revealed a significant two-way interaction: ( $f(1, 159) = 4.31$ ,  $p < .01$ ).



*Figure 5 – Purchase Intent*

Contrasts also revealed that for the Dying Kitty (negative-affect) program, purchase intent was *higher* when the ad was preceded by the countdown ( $M_{\text{countdown}} = 3.29$ ) than when the ad was not preceded by the countdown ( $M_{\text{no-countdown}} = 2.78$ ;  $t(80) = -1.41$ ,  $p < .05$ ); however, for the Birthday Kitty (positive-affect) program, the purchase intent was *less* when the ad was preceded by the countdown ( $M_{\text{countdown}} = 2.53$ ) than when the ad was not preceded by the countdown ( $M_{\text{no-countdown}} = 3.17$ ;  $t(80) = 1.52$ ,  $p < .05$ ). These findings are similar to that found in Study 1A.

## Discussion

The results for Study 1B yielded similar results to Study 1A. In the Dying Kitty (negative-affect) condition, attitudes toward the advertisement and purchase intent were both higher with a countdown warning than without one. This thereby supports hypothesis 1A. In the Birthday Kitty (positive-affect) condition, attitudes toward the advertisement and purchase intent were lower with a countdown warning than without one. This supports hypothesis 1B. However, when conducting the affect manipulation, the Birthday Kitty did not produce a significantly higher positive-affect than did the Dying Kitty. Although Study 1B did yield similar results to Study 1A, it is concluded that the viewer's moods were not induced by the program, but were instead induced by the prompt.

## **STUDY 2**

The purpose of Study 2 is to replicate the results found in Studies 1A and 1B by using clips that invoke a mood response in a more natural fashion. Study 2 is conceptually identical with changes only to the programs and commercials used.

### Methods

#### *Selection of Advertisement*

One thirty-second commercial from TRUE Organic Juice was selected for inclusion in the study. The clip features scenes of vegetables and fruits in front of a sunny, farm background and shots of the product. Upbeat piano music plays and a narrator describes the products. This commercial was selected because the brand was not commonly known among subjects.

#### *Selection of Program*

Two programs were selected for inclusion in the study. These clips were subjected to a pretest on dimensions of positive-affect such as humor and negative-affect such as sadness. The positive-affect program features a *comedy* clip from the movie, *40-Year-Old Virgin*. It features the actor, Steve Carell, undergo a slapstick chest wax as his friends cheer and taunt him on. The clip plays for two minutes and thirty seconds before being interrupted by an advertisement with or without the countdown warning. After the commercial, the clip resumes and concludes. The

negative-affect program features a *tragedy* clip titled “My Father is a Liar”. The program begins cheerfully but quickly takes a turn for depressing as the daughter reveals that her father is unemployed. The clip plays for two minutes and thirty seconds before being interrupted by an advertisement or countdown warning. After the commercial, the clip resumes and concludes.

### *Participants*

A total of 268 undergraduate college students from a northeastern U.S. university participated (51% females).

### *Experimental Design*

A 2 (Comedy vs. Tragedy) x 2 (Countdown vs. No-Countdown) between-subjects design was used. Participants viewed the video clips that were either succeeded by a countdown warning or advertisement. Participants then responded to the questions concerning their attitudes towards the advertisement and purchase intent.

### *Pretest and Measures*

In the pretest, mood measures towards the program was measured using a seven-point bipolar scale anchored with dull-exciting, tragic-cheerful, unentertaining-entertaining, serious-funny, depressing-uplifting, unamusing-amusing, unpleasant-pleasant, sad-happy, weary-amusing, angering-calming, ordinary-quirky. These eleven items were averaged to produce an overall mood score where a higher score indicate more positive moods ( $\alpha = .89$ ). Similar to Study 1, attitude toward the ad was measured using a seven-item measure with a seven-point bipolar scale anchored with good-bad, wise-foolish, positive-negative, favorable-unfavorable, necessary-unnecessary, beneficial-harmful, desirable-undesirable (Petty, Tormala, Brinol, 2002, p. 732). These seven items were averaged to produce an overall attitude score where a higher score indicated more positive attitude ( $\alpha = .96$ ). Purchase intent was measured using a two-item measure with a seven-point bipolar scale anchored with “not seek more information”-“seek more information” and “not purchase”-“purchase”. These two items were averaged to produce an overall attitude score where a higher score indicated more positive attitude ( $\alpha = .82$ ).

