CHAPTER 5

EFFECTIVENESS OF ADS - A SURVEY-BASED APPROACH

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5.1. INTRODUCTION:

In chapters 3 and 4, we have decoded ads for Boroline through semiotics and psychoanalysis to find out how the designer of these ads tried to project and promote their products, whether any change in the theme or positioning of the product and the way they were projected could be observed. We tried to explore the causation of these changes and the reasons of specific positioning portrayed thereby. The semiotic and psychoanalytical tools though helped us to pursue an in-depth study, might be incomplete in assessing the inherent claims of these ads. Because the semiotic and psychological analysis of the ads may bring us the expert views but these ads were basically meant for addressing an audience of common men who do not have any understanding of the aforesaid subjects. No ad is ever created and published only for the experts. The ads are mainly targeted for common people. Hence, the viewers, consisting of customer and prospects can be more instrumental to examine the effectiveness of these ads. Since the number of viewers is usually extremely large, impact of the ads can only be studied through conducting a survey to examine and understand the views of the viewers. This may help the analyzer to observe if the respondents can also find the similar appeals in the ads as found by experts. One may be interested to find out communality between the survey observation and expert analyses. The ads where the
analyses based on semiotics and the analysis based on survey will draw similar inferences, may be considered as strong representations. The ads where the expert-inferences and survey observations are different, one may call them weak representations (Rao, 1989).

5.2. LITERATURE REVIEW:

Empirical Studies on Influence of Ads on Market Demand: The influence of advertising on primary demand for cigarettes is investigated by Leeflang and Reuijl. They suggested that by employing annual, bimonthly, and monthly observations, the consequences of temporal aggregation could also be studied. Independent of the level of temporal aggregation, advertising was found to have a statistically significant impact on industry sales, although the influence diminished over time (Leeflang and Reuijl, 1985). Lee, Fairchild, Behr investigated ads for fruit juice brands and their effectiveness and impact on the demand for the product. They had also installed a comparative study among various national brands (Lee, Fairchild, Behr, 2006). According to Lambin, optimal allocation of fund among various marketing inputs, which may generate expected sales, was always a Herculean task. He tried to examine, the reaction of competitors over the change in Marketing inputs made by a firm. Here he considered the sales of any firm as a function of Advertising, market share, relative price and quality. He stressed on the importance of advertising as the principal predictor of sales (Lambin, 1970).
Empirical Studies on Influence of Ads containing Negative Appeal: Yang examined several research works to find the impact of negative political advertisements and critically analyzed them. The author found that the direction of the research has been moving toward focusing on the broader and more general effects of negative political ads. Facing continuously increased literatures in the area, communication scholars need to develop a theory or theories to guide the research (Yang Lin, 1996). The study conducted by Shen, examined viewers emotional responses to print political advertising. It demonstrated that positive and negative (direct attack) political advertising differ in the emotional responses that they elicit. Consistent with prior research on emotion, positive and direct attack political advertising generated different amounts of message recall and produce different quantities of positive and negative cognitive responses. This research work undertaken by Chang, establishes the importance of ad-evoked emotion in the formation process of ad exposure and candidate evaluation. Integrating findings from this study, a model was proposed that established the relationship of four important variables: ad valence, ad-evoked emotion, attitude toward the ad, and candidate liking. It suggests that (1) ad valence has an impact on attitude toward the candidate via the mediation of ad-evoked emotion; (2) ad valence has an impact on attitude toward the ad via the mediation of ad-evoked emotion; (3) attitude toward
the ad has an impact on candidate evaluation; and (4) ad-evoked emotion can explain variations of candidate evaluations beyond that which can be accounted for by attitude toward the ad (Chang, 2001).

