

Eye Tracking Analysis of Readers' Psychological Interaction with Marketing Copy Referencing Life Values

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Abstract. Rather than simply reporting product information, many advertisements nowadays employ images that convey a certain life values. How do consumers respond to advertisements of this type? This study analyzed consumer responses to the advertising card of C'N'C Costume National using eye-tracking technology and a questionnaire survey. Research findings were as follows: (1) It was found that participants scanning figure and text repeatedly on the copy referencing life values more than on the copy referencing product information. This was confirmed by chi-squared testing. (2) Factor analysis identified three significant factors, namely, psychological interaction, a sense of specialness, and anticipation. (3) We discovered that females with a background in design tended to spend more time watching a male model than men of all backgrounds did. This study contributes to marketing research, demonstrating the effectiveness of conveying messages about life values to achieve more desirable advertising effects while also conveying social concern.

Keywords: Eye tracking · Advertising copy · Life values · Readers' psychological interaction

1 Introduction

Many companies still rely on celebrity endorsement and advertisements referencing dry product information to encourage consumers to choose their brand of product. Yet in today's fiercely competitive market and climate of elevated social concern, more and more brands are employing models to act out a visual narration of certain life philosophies and standards of value. The Dove Real Beauty Series focused on inner beauty rather than product details to great success. Another example is the C'N'C Costume National advertisement, which asked the users of social networking sites to share their life philosophies.

In what way do the observers respond differently to an advertisement of this type? This study first explored the literature related to value standards and consumer

behavior, visual flow and meaning, and the influence of gender on ways of observing advertisements. This leads us to propose the hypothesis that an advertisement focused on life values engages consumers more than those featuring only product information. We tested this hypothesis while also investigating whether the gender of viewers influences their preferences toward the gender of models.

2 Literature Review

2.1 Standard of Value and Consumer Behavior

Standard of value is a persistent preference held by people toward certain behavior, affairs, state of things, or goals. A set of value standards may be swayed by a person's personalities, life experience and socio-cultural factors, and further affects personal attitudes and behavior as a result [1, 2]. Schwartz [2] categorized value standards into the following classifications: achievement, benevolence, hedonism, conformity, power, security, self-direction, stimulation, tradition and universalism. Carman [3] asserted that value standards exert influence on one's interests, time management, and how one makes decisions and enacts one's roles in social contexts, including that of consumer. Yang [4] believed that value standards have a higher relevance with postmodern symbolic consumption. For young adults who are socially anxious or introverted, commodities that promise uniqueness or the unconventional have the most appeal. For chic, open-minded consumers, a product's beauty or cultural connotations will be more important.

2.2 Visual Flow and Meaning

Visual scanpaths can reflect the process of attention shifting within observers. Treisman and Gelade [5] compared the operation of visual attention to multiple packets that are continuously prepared by the visual system prior to the merging of information with its corresponding meaning manifesting in individual consciousness. Experiments on explicit and implicit product presentation in advertisements have established that in terms of the latter type, viewers display more frequent saccades between images and text, spend more time on them, and exhibit more positive attitudes and greater interest [6].

2.3 Advertisement Observation and the Model's Gender

There exist conflicting views among researchers on the correlation between observers' attitudes toward the advertisement and the model's gender. Some scholars purport that this relationship depends on the attributes of a product. David M. Ogilvy [7], a world-renowned advertiser, proposed that "to arouse the attention of women, babies and women must use the illustrations" and that "to arouse the attention of men, we must use the men's illustrations."

3 Methodology

The research methods employed in this study were eye tracking and a questionnaire survey. We also used SPSS to determine whether any diversities existed among the subjects with different backgrounds in terms of watching time and scanpaths, and then analyzed whether subjects showed preference toward such advertisements.



3.1 Eye Tracking Method

Independent variable: The independent variable was advertisement copy. The experiment group was shown copy conveying life values, while the control group was shown copy stressing product information.

Dependent Variable: Total Browsing Time and Scanpaths. Experimental control: identical images in the two samples and the two copies occupying similar amounts of area.