## Results

Regarding the affect manipulation, the *40-Year-Old Virgin* comedy clip ( $M_{comedy} = 5.33$ ) produced a significant positive-affect ( $f(53) = 7.52, p < .01$ ) than did the father/daughter tragedy clip ( $M_{tragedy} = 3.68$ ). The attitude measures were submitted to a 2 (Comedy vs. Tragedy Program) x 2 (Countdown vs. No-Countdown) fully factorial ANOVA. As shown in Figure 6, the analysis revealed a significant two-way interaction: ( $F(1, 127) = 9.78, p < .01$ ).

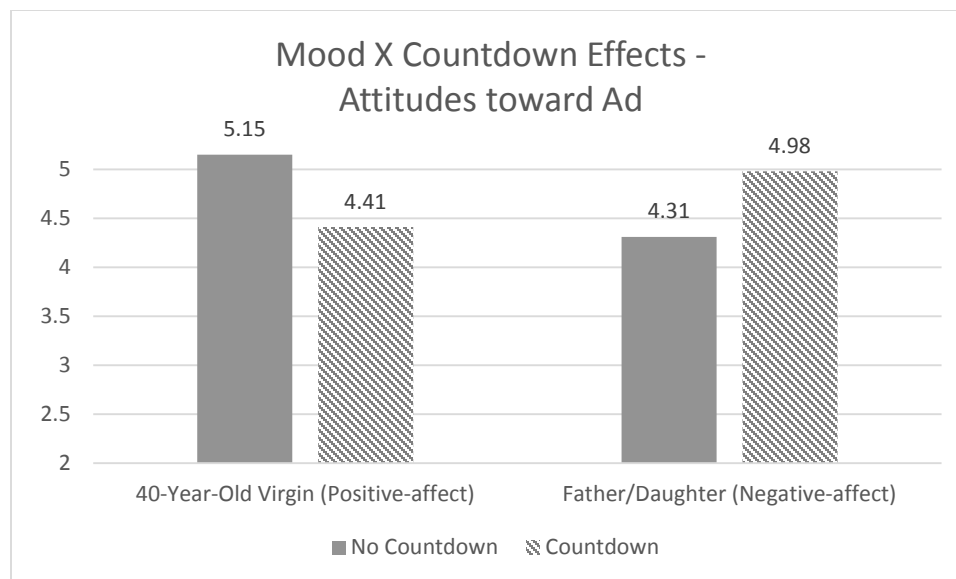
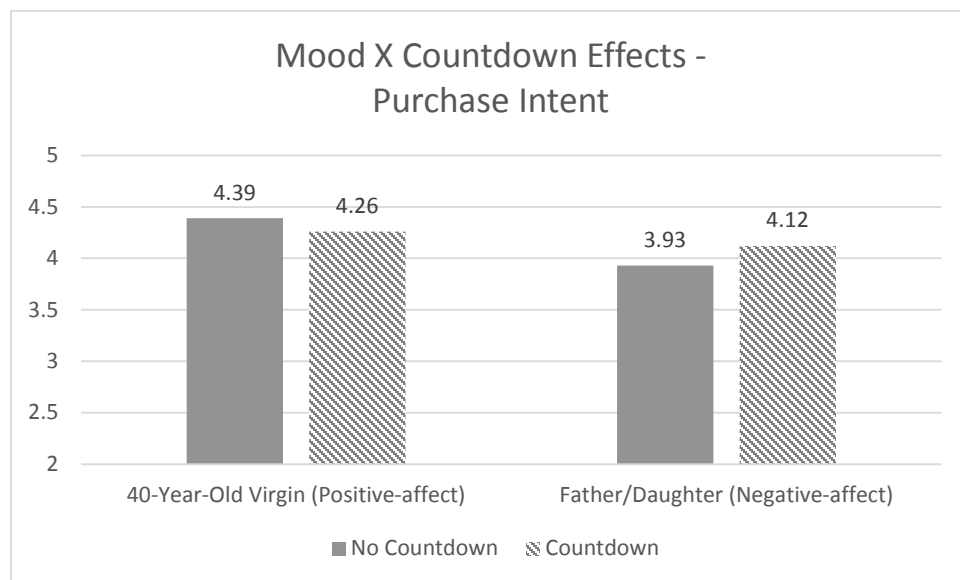