Empirical Studies on Influence of Ads on the basis of its Structure, Design, Frequency etc.: Baltas, through this paper sought to investigate, the structure of advertising effectiveness on the internet. He empirically examined the importance of creative and media factors for banner effectiveness. Econometric modelling of actual data on banner ads demonstrated that creative factors such as banner size, animation, message length and logos, as well as media factors such as campaign length, number of host websites, use of offline media, and campaign cost, may influence the direct response of the target audience as measured by click-through rates. The results led to important practical implications for internet advertising (Baltas George, 2003). Dahlen through this paper investigates the consequences of repeat visits to websites. It reported on a large empirical study that shed light on the differences between experienced and new website visitors and between visitors with different levels of web usage experience. The study investigated the time and activity visitors spend on the website, their attitudes towards the site and the brand, and how visitors were affected by the website in their attitude towards the brand (Micael Dahlen 2005).
Emperical Studies on Influence of Ads on the basis of Rhetorics and Cultural Cues: The Mick and McQuarrie, through their study emperically examined the role of various type of rhetorical figures in the visuals, which were creative devices that entailed the arrangement of cues in paradoxical relationships. Specifically, its focus laid in investigating whether the influence simple and complex tropes have on viewer’s perception. According to them, by fully understanding the effects of certain types of tropes, advertisers might better apply their persuasive messages (Mick, McQuarrie, 1999). Morris through this study examined the relationships between cultural dimensions and characteristics of advertisements. A theoretical framework provided a cultural basis for the development of advertising messages. Two cultural dimensions – individualism-collectivism and femininity-masculinity – were used to explain appearances and portrayals of people in commercial print messages from 43 countries. The method for investigation is a content analysis of advertisements from general interest magazines that are widely read in each nation. The study found that in masculine countries, men in advertisements are more likely to be portrayed in occupations and work like-situations than in feminine countries. Other findings failed to reach statistical significance, but show relationships in the direction proposed and provide indications for how culture affects advertising content (Pamela Morris, 2005).
Several empirical studies are conducted to examine the influence of advertisements on market demand, impact of negative advertising appeals on consumers, the strength of the impact of ads on the basis of their design, frequency etc. These studies generated gold mine of information which may benefit the marketers. But in our present study we propose to follow the line of Mick and McQuarrie as they studied on the reader's response of visual rhetoric of the ads. Morris also conducted empirical study to find out the influence of rhetoric on persuasion, which had also indicated the same trail.

5.3. TABULATION AND ANALYSIS OF DATA

The initial analysis of data is to focus on some basic features of the same. These features describe the data in a general way, summarizing the nature of variation in the information set. The main objective of statistical analysis of data is to draw valid inferences about the population on the basis of a sample drawn from the population. In other words, one is required to draw inferences about the population parameters/ behaviour in the light of the sample data. The statistical procedures used for drawing inferences about the population from sample data are covered under estimation and testing of hypothesis. We would like to follow the second path.

We have all ready stated that the necessary data for testing of hypothesis will be generated through the administration of the questionnaire described in
Chapter 2. What follows is the schematic presentation of the corresponding analysis where each question addresses an important issue of the study. Question number 1 and 2 represents brand recall and we will be specially interested in the positioning of Boroline. Question number 3 deals with image sign and symbol representing social custom/religious practice/motherhood or nature. The question number 4 throws light on the targeted age group. Question number 5, describes how the visual has been projected as a representative of buyer/buying decision maker/influencer/user. Question number 6, generates data on the mode of product promotion. Question number 7, deals with the priorities assigned to different attributes of boroline. Information on culture, is available from responses against the question number 8. The question number 9, the last in the sequence, covers projection of the value system of the female figures portrayed through the visual.

5.3.1. Analysis for Brand Recall:

Against question number 1, which enquired about the status of Boroline as a beauty cream, we have got the following information from male respondents.

5.3.1.1. Brand Recall for Beauty Cream (Male Responses):

<table>
<thead>
<tr>
<th>Name of Brands</th>
<th>Boroline</th>
<th>Fair &amp; Lovely</th>
<th>Other Creams</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Responses</td>
<td>5</td>
<td>27</td>
<td>3</td>
<td>35</td>
</tr>
</tbody>
</table>
From the above table, we find approximately 14% of the male respondents. To make inductive inference about the population behaviour, we would like to test for the hypothesis that the brand recall proportion of Boroline as a beauty cream, \( \theta \), is \( \theta_0 = 0.25 \), against the alternative that, \( \theta \), is less than \( \theta_0 \).

