Testing the Interactions of Atmospheric Color and Interactivity in Advertising Response in the Computer Mediated Environment

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Three streams of literature are brought together: advertising response, web response and color response. A comparison of results across three different advertising response models (MacKenzie et al. 1986; Yakratsas and Ambler 1999; and Novak, Hoffman and Yeung 2000) is suggested. Propositions are developed to test the interactions of color and interactivity within the advertising response model.

Introduction

With the skyrocketing TV ad rates and the falling of print circulation numbers, the web appears to be the savior of both the advertising industry and corporations who depend on advertising to generate demand. Never-the-less, the web will be expected to show better effectiveness and efficiency ratios than other media (Harvey 1997). Some say web advertising is losing its gloss (Kranhold 2000), but other analysts believe the web's future as an advertising medium is bright (Net Advertising 2000). While the web provides many interesting topics to marketers, this paper is concerned with whether consumer response to advertising on the web is similar to consumer response to traditional advertising, specifically with regard to the effects of interactivity and atmospheric color.

While there is an exhaustive literature on both information processing and affective responses to traditional advertising (see MacKenzie, Lutz and Belch 1986; Vakratsas and Ambler 1999, for a review), there are few studies of advertising responses within the computer mediated environment (CME). One study found that subjects had gained greater belief strength for Web Text ads than TV, and greater belief strength for Web AV than for Web Text ads (Singh et al. 1998). Another study found that a higher order of cognitive processing results from interaction with print catalogs than online catalogs (Griffith and Krampf 2000). What is missing is a study that compares the effects on information processing and affective responses within traditional and new advertising response models within the CME to a similar but non-interactive environment. Two studies regarding the CME predict that the atmospheric color will enhance positive attitude toward the site, (Chen and Wells 1999; Dailey and Heath 1999), and one marketing study looks at the effects of the CME on information processing (BezJian-Avery et al. 1998). There are no studies examining the interaction of atmospheric color with information processing in the CME.

Propositions

Advertising Response

Although two new response models have been suggested (Memory-Affect-Cognition: Vakratsas and Ambler 1999; Flow: Novak, Hoffman and Yeung 2000), the dominant view of the effects of advertising in the copy pretest situation is expressed by the dual mediation model (MacKenzie et al. 1986; Brown and Stayman 1992) which explains purchase intention as a function of ad and brand cognitions and ad and brand attitudes. Whether this model is at...
all appropriate to the CME is our first question, and proposition one results.

PI: The dual mediation model will provide a good fit and explain significant variance in advertising response data collected from a computer mediated environment.

**Color: Affect and Information Processing**

Color has long been used effectively in print and television ads, and the question here is whether or not effects are similar in the CME. Certain colors are known to generate positive affect (Gom et al. 1997). More to the point, atmospheric color has been shown to increase time spent at the site (Dailey and Heath 1999), attitudes and cognitions (e.g. Middlestadt 1990), information processing (Soldat et al. 1997), and recall (Hall and Sidio-Hall 1994). While two studies predict that atmospheric color will enhance positive attitude toward the site (Chen and Wells 1999; Dailey and Heath 1999), there are no studies examining the effects of color with information processing (as measured by recognition and recall) in the CME. Soldat et al. (1997) found that suggestive use of color caused differences in processing style in a print context. These results should be tested in the CME.

P3: Use of warm colors in the CME will result in heuristic processing, where use of cool colors will result in more effortful processing as measured by recall and recognition.

**Interactivity and Flow: Affect and Information Processing**

Traditional advertising response models have assumed that affect results from cognitions. However, Hoffman and Novak (1996) authors introduce the concept of "flow" to describe the online experience and it is expected to result in both positive subjective experience and increased learning, that is, positive affect and cognition.

P2: More positive affect will be generated by the CME ad than by a More traditional format.

With regard to information processing, interactivity was expected to increase information processing. Surprisingly, the little empirical research on the effects of interactivity on information processing reports mixed results (e.g. Ghose and Dou 1998; Yang 1995). A multidimensional construct including user control, non-linear presentation (Rose 1999) and temporal synchronicity (Hoffman and Novak 1996), interactivity is expected to affect recall and recognition as well as attitude. Unfortunately, empirical results do not support the proposition (e.g. Jaffe 1997). Additionally, the CME may be subject to context effects more similar to print media than TV, resulting in reduced ad involvement in the CME (Norris and Coleman 1992). Therefore, we must predict less recall and recognition in the CME.

P4: Ads in the interactive environment will produce less recall and recognition than ads in a similar but noninteractive medium.

**Interactions**

Both the color literature and Hoffman and Novak (1996) predict positive affect resulting from optimal color use in the interactive environment. Thus we expect that a significant interaction term will increase the effects of color and interactivity. The results on information processing are more mixed. While cool
colors have been shown to facilitate careful processing, the CME may reduce those effects, again suggesting a significant interaction. Proposition five results.

P5: Interaction terms for color and interactivity will be significant predictors of both ad induced affect (+) and recall and recognition (-).

Conclusion

This paper has brought together literature from various disciplines in order to examine the expected effects of color and interactivity on advertising response. Propositions have been developed whose empirical tests should be of great interest to any manager considering advertising on the internet.

References


Middlestadt, Susan E. (1990), "The effect of background and ambient color on product attitudes and beliefs," Advances in Consumer Research, 17, 244-249.