Figure 6 – Advertisement Attitude

Contrasts revealed that for the Father/Daughter (negative-affect) program, attitude toward the ad was *more positive* when the ad was preceded by the countdown ( $M_{countdown} = 4.98$ ) than when the ad was not preceded by the countdown ( $M_{no-countdown} = 4.31; t(67) = -2.23, p < .05$ ); however, for the *40-Year-Old Virgin* (positive-affect program), attitude toward the ad was *more negative* when the ad was preceded by the countdown ( $M_{countdown} = 4.41$ ) than when the ad was not preceded by the countdown ( $M_{no-countdown} = 5.15; t(60) = 2.19, p < .05$ ).

The purchase intent measures were also subject to a 2 (Comedy vs. Tragedy Program) x 2 (Countdown vs. No-Countdown). As shown in Figure 7, the analysis did not reveal a two-way interaction: ( $F(1, 127) = .33, p < .74$ ).



*Figure 7 – Purchase Intention*

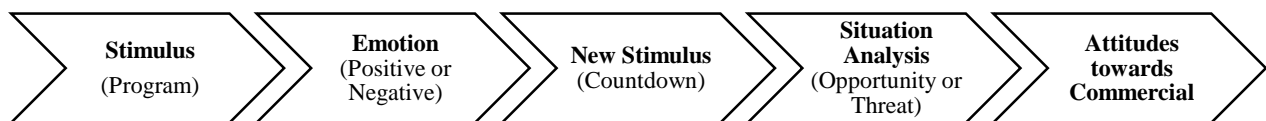
Contrasts revealed that for the Father/Daughter (negative-affect) program, purchase intent was *marginally higher* when the ad was preceded by the countdown ( $M_{\text{countdown}} = 4.12$ ) than when the ad was not preceded by the countdown ( $M_{\text{no-countdown}} = 3.93$ ;  $t(67) = -.506$ ,  $p < .05$ ); however, for the *40-Year-Old Virgin* (positive-affect) program, the purchase intent was *marginally less* when the ad was preceded by the countdown ( $M_{\text{countdown}} = 4.26$ ) than when the ad was not preceded by the countdown ( $M_{\text{no-countdown}} = 4.39$ ;  $t(60) = .314$ ,  $p < .05$ ).

### Discussion

Study 2 tested the hypotheses in a more naturalistic setting, using a real program to induce positive and negative mood; it yielded similar results to Studies 1A and 1B thereby reinforcing the conceptual framework. For the negative-affect condition, attitudes toward ad was higher when preceded by the countdown warning. However, for the positive-affect condition, attitudes towards ad was lower when preceded by the countdown. Compared to Study 1AB, purchase intent had higher overall means, however it did not yield any significant difference.