Here sample proportion \( \hat{\theta} \) is equal to 0.14. The corresponding test statistics can be constructed as:

\[
z = \frac{\hat{\theta} - \theta_0}{\sqrt{\frac{\theta_0(1-\theta_0)}{n}}}
\]

\[
= \frac{0.14 - 0.25}{\sqrt{\frac{0.25(1-0.25)}{35}}}
\]

\[
= \frac{-0.11}{0.0732} = -1.5029
\]

Since \( z \) observed is greater than \( z \) tabulated, i.e., -1.6449 at the 5% level of significance, we accept the null hypothesis, confirming the fact that the brand recall proportion of Boroline as beauty cream is at most 0.25. This establishes the fact that Boroline has a very weak positioning among men for its beauty related properties.

Against question number 2, which enquired about the status of boroline as an antiseptic cream, we have got the following information from male respondents.
5.3.1.2. Brand Recall for Antiseptic Cream (Male Responses):

<table>
<thead>
<tr>
<th>Name of Brand</th>
<th>Boroline</th>
<th>Boro Plus</th>
<th>Other Creams</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Responses</td>
<td>of</td>
<td>of</td>
<td>of</td>
<td>of</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>3</td>
<td>3</td>
<td>35</td>
</tr>
</tbody>
</table>

We obtain from the above table that, 82% of the male respondents recalled Boroline as an antiseptic cream. To make inductive inference about the population behaviour, we would like to test for the hypothesis that the brand recall proportion of Boroline as an antiseptic cream, \( \theta \), is \( \theta_0 = 0.75 \), against the alternative that, \( \theta \), is less than \( \theta_0 \).

Here sample proportion \( \hat{\theta} \) is equal to 0.82. The corresponding test statistics can be constructed as:

\[
    z = \frac{\hat{\theta} - \theta_0}{\sqrt{\frac{\theta_0(1-\theta_0)}{n}}}
    = \frac{(0.82-0.75)}{\sqrt{0.75(1-0.75)}/35}
    = 0.07/0.0732 = 0.9563
\]

Since \( z \) observed is greater than \( z \) tabulated, i.e., -1.6449 at the 5% level of significance, we accept the null hypothesis, confirming the fact that the brand recall proportion of Boroline as antiseptic cream is at least 0.75. This establishes the fact that Boroline has a very strong positioning among men for its antiseptic properties.

Similar study, carried out on female respondents, has resulted in the following tables.
5.3.1.3. Brand Recall for Beauty Cream (Female Responses):

<table>
<thead>
<tr>
<th>Name of Brands</th>
<th>Boroline</th>
<th>Fair Lovely &amp; Other Creams</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Responses</td>
<td>2</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

From the above table, we find approximately 13% of the female respondents. To make inductive inference about the population behaviour, we would like to test for the hypothesis that the brand recall proportion of Boroline as a beauty cream, \( \theta \), is \( \theta_0 = 0.25 \), against the alternative that, \( \theta \), is less than \( \theta_0 \).

Here sample proportion \( \hat{\theta} \) is equal to 0.13. The corresponding test statistics can be constructed as

\[
z = \frac{(\hat{\theta} - \theta_0) \sqrt{\theta_0(1-\theta_0)}}{\sqrt{n}}
\]

\[
= \frac{(0.13 - 0.25) \sqrt{0.25(1-0.25)}}{\sqrt{15}}
\]

\[
= -0.12/0.1118 = -1.0733
\]

Since \( z \) observed is greater than \( z \) tabulated, i.e., -1.6449 at the 5% level of significance, we accept the null hypothesis, confirming the fact that the brand recall proportion of Boroline as beauty cream is at most 0.25. This establishes the fact that Boroline has a very weak positioning among women for its beauty related properties.

5.3.1.4. Brand Recall for Antiseptic Cream (Female Responses):

<table>
<thead>
<tr>
<th>Name of Brand</th>
<th>Boroline</th>
<th>Boro Plus</th>
<th>Other Cream</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Responses</td>
<td>12</td>
<td>1</td>
<td>2</td>
<td>15</td>
</tr>
</tbody>
</table>
From tables 5.2.1.3 and 5.2.1.4, we find approximately only 13% of the female respondents recalled Boroline as beauty cream whereas 80% of the female respondents recalled Boroline as antiseptic cream. This establishes the fact that Boroline has a very strong positioning among the women for its antiseptic properties.

We would like to test for the hypothesis that the brand recall proportion of Boroline as antiseptic cream, $\theta_0 = 0.75$, against the alternative that, $\theta$, is less than $\theta_0$.

