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# Online Mood Induction

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## ABSTRACT

The purpose of this study is to examine whether affect-laden online materials, such as news stories and ads, can induce mood. In particular, this study examines whether viewing a positive online ad or reading a positive online story can induce a positive affect similar to other established mood inductions such as receipt of a surprise gift. Based on the results of previous “offline” studies we expect to see that both online news stories and ads affect mood.

## Keywords

Affect, mood, online ads, online news

## INTRODUCTION

As audiences migrate from the television to the Internet, advertisers have extended their use of ads to the Web. In fact, online advertising in 2004 constituted 8.35 percent of the average media plan spending. This figure is projected to grow to 17 percent by 2007 (Kerner, 2004). Because the Internet allows consumers to interact with it, online advertisements can be more robust than traditional media advertisements— often allowing consumers to win a prize by playing a game contained in the ad. These types of online advertisements allow unique consumer involvement and personalization, while at the same time allowing the traditional advertising objective of developing and maintaining brand recognition (Hyland, 2000). The question arises can these online ads evoke affective responses in individuals as they have been shown to do in traditional media (e.g., television, Kamins, Marks, and Skinner, 1991)? Further, more and more consumers are heading online to get their news. Often times, a website is an extension of a newspaper or television news channel, such as Boston.com (Boston Globe’s website) or CNN.com. One newspaper has had significant gains through the Web— reaching 45 percent of the adult population in its area during an average week. Even when duplications of print and online editions are removed, the paper has had a 7.1 percentage point gain in readership through its website. The typical online news consumer is 35 to 44-year old (25 percent), male (54 percent) with an annual income of above \$75,000 (42 percent), who accesses the site from home (66 percent) (Greenspan, 2004). Again, from the growing use of online news stories, the question arises can these online news stories evoke affective responses in individuals as they have been shown to do in traditional media?

## BACKGROUND

Recent investigations have established affect as an important decision making variable (Isen, 2000; Damasio, 1994). Affect can influence peoples’ thoughts and thereby influence the decisions that rely on those thoughts (see Isen, 1984 for a detailed review). In addition to priming cognitive material, affect guides our reasoning (Picard, 1997) by acting as an information processing mechanism that works in conjunction with our rational thoughts (Hanoch, 2002). Literature suggests that certain affective states have a facilitation effect on variety seeking as well as exploration, preference, and shopping intentions. Kahn and Isen (1993) show that subjects in positive mood exhibit more switching among alternatives and select a broader range of items in their choice. Barone et al. (2000) show that people in positive mood evaluate brand extensions more favorably. Finally, Swinyard (1993) argues that positive mood can influence shopping intentions when consumers are involved in a positive shopping experience.

The importance of affect on cognitive processes and behavior (Barone, et al., 2000), and the widespread use of the Internet calls for scientific examination of factors that may influence affect during one's online experience. In particular, it is important to investigate whether affect-laden online materials, such as ads and news stories, can influence one's mood. Thus, this study concentrates on online ads and news articles to see if they can affect individuals' mood. It is important to note that "affect" is an umbrella term used to refer to moods as well as emotions. Though moods and emotions are affective states, they differ on the dimensions of "pervasiveness," "intensity," and "specificity" (Forgas, 1991; Moore and Isen, 1990). Emotions generally denote short-lived strong reactions that most often have both a specific cause (as in a provocative act) and a target (as in the target of anger). Moods, on the other hand, usually refer to enduring, less intense, and more diffused affective states, which are not directed toward any particular object or behavior (Moore and Isen, 1990; Lazarus, 1991, p. 48; Forgas, 1991). Furthermore Clark and Isen (1982) and Schwartz and Clore (1988) argue that specific mood states (e.g., sadness, fear, etc.) can be grouped into more general or global categories, such as positive, neutral, and negative moods. In this paper, the term "affect" refers to the mood of the subjects and not their emotions. In order to measure the affective influence ads and news articles can have on consumers, we will conduct a pretest as well as final study.

## **METHOD**

### **Pretest: Calibrating the affective tone of the online Ads and News**

This study examines whether positive or negative mood can be induced by viewing positive (e.g., happy) or negative (e.g., sad) news articles, and ads. The affective tone of these online materials, however, must first be verified in a pretest. In order to do this, 25 subjects will be asked to evaluate the pleasantness of three news articles which will be presented to them in a random order. Then, in another session the same 25 subjects will rate approximately 20 randomly ordered ads for positive tone. It is important to note that these online materials, prior to the pretest, will be evaluated by a smaller pool of subjects (20-30) to ensure that all three affective tones (positive, negative, and neutral) are represented by the material used in the pretest. The news articles have already undergone a prior pretest which evaluated their affective tones. Ads typically consist of pictures and slogans, which must be tested separately for their affective tone. In this study we concentrate on the affective tone of the pictures only. The further testing on the slogan and combined picture and slogan will be studies in subsequent studies.

