

Excerpted from the Journal of Advertising Research

March 2006 (Copyright Advertising Research Foundation, 2006)

How to Capture the Heart? Reviewing 20 Years of Emotion Measurement in Advertising

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In the latest decades, emotions have become an important research topic in all behavioral sciences, and not the least in advertising. Yet, advertising literature on how to measure emotions is not straightforward. The major aim of this article is to give an update on the different methods used for measuring emotions in advertising and to discuss their validity and applicability. We further draw conclusions on the relation between emotions and traditional measures of advertising effectiveness. We finally formulate recommendations on the use of the different methods and make suggestions for future research.

INTRODUCTION

No advertising researcher, be it a practitioner or an academic, doubts that emotions are an important factor in the advertising process. In models on “how advertising works,” emotions have never been completely absent. According to the earliest advertising model AIDA, introduced by Strong (1925), an emotional reaction (here: desire) occurred only after consumers had experienced interest for the advertisement or the product. This led to the widespread conception that the advertising process starts with attention (A) and cognitive processing (Interest), which leads to affect (Desire), and then generates behavior (Action). Models based on this order of processing are generally called “hierarchy of effects” models and dominated advertising literature for years (for a review: Vakratsas and Ambler, 1999).

From the 1980s on, the role of emotion changed. Driven by the work of Zajonc (1980), who argued that emotion has primacy over and can function independent of cognition, emotions gained renewed attention and were being accepted as an important mediator of cognitive and behavioral consumer responses to advertising (Batra and Ray, 1986; Edell and Burke, 1987; Holbrook and Batra, 1987).

In the latest decades, considerable progress has been made in the study of emotions. The influential work on emotions by neuroscientists such as Damasio (1994) and LeDoux (1996) has led to the general conception that emotions are not a useless by-product but are essential for rational thinking and behavior. Building on these insights, researchers in various disciplines including marketing and advertising have emphasized the great importance of emotions for human behavior and decision making (Ambler and Burne,

1999; Vu Plessis, 2005; Hall, 2002). According to these views, emotions dominate cognition and need to be considered as the most crucial factor in the advertising process. Emotional reactions function as the gatekeeper for further cognitive and behavioral reactions.

Giving the importance of emotions in the advertising process, accurate measurement of emotions is essential. However, measuring emotions is not easy. Throughout the years, emotional reactions to advertising have been measured in numerous ways (Bagozzi, Gopinath, and Nyer, 1999). Although most authors acknowledge the importance of emotions in the advertising process, Vakratsas and Ambler (1999) argued that there is more work needed to calibrate measurement methodologies of emotion in advertising.

Currently, the development of a typology of emotional response is no longer the main focus of advertising research on emotions. Verbal self-report is now mostly being applied as a set of emotion adjectives that need to be scored by use of semantic differentials or Likert scales. This form of verbal self-report has several advantages. It is a simple, cheap, and quick method to investigate large-scale emotional responses to a set of advertising stimuli.

However, there are some important limitations concerning the reliability and validity of this method. Although most authors report their verbal emotion scales to be sufficiently reliable, emotion scales often consist of a long list of emotion adjectives. Rating a large set of advertisements on such a list may be cumbersome and produce fatigue in the respondents.

When it comes to the validity of this method, the most important limitation involves an inevitable amount of cognitive processing required in verbal self-report that may distort the original emotional reaction in case of lower-order emotions. For higher-order emotions, this is not disadvantageous because cognitive appraisals are needed to register these types of emotions.

Respondents may also be unable to report their emotions because they are not aware about how they exactly feel, or respondents may be unwilling to report their emotions because of social desirability concerns. Combining these constraints with verbal self-report, it can be argued that a perception of emotional response may be measured rather than the emotional response itself.

Another issue involves the fact that verbal self-report is retrospective. It can measure emotional reactions only after the advertising stimulus is shown, not while it is presented. This is an important issue in the copy testing of commercials in which it is important to know which part of the commercial evokes the most intense emotional reaction.

Visual self-report. Similar to verbal self-report, visual self-report instruments measure subjective feelings. Instead of relying on verbalizations or a list of emotion words, responses of visual self-report are based on cartoon-like figures representing different emotions or emotional states. In advertising literature, we take notice of two visual self-report instruments: the most frequently used, SAM.