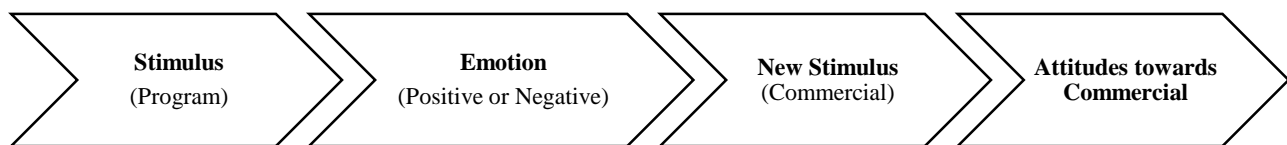
Building upon Gross and Thomson's (2007) model of emotion regulation, we used the *40-Year-Old Virgin* comedy and father/daughter tragedy clip to induce a stream of positive or negative moods. A new stimulus appears in the form of a countdown warning to an

advertisement leaving the viewer with time to evaluate the impending commercial. When watching the *40-Year-Old Virgin* comedy, viewers might evaluate the impending commercial as a threat to their enjoyment and therefore, attitudes toward the commercial are negative. Viewers watching the father/daughter tragedy might evaluate the impending commercial as an opportunity to escape and therefore, attitudes toward the commercial are positive. This reinforces the negative-state relief model which occurs at the fourth stage of situation analysis (Figure 8).



*Figure 8: Model of Emotion Regulation – Countdown*

Viewers who watched the father/daughter tragedy clip yielded lower attitudes towards ad than the viewers who watched the *40-Year-Old Virgin* comedy clip under the no countdown condition. Without the presence of a countdown warning, viewers are given no time to adjust to the new stimulus of a commercial. Therefore, under the mood congruency model, stage four does not occur (Figure 9). Instead, the advertisement becomes the new stimulus. As a result, viewers use their most recent mood as a heuristic to react to a new stimulus (e.g., a mid-roll ad). This automatically influences viewer’s attitudes towards the commercial.



*Figure 9: Model of Emotion Regulation – No Countdown*

## **GENERAL DISCUSSION**

The results provide evidence that countdown warnings are effective for use in programs that generate negative-affect, but not effective for use in programs that generate positive-affect. From the emotional regulation framework, humans prefer to be at a level state of contentment or cheerfulness, for positive-affect programs, a countdown warning may threaten viewer’s enjoyment; for negative-affect programs, a countdown warning is seen as an opportunity for

viewers to resume their natural state of contentment. Conversely, when an advertisement abruptly interrupts an uplifting program, viewers are more accepting towards the advertisement due to their current state of elation. Under the no countdown condition, the study contributes to an earlier findings by Goldberg and Gorn (1987). Commercial effectiveness (currently defined as attitudes toward advertisement and purchase intent) are improved when positive affect programs are paired with a positive advertisement.

Unlike Goldberg and Gorn's study which used advertisements that score high on emotional appeal or informativeness, programs were paired with positive advertisements that focused on a beverage product with little informational, persuasive, or emotional appeal. Therefore, results may have been vastly different for a program paired with a high negative-affect advertisement and vice-versa. A possible future study could examine the effects of countdown warnings on positive- and negative-affect programs paired with positive- or negative-affect advertisements. Additional future studies could examine other advertising tools such as bumper ads and "is this ad relevant to you".

One limitation for this study may arise from the convenience sample. The demographics of the study participants, who are predominantly undergraduate university students, may generate geographically and demographically biased results. Another limitation for this study is the type of main video content and advertisement chosen for this study, which may have created some unknown biases since these videos are readily available to the public on YouTube. Finally, the point in which the advertisement is inserted may serve as another limitation. Several studies found that "mid-roll" advertisements, advertisements that are inserted in the middle of a program, had the highest completion rate and the lowest perceived intrusiveness in comparison to "pre-roll" and "post-roll" advertisements (Krishnan, Sitaraman & Amherst, 2013; Li & Lo, 2015). Unlike Study 1AB, Study 2 resumed the program after a commercial break and this sense of "closure" may have slightly influenced results.

As video advertising is often presented as a zero-sum game, marketers and advertisers will benefit by understanding the effects that a countdown alert can have on the viewer. The



study expands upon previous research on program-induced moods and consumer's evaluation to advertisements. This thereby provides the academic and professional community with another tool that can be used to increase advertising effectiveness and purchase intent, while expanding available knowledge on consumer behaviors.