### **Mood Induction Study: overview and design**

After the affective tone of the online material is verified through the pretest, we will examine whether mood can be induced by these materials. That is, we will examine whether reading and viewing affect-laden online materials, such as positive or negative news stories and ads, can induce mood. To test this, we examine whether reading a positive or negative online news story, or viewing a positive or negative ad can change the affective state of the subjects. Affect-laden offline (paper-based) stories have been used in prior research to induce mood (Johnson and Tversky, 1983). Thus, it is reasonable to expect affect-laden online materials, such as online news articles and ads, could influence viewers' moods. We will compare our online methods of positive affect induction with the already established method of receiving an unexpected gift of candy, which has been repeatedly reported to be successful (Isen 2000, Djasmasbi, 2003). Therefore, in this study we will have three positive affect conditions (unexpected receipt of a gift, positive online news, and positive online ads), two negative affect conditions (negative online news and negative online ads), and one control or neutral affect condition.

### **Participants**

Two hundred and forty students from a major land grant university will participate in this study. Consistent with prior mood research participants will be randomly assigned to a control or experimental group (unexpected receipt of a gift, positive online news, positive online ads, negative online news, and negative online ads) (Isen, Labroo, and Durlach, 2004). The effectiveness of the mood inducement procedure will be determined by comparing the mood scores of the participants in the control group with the various experimental groups.

### **Affect Measurement**

Consistent with prior research (Elsbach and Barr 1999; Djasmasbi 2003), a self-report survey will be used to measure the affective state of the subjects. Subjects will be asked to rate on a seven-point scale (with 1 denoting "strongly disagree", 4 denoting "neutral", and 7 "strongly agree") how each of the words "glad," "annoyed," "frustrated," "happy," "pleased," and "dissatisfied" described their current affective state. The words on this survey were adopted from the set of words used on an affect manipulation survey created by Elsbach and Barr (1999). To measure affect, we will create a composite mood score of the survey by calculating the sum of its positive items minus the sum of its negative items.

## RESULTS

In the screening process for news articles, a set of headlines and introductory text for several articles was presented on a single page. Subjects were asked to select the headline of the news article that they believed to be the happiest in nature. They did the same for the saddest. Subjects then read the complete article and rated it on several items. Over half of the subjects selected “☺ turns 20” as the happy headline (23 out of 44) and “Shaken baby damage sets one twin apart” (21 out of 44) as the sad headline. Analysis of the most frequently selected happy and sad news articles showed marked differences in pretest mood ( $p < .001$ ) but no difference in terms of article boredom or involvement ( $p = 0.906$  and  $.967$  respectively). A neutral story, “Newly discovered cave provides ‘picture to the past’.” was judged to be similar to the happy and sad stories in terms of boredom and involvement. This suggests that the articles were viewed similar in terms of interest and only differed in terms of affect. The ad screening is currently in process and uses a similar screening process. The full set of results will be completed in March (2005) and presented at the conference.

## DISCUSSION AND FUTURE RESEARCH

The results of this study have several important theoretical and practical implications. First, the results potentially can extend the methods of mood induction to include the online medium. This is of particular interest and importance for the fields of human computer interaction and advertising. If mood can be induced online through visual and written stimuli, designers of websites and advertisers may use these types of stimulus to induce certain reactions in users, such as increasing their retention of ads or influencing their purchasing decisions (Swinyard, 1993). Second, since mood has been shown to be an important variable in cognition and decision behavior (Isen 2000; Hanoch, 2002) the results of this study can also have potentially important implications for measurements in studies that investigate online decision behavior. By statistically controlling the mood of the decision makers (measuring the mood of the decision makers) future experiments can reduce the error variance in their analysis and thus yield more precise results. Finally, this study can be extended to examine the influence of combined affect-laden ads and news with similar and/or dissimilar affective tones on one’s mood. In other words, this study can be extended to examine whether embedding ads in news articles with incongruent affective tones have the same mood inducement effect as embedding ads in news articles with congruent affective tones.

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