The Self-Assessment Manikin (SAM), developed by Lang (1980), is a visual self-report instrument that relies on Mehrabian and Russell's PAD-dimensions (1974). Instead of rating a set of emotion-adjectives for all three PAD-dimensions, Lang (1980) created a

set of five figures for every dimension (see Figure 2). Accordingly, for every single dimension respondents have to indicate which figure best represents their emotional state (e.g., after seeing a picture).

When it comes to the advantages and disadvantages of this method, we agree with Morris, Woo, Geason, and Kim (2002) that visual self-report instruments like SAM are quick and user-friendly tools for measuring emotional responses to advertising. This makes visual self-report faster and less boring than verbal self-report. Also, visual instruments are suitable for cross-cultural research and research with children (Morris, 1995).

We do not completely agree, however, with Morris, Woo, Geason, and Kim (2002) when they state that SAM eliminates the cognitive processing associated with verbal measures. SAM consists of three rows of figures explicitly named as pleasure, arousal, and dominance. Further, verbal instructions are necessary when administering SAM. This implies that higher-order processes are still involved in the completion of these measures and hence potentially affect the lower-order emotional responses SAM aims to register. We agree that SAM reduces introspection and cognitive processing when compared to verbal self-report. However, it does not completely eliminate it. Consequently, the main limitation of this approach still concerns the cognitive bias: visual self-report can only measure perception of an emotional reaction.

SUMMARY AND CONCLUSIONS

In this article we have evaluated and compared two main methods for measuring emotional reactions to advertising stimuli: self-report measures and autonomic measures. These measures fundamentally differ in the aspect of emotions they register. This largely determines their strengths and weaknesses. Self-report measures are cheap and easy but they necessarily involve a cognitive intervention. Autonomic reaction, at first sight, seem most valid to measure lower-order emotions. However, due to implementation difficulties and the lack of straightforward and accurate data, the measurement of autonomic measures is not yet fully integrated in advertising research clinic.

Comparing the effect of emotional reactions on other measures of advertising effectiveness reveals some general effects for all types of measurement. Results from different methods seem to indicate that the arousal has more effect on recall as compared to valence (Pleasure). When it comes to the effects on Abr (Attitude toward the Brand) and PI (Purchase Intent), we can conclude that visual self-report measures and autonomic measures yielded more direct effects compared to verbal self-report, in which the effect of emotional reactions on Abr and PI is often mediated by Aad. We think this is mainly due to the fact that studies reporting verbal self-report of emotional reactions often include a similar verbal measure of Aad, making Aad a confounding variable instead of a variable that provides additional information. Consequently, in verbal self-report, Aad mediates all other effects of emotional reactions. Similar concerns are also expressed by Derbaix (1995) and Morris, Woo, Geason, and Kim (2002). This constraint mainly applies to the verbal measurement of lower-order pleasure emotions.

The abundance of studies supporting the direct or indirect impact of emotional reactions on other measures of advertising effectiveness proves that emotions fulfill a crucial role in the advertising process. Recent research on emotions from the field of neuroscience has indicated that emotions come first and form the basis of rational thinking and behavior. Applying this to advertising, we suggest that an emotional reaction needs to be established before further cognitive processing of an advertising stimulus takes place. Emotions can be considered as the gatekeeper for further advertisement processing. Several studies we reviewed here support this notion. The article by Morris, Woo, Geason, and Kim (2002) convincingly showed that emotional reactions to advertising dominated cognitive factors in explaining behavior, e.g., purchase intention.

Recommendations for the practical use of the measurement methods

The recommendations we formulate are dependent on the type of advertisement (print advertisement or commercial) and on the type of emotion (lower- versus higher-order emotion) involved,

For the measurement of lower—order emotional reactions to print advertisements, autonomic measures are, theoretically, the most valid because they are not distorted by cognitive processes. However, in current advertising research, the use of these types of measures has been scarce. This implies that to date we cannot conclude much about their predictive validity. That is why, from a practical point of view, we recommend visual self-report measures such as SAM (e.g., AdSAM). These methods can perform quick and cheap measurements of emotional reactions. Moreover, these measures are suitable for large-scale research, cross-cultural research, and research with children. Although they can only administer subjective feelings, the cognitive bias is lower compared to verbal self-report. Moreover, previous research has shown that emotional reactions measured by means of SAM exhibit direct effects on behavioral measures such as purchase intention (Morris, Woo, Geason, and Kim 2002).