Here sample proportion $\hat{\theta}$ is equal to 0.80 the corresponding test statistics can be constructed as $z = \frac{(\hat{\theta} - \theta_0) \sqrt{\theta_0(1-\theta_0)}}{\sqrt{n}}$

$$= \frac{(0.80-0.75) \sqrt{0.75(1-0.75)}}{\sqrt{15}}$$

$$= 0.4472$$

Since $z$ observed is greater than $z$ tabulated, i.e., -1.6449 at the 5% level of significance, we accept the null hypothesis, confirming the fact that the brand recall proportion of Boroline as antiseptic cream is at least 0.75. This establishes the fact that Boroline has a very strong positioning among men for its antiseptic properties.
Comparative Study:

The survey analysis showed that Boroline has a very strong positioning in the market for its antiseptic properties as concluded by both men and women respondents.

5.3.2. Analysis on usage of signs/ symbols/ images:

Against question number 3, which enquired whether an image / sign/ symbol portrayed in the ads represented social custom/ religious practice/ motherhood/ nature or any thing else, we have obtained the following information from male respondents.

5.3.2.1. Year wise frequency table on implication of signs/ symbols/ images: (Male Responses)

<table>
<thead>
<tr>
<th>Year</th>
<th>Social Customs</th>
<th>Religious Practice</th>
<th>Motherhood</th>
<th>Nature</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>19</td>
<td>11</td>
<td>04</td>
<td>01</td>
<td>00</td>
<td>35</td>
</tr>
<tr>
<td>1964</td>
<td>12</td>
<td>09</td>
<td>06</td>
<td>02</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>1966</td>
<td>05</td>
<td>05</td>
<td>06</td>
<td>08</td>
<td>11</td>
<td>35</td>
</tr>
<tr>
<td>1972</td>
<td>10</td>
<td>09</td>
<td>05</td>
<td>05</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>1976</td>
<td>07</td>
<td>07</td>
<td>02</td>
<td>04</td>
<td>15</td>
<td>35</td>
</tr>
<tr>
<td>1982</td>
<td>08</td>
<td>15</td>
<td>02</td>
<td>01</td>
<td>09</td>
<td>35</td>
</tr>
<tr>
<td>1986</td>
<td>07</td>
<td>22</td>
<td>01</td>
<td>00</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1994</td>
<td>06</td>
<td>20</td>
<td>03</td>
<td>00</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>1999</td>
<td>07</td>
<td>16</td>
<td>03</td>
<td>00</td>
<td>09</td>
<td>35</td>
</tr>
<tr>
<td>2000</td>
<td>04</td>
<td>07</td>
<td>04</td>
<td>15</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>121</td>
<td>36</td>
<td>36</td>
<td>72</td>
<td>350</td>
</tr>
</tbody>
</table>

Test for Association:
Null Hypothesis (H0): The choice of image/sign/symbol, that are portrayed in the ads and the time frame in the analysis are not associated or are independent.

Alternative Hypothesis (H1): The choice of image/sign/symbol, that are portrayed in the ads and the time frame in the analysis are associated or are not independent.

Requisite data can be obtained from table number 5.3.2.1.

Calculated value of chi square = 130.589

Tabulated value of chi square = 50.998

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to (5-1)(10-1) = 36.

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. It reveals the fact that the image/ sign/symbol, portrayed through ads changed over the years.

Thus the choice of sign/ symbol / image changed over the years.

Test for Proportion:

a. Null Hypothesis (H0): No change has taken place in the social customs projected through sign, symbol and image in the periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.2.1.

The calculated value of $Z = 2.6200$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than tabulated value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, social custom between the two periods under consideration.

b. Null Hypothesis (H0): No change has taken place in the religious practice, projected through sign, symbol and image in the periods 1963-1976 and 1982-2000.


Requisite data can be obtained from table number 5.3.2.1.

The calculated value of $Z = 3.5460$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, religious practice, between the two periods under consideration.
Similar study, carried out on female respondents, has resulted in the following table.