Experiment Samples: Two sets of samples were garnered from a 2008 advertising card of C'N'C Costume National (Table 1). All the models were randomly selected from Myspace Networking sites. Sample A (shown to the experimental group) kept the

Table 1. Samples from experimental group and control group

Sample A	Sample B
	

Source: C'N'C Costume National in SOGO Department Store, Taipei (has been modified)

white frame that circled the model's head and the original copywriting: "Make sure you trust the people you know"/Female/26 years old/New York/United States; "Love is all we need"/Male/25 years old/New York/United States. Sample B (shown to the control group) contained images of the models' heads without the white frame and the copy was changed to convey product information: No: Ad48052/Style: Female, T shirt/Color: Black/Size:L/M/S/Price: 1200; No: Ad51046/Style: Male, Jacket/Color: Black/Size: 30/32/36/Price: 2940. All the copy was in Chinese, with which all the subjects are familiar.

Experiment Equipment and Participants: This study employed Face Lab4 real-time face and fixation tracking device in conjunction with GazeTrail software analysis. The participants included 36 students in college; 18 of them had backgrounds in design, while the remaining 18 participants had backgrounds in other fields.

3.2 Questionnaire Survey

Objective: To understand how participants respond to copy conveying a message related to life values. Responses were measured on a 7-point Likert scale.

Participants: To achieve high reliability in factor analysis, this research recruited 114 participants for the questionnaire survey, half of whom had background in design.

Source of Questions: A total of 30 questions were designed drawing on the work of Huang and Chuang [8], focusing on visual narration, emotional response and theories related to aesthetic experience.

4 Results and Discussion

4.1 Eye-Tracking Analysis and Chi-square Test

This study employed data analysis using GazeTrail, classifying the types of samples into "woman copy," "woman," "man copy," "man," "left," and "right". Independent-sample t-tests found no significant difference between the factors of "observation time" and "participants' gender and background". The mean values showed that participants in the experimental group spent longer observing the advertisement referencing life values than those in the control group who were shown product-related advertisements (Table 2).

We explored the relationship between "scanning" and "type of copy" from the eye-tracking scanpath of the participants with chi-squared testing, which showed that there exists a significant relationship between the two ($X^2(1) = 8.578$, Pearson chi-squared score = .003). That means participants scanning figure and text repeatedly on the copy referencing life values more than on the copy referencing product information.

Table 2. Comparison of observation times in experimental group and control group

	Woman copy	Woman	Man copy	Man	Brand	Left area	Right area
Experimental group: participants without a background in design	2.58	1.12	1.14	1.48	1.40	7.94	5.26
Experimental group: participants with a background in design	2.84	0.91	1.34	1.70	1.92	7.69	4.33
Subtotal	2.72	1.01	1.24	1.59	1.68	7.80	4.77
Control group: participants without a background in design	2.24	0.70	2.37	0.83	1.70	5.37	5.38
Control group: participants with a background in design	2.07	0.81	1.49	1.11	2.81	8.06	4.07
Subtotal	2.17	0.75	1.99	0.95	2.19	6.55	4.81

4.2 Independent Two-Way ANOVA

This study used independent sample two-way ANOVA on the participants' background and gender, and found a significant correlation between these two independent variables (p -value = .025). This study further used key result analysis and discovered that females with a background in design tended to observe male models longer than men did (p -value = .037). Meanwhile, there was no discernible difference in the watching time for women models in an advertisement.

4.3 Factor Analysis

We first conducted item analysis and tests on internal consistency and reliability related to the 30 question items. After eliminating eighteen items, we employed Varimax rotation for principal component analysis, resulting in $KMO = .729$ (>0.7) and good reliability. The results of the Bartlett test were also significant, deeming that factor analysis was appropriate. Furthermore, the cumulative total explained variance of the three factors reached 69.87 %. Finally, we named the three factors psychological interaction, a sense of specialness, and anticipation. The mean score given by the subjects was significantly higher than 4 (no opinion), revealing that the life values advertisement was praised by the subjects.

5 Conclusions and Suggestions

This study explored the relationship between advertising copy referencing life values and the observer's psychological interaction. The research findings were as follows: (I) The data related to eye tracking proved that copy that conveys a message about life values is likely to trigger the observer's interest. Results from factor analysis also confirmed that such advertisements motivated psychological interaction, which was in accordance with the propositions by Radach et al. [6]. (II) The data related to eye tracking also evinced that females with a background in design tended to watch men models longer than males did, which was contradictory to the claim made by David Ogilvy [7]. The results of this study make valuable contributions to the field of marketing. Future work could seek to build upon these results to increase the reliability of this methodology.

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