THE EFFECTS OF ATMOSPHERIC FACTORS ON INTERNET BUYERS' EMOTIONAL RESPONSES

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ABSTRACT

Atmospheric factors such as music and color in a retail environment can influence consumers' emotional responses and shopping behaviors. Online retailers are likely to try to influence consumers' shopping behavior through atmospherics and service, just as physical stores do. This study tested the effects of music tempo and color hue in an electronic commerce context by using laboratory experiment. The results indicate that both music and color reveal significant effect on participants' emotional responses. Specifically, participants reveal higher level of arousal and pleasure in their emotion when they were under quick music and warm color conditions than those exposed to slow music and cool color environment.

INTRODUCTION

Analogous to physical stores, websites are likely to try to differentiate themselves in part on the basis of atmospherics and service [[1]]. In order to understand the effects of such environmental factors as color, music…etc. on consumers' emotions in e-commerce context, we have first to consider the difference between physical service environment and online storefront.

In this article, we aim to examine the effects of atmospheric variables on virtual storefront shoppers. Our specific focus will be the effects of music tempo and color hue on participants' induced emotion, as well as the effects on participants' attitudinal preferences related to their future shopping behavior. The relationships of such variables are examined in an experiment that manipulates store ambiance—background music and color hue of a fictitious online storefront.

CONCEPTUAL BACKGROUND

Clever design of store atmosphere can elicit desired behavioral responses among consumers. However, comparing to shop in physical stores, consumers can only "feel" the products and store atmosphere through their eyes and ears when they are browsing a Web site. Thus, eyes and ears become their two most important channels to perceive the environment for Internet buyers. Past researches focusing on the effects of these two senses on consumer behavior are summarized as follows.

Music

Music is not simply a generic sonic mass, but rather a complex chemistry of controllable elements. Various structure characteristics of music, such as tempo, volume and harmony, are proved to have effect on consumers' responses and behaviors. Numerous studies have found that fast-tempo and high-volume music increase people's arousal levels [[4]] [[8]], which then lead people to walk faster and to talk and eat more quickly in restaurants [[6]]. Thus, all other things being equal, fast music is considered to be more happy and/or pleasant than slow music [[3]] [[9]].

Color

The Munsell System, which is the de facto system used in psychological research, defines colors in the three dimensions of hue, value, and chroma [[7]]. Hues are classified as warm colors and cool colors. Warm colors are those high wavelength colors such as red, orange and yellow. Cool colors are low wavelength colors such as green and blue. Researches have shown that warm colors are associated with elated mood states and arousal but also heightened anxiety, whereas cool colors reduce arousal levels and can elicit such emotions as peacefulness, calmness, love, and happiness [[10], pp.71-79].

EXPERIMENTAL DESIGN

The experiment is a 2 (music tempo: fast/slow) × 2 (color hue: warm/cool) between-subjects factorial design. 128 participants were recruited and then assigned into one of the 4 groups randomly. A gift shop served as the context of the study.

The experiment was conducted in a laboratory quipped with 40 personal computers. In order to avoid the situation in which the users unintentionally turn off the voice of the computer, the music was played through the laboratory's sound system. The content of the web pages browsed by participants in all conditions were the same. The background color varied in terms of the color manipulation. After a brief introduction, the participants were asked to answer a questionnaire measuring their emotional responses. Further, the demographic information is also collected.

Twelve-item semantic differential scale developed by [[5]] was employed to measure emotional responses to the environment. Six item pairs measured the arousal dimension of emotions are: happy-unhappy, pleased-annoyed, satisfied-unsatisfied, contented-melancholic, hopeful-despairing and relax-bored. The other six items tapped into the pleasure dimensions, they are: stimulated-relaxed, excited-calm, frenzied-sluggish, jittery-dull, wide awake-sleepy and aroused-unaroused.

DATA ANALYSIS AND CONCLUSION

MANOVA test was performed to test the effects of music and color on participant's emotional responses.

As expected, the main effects of music and color are significant for both of the dependent measures. The results of this study suggest that music tempo and color hue can have significant effects on Internet customers' emotional states. Specifically, participants have higher level of arousal and pleasure when the store playing fast tempo music with background color in red. The results support the findings in many marketing literatures (see [[2]] [[4]] [[8]]) that faster tempos contribute higher amounts of information which in turn lead to increased levels of arousal. In addition, the tempo of background music is also proved to be able to add to or detract from the pleasantness of an environment [[4]].

In summary, both background music and color are elements of the environment that may provide for an effective method of influencing mood states. A well-designed web site with appropriate music and color can create a desired environment and thus entice and retain target customers successfully. Findings in this study provide a direction for practical applications of such ambient factors as music and color in online store settings.

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