## **APPENDIX**

### Appendix A. – (Study 1A)

#### Advertisement “Mom’s Coffee”



#### **Happy Affect Prompt**

“Sammi is an energetic golden retriever puppy that will be turning 1 month old next week! Your task is to select a play toy for his 1 month birthday party. Please watch the video in the next page that features little Sammi during playtime and keep in mind that you’ll be selecting a toy for his birthday”.

#### **Sad Affect Prompt**

“Sammi is a golden retriever puppy who has an incurable genetic disorder which causes painful muscle deterioration and eventually heart failure, Sammi only has 1 week to live. Your task is to select a play toy that will be buried with him. Please watch the video in the next page that features little Sammi playing a month ago and keep in mind the toy you select will be his last”.

**Puppy Program – No Condition**



**Puppy Program – With Condition**



### **Puppy Toys**

Which toy would you like to give Sammi?



Appendix B. – (Study 1B)

**Happy Affect Prompt**

“Sammi is an energetic kitten that will be turning 1 month old next week! Your task is to select a play toy for his 1 month birthday party. Please watch the video in the next page that features little Sammi during playtime and keep in mind that you’ll be selecting a toy for his birthday.”

**Sad Affect Prompt**

“Sammi is a kitten who has an incurable genetic disorder which causes painful muscle deterioration and eventually heart failure, Sammi only has 1 week to live. Your task is to select a play toy that will be buried with him. Please watch the video in the next page that features little Sammi playing a month ago and keep in mind the toy you select will be his last”.

**Kitty Toys**

Which toy would you like to give Sammi?



**Kitten Program – No Condition**



**Kitten Program – Condition**



Appendix C. – (Study 2)

Comedy Program – No Condition



Comedy Program – Condition



Five Seconds to the Ad: How Program-Induced Mood Affects Ad Countdown Effects  
*Senior Capstone Project for Tiffany Venmahavong*

---

Tragedy Program – No Condition



Tragedy Program – No Condition





Advertisement – “True Juice”



Appendix D. – (Survey Questions)

Study 1AB – Program Mood

I felt that the **Video Clip** with Sammi was:

Unpleasant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Pleasant
Unlikeable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Likeable
Boring	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Interesting
Unentertaining	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Entertaining
Not Exciting	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Exciting
Not Suspenseful	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Suspenseful
Uninformative	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Informative
Depressing	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Uplifting
Uninspiring	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Inspiring
Sad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Happy

Study 2 – Program Mood

How would you describe the video you just watched above?

Dull	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Exciting
Tragic	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Cheerful
Unentertaining	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Entertaining
Serious	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Funny
Depressing	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Uplifting
Unamusing	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Amusing
Unpleasant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Pleasant
Sad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Happy
Weary	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Amusing
Angering	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Calming
Ordinary	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Quirky

Five Seconds to the Ad: How Program-Induced Mood Affects Ad Countdown Effects  
*Senior Capstone Project for Tiffany Venmahavong*

---

Attitudes toward Advertisement

The Advertisement is:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree	
Bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Good
Foolish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Wise
Negative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Positive
Unfavorable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Favorable
Unnecessary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Necessary
Harmful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Beneficial
Undesirable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Desirable

Purchase Intent

Concerning TRUE's Organic Juice, I am more likely to:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree	
Not Seek More Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Seek More Information
Not Purchase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Purchase