5.3.2.2. Year wise frequency table on implication of signs/symbols/images: (Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Social Customs</th>
<th>Religious Practice</th>
<th>Motherhood</th>
<th>Nature</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>06</td>
<td>05</td>
<td>01</td>
<td>03</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1964</td>
<td>03</td>
<td>00</td>
<td>04</td>
<td>04</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1966</td>
<td>02</td>
<td>02</td>
<td>01</td>
<td>03</td>
<td>07</td>
<td>15</td>
</tr>
<tr>
<td>1972</td>
<td>02</td>
<td>03</td>
<td>01</td>
<td>01</td>
<td>08</td>
<td>15</td>
</tr>
<tr>
<td>1976</td>
<td>03</td>
<td>00</td>
<td>00</td>
<td>05</td>
<td>07</td>
<td>15</td>
</tr>
<tr>
<td>1982</td>
<td>03</td>
<td>05</td>
<td>00</td>
<td>01</td>
<td>06</td>
<td>15</td>
</tr>
<tr>
<td>1986</td>
<td>06</td>
<td>07</td>
<td>00</td>
<td>00</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>1994</td>
<td>05</td>
<td>06</td>
<td>02</td>
<td>00</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>05</td>
<td>07</td>
<td>00</td>
<td>00</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td>2000</td>
<td>03</td>
<td>04</td>
<td>02</td>
<td>02</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>39</td>
<td>11</td>
<td>19</td>
<td>43</td>
<td>150</td>
</tr>
</tbody>
</table>

1. Test for Association:

Null Hypothesis (H0): The choice of image/sign/symbol, that are portrayed in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The choice of image/sign/symbol, that are portrayed in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.2.2.

Calculated value of chi square = 64.465
Tabulated value of chi square = 51.133

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to (5-1)(10-1)=36.

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus the choice of sign/symbol/image changed over the years.

Test for Proportion:

a. Null Hypothesis (H0): No change has taken place in the social customs projected through sign, symbol and image between the periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the social customs projected through sign, symbol and image between the periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.2.2.

The calculated value of Z = 1.1266

The critical value of Z at 5% level of significance = 1.6449.

Calculated value is less than critical value.

Alternative hypothesis is rejected. Thus, no significant change has taken place in the parameter, social custom between the two periods under consideration.
b. Null Hypothesis (H0): No change has taken place in the religious practice, projected through sign, symbol and image in the periods 1963-1976 and 1982-2000.


Requisite data can be obtained from table number 5.3.2.2

The calculated value of $Z = 3.537$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical Value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, religious practice, between the two periods under consideration.

Comparative Study:

Thus the choice of sign/ symbol / image depicted in the ads, have undergone significant change over the years. They projected a social orientation in the initial years and a religious orientation in the later years according to the male respondents. But according to the female respondents, no change has taken place between the two periods under consideration in respect to the social customs projected in the ads where as the religious practices have undergone a significant change.
5.3.3. Analysis for Targeted Age Group:

Against question number 4, which enquired whether the product promoted by the ad is meant for, kid/teenager/young/middle age/old age/all age groups/others, we have obtained the following information from male respondents.

5.3.3.1. Year wise frequency table on perceived targeted age group: (Male Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Kid</th>
<th>Teenager</th>
<th>Young Age</th>
<th>Middle Age</th>
<th>Old Age</th>
<th>All Age Groups</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>00</td>
<td>03</td>
<td>10</td>
<td>03</td>
<td>00</td>
<td>18</td>
<td>01</td>
<td>35</td>
</tr>
<tr>
<td>1964</td>
<td>00</td>
<td>08</td>
<td>12</td>
<td>10</td>
<td>00</td>
<td>05</td>
<td>00</td>
<td>35</td>
</tr>
<tr>
<td>1966</td>
<td>00</td>
<td>05</td>
<td>08</td>
<td>09</td>
<td>00</td>
<td>13</td>
<td>00</td>
<td>35</td>
</tr>
<tr>
<td>1972</td>
<td>00</td>
<td>03</td>
<td>10</td>
<td>12</td>
<td>02</td>
<td>07</td>
<td>01</td>
<td>35</td>
</tr>
<tr>
<td>1976</td>
<td>00</td>
<td>14</td>
<td>16</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>04</td>
<td>35</td>
</tr>
<tr>
<td>1982</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>02</td>
<td>01</td>
<td>27</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1994</td>
<td>00</td>
<td>02</td>
<td>00</td>
<td>04</td>
<td>03</td>
<td>21</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1996</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>04</td>
<td>03</td>
<td>22</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>1999</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>03</td>
<td>04</td>
<td>21</td>
<td>07</td>
<td>35</td>
</tr>
<tr>
<td>2000</td>
<td>00</td>
<td>01</td>
<td>01</td>
<td>03</td>
<td>02</td>
<td>21</td>
<td>07</td>
<td>35</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The age group targeted in the ads and the time frame in the analysis are not associated or are independent.

Alternative Hypothesis (H1): The age group targeted in the ads and the time frame in the analysis are associated or are not independent.

Requisite data can be obtained from table number 5.3.3.1

Calculated value of chi square = 215.06
Tabulated value of chi square = 61.07

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to $(7-1)(10-1) = 54$.

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus the choice of targeted age group varied over the years.

Test for Proportions:

a. Null Hypothesis (H0): No change has taken place in the parameter, all age group, between the periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the parameter, all age group, between the periods 1963-1976 and 1982-2000

Requisite data can be obtained from table number 5.3.3.1

The calculated value of $\text{"Z"} = 8.2604$

The critical value of $\text{"Z"}$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, all age group, between the two periods under consideration

b. Null Hypothesis (H0): No change has taken place in the targeted age group namely the young and teenager between the periods 1963-1976 and 1982-2000.
Alternative Hypothesis (H1): Significant change has taken place in the targeted age group namely the young and teenager between the periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.3.1

The calculated value of $Z = 10.4468$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than tabulated value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, targeted age group namely the young and teenager, between the two periods under consideration.

Thus young and teenagers are replaced by all age group as the segmentation strategy. Here, changes are significant.

Initially Targeted \[\Rightarrow\] In the later years targeted all without showing preference
Young and teenagers

Similar study, carried out on female respondents, has resulted in the following table.
5.3.3.2. Year wise frequency table on perceived targeted age group: (Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Kid</th>
<th>Teenager</th>
<th>Young Age</th>
<th>Middle Age</th>
<th>Old Age</th>
<th>All Age Groups</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>00</td>
<td>00</td>
<td>04</td>
<td>03</td>
<td>00</td>
<td>07</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>1964</td>
<td>00</td>
<td>00</td>
<td>07</td>
<td>05</td>
<td>00</td>
<td>03</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1966</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>00</td>
<td>10</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1972</td>
<td>00</td>
<td>00</td>
<td>03</td>
<td>02</td>
<td>00</td>
<td>05</td>
<td>05</td>
<td>15</td>
</tr>
<tr>
<td>1976</td>
<td>00</td>
<td>08</td>
<td>07</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1982</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>11</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1986</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>13</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>1994</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>14</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>10</td>
<td>05</td>
<td>15</td>
</tr>
<tr>
<td>2000</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>10</td>
<td>05</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>00</td>
<td>09</td>
<td>22</td>
<td>10</td>
<td>00</td>
<td>83</td>
<td>26</td>
<td>150</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The age group targeted in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The age group targeted in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.3.2

Calculated value of chi square = 186.26

Tabulated value of chi square = 72.39

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to (7-1)(10-1) = 54.

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus the choice of targeted age group varied over the years.

Thus, women respondents put across an opinion.
Test for Proportions:

a. Null Hypothesis (H0): No change has taken place in the parameter, all age group, between the periods 1963-1976 and 1982-2000.


Requisite data can be obtained from table number 5.3.3.2.

The calculated value of $Z = 5.4267$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, all age group, between the two periods under consideration.

b. Null Hypothesis (H0): No change has taken place in the targeted age group namely the young age group between the consecutive periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the targeted age group namely the young age group between the periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.3.2.

The calculated value of $Z = 5.0920$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.
Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, targeted age group namely the young age group, between the two periods under consideration.

Thus the youth is replaced by all age group projecting a change in segmentation strategy of GD Pharmaceutical between the two periods under consideration.

Initially Targeted: Young

In the later years targeting unfocused

Comparative Study:

The choice of targeted age group varied over the years. Young and teenagers were targeted in the early years while the later years no specific age group was projected. Thus in the later years Boroline might have targeted all age groups.

5.3.4. Analysis for market segmentation:

Against question number 5, which enquired whether