## **REFERENCES**

- Bower, G. H. (1981). Mood and Memory. *American Psychologist*, 36(2), 129-148.
- Cialdini, Robert B., Douglas T, Kenrick, & Donald J. Baumann (1982). Effects of Mood on Prosocial Behavior in Children and Adults. *The Development of Prosocial Behavior*, New York, Academic Press, 339-359.
- Churchill, G. A., & Suprenant, C. (1982). An Investigation into the Determinants of Customer Satisfaction. *Journal of Marketing Research*, 19, 491-504.
- Duval, Shelly, Virginia H. Duval, & Robert Neely (1979). Self Focus, Felt Responsibility, and Helping Behavior. *Journal of Personality and Social Psychology*, 37 (October, 1769-1778.
- Gibbons, Frederick X, & Robert A. Wicklund (1982). Self-Focused Attention and Helping Behavior. *Journal of Personality and Social Psychology*, 43 (September), 462-474.
- Goldberg, M. E., & Gorn, G. J. (1987). Happy and Sad TV Programs: How They Affect Reactions to Commercials. *Journal of Consumer Research*, 14(3), 387-403.
- Gross, James J. and Ross A. Thomson (2007), Emotion Regulation: Conceptual Foundations. *Handbook of Emotion Regulation*, James J. Gross, ed. New York: Guilford Press, 2–26.
- Helson, H. (n.d.). Adaption Level Theory. *In Psychology: A Study of a Science* (Vol. 1, pp. 565-621). New York: McGraw-Hill.
- Kamins, M. A., Marks, L. J., & Skinner, D. (1991). Television commercial evaluation in the context of program-induced mood: Congruency versus consistency effects. *Journal of Advertising*, 20 (2), 1-14.
- Krishnan/ Akamai Technologies, S. S., & Sitaraman/ University of Massachusetts, Amherst, R. K. (2013). Understanding the Effectiveness of Video Ads: A Measurement Study. In (pp. 1-15). Barcelona, Spain: AMC Internet Measurement Conference (IMC).
- Li/ Xi'an Jiaotong University, China, H., & Lo/ National China Hsing University, Taiwan, H. Y. (2015). Do you recognize its brand? The effectiveness of online in-stream video advertisements. *Journal of Advertising*, 33(3), 208-218.
- Maruyama, Geoffrey, Scott C. Frasier, & Norman Miller (1982), Personal Responsibility and Altruism in Children. *Journal of Personality and Social Psychology*, 42(April), 658-664.

Olney, T. J., Holbrook, M. B., & Batra, R. (1991). Consumer Responses to Advertising: The Effects of Ad Content, Emotions, and Attitude toward the Ad on Viewing Time. *Journal of Consumer Research*, 17(4), 440-453.

Petty, R. E., Briñol, P., & Tormala, Z. L. (2002). Thought confidence as a determinant of persuasion: The self-validation hypothesis. *Journal of Personality and Social Psychology*, 82, 732.

Pashkevich/ Google, Inc, Max, Sundar Dorai-Raj/ Google, Melanie Kellar/ Google, Inc., and Dan Zigmond/ Google. "Empowering Online Advertisements by Empowering Viewers with the Right to Choose." *The Journal of Advertising Research* (2012): 65-71. Web.

Rogers, Marian, Norman Miller, F. Stephen Mayer, & Shelley Duval (1982). Personal Responsibility and Salience of the Request for Help. Determinants of the Relation Between Negative Affect and Helping Behavior," *Journal of Personality and Social Psychology*, 43 (November), 956-970.

Rosenhan, D. L., Salovey, P., & Hargis, K. (1981). The Joys of Helping: Focus of Attention Mediates the Impact of Positive Affect on Altruism. *Journal of Personality and Social Psychology*, 40(5), 899-905.

Stout, Patricia A. & John D. Leckenby (1986), Measuring Emotional Response to Advertising. *Journal of Advertising*, 15 (December), 35-42.

Teixeira, T., Wedel, M., & Pieters, R. (2012). Emotion-Induced Engagement in Internet Video Advertisements. *Journal of Marketing Research*, 49(2), 144-159. doi:10.1509/jmr.10.0207

Thompson, William C., Claudia L. Cowan, & David L. Rosenhan (1980), Focus of Attention Mediates the Impact of Negative Impact on Altruism. *Journal of Personality and Social Psychology*, 28(February), 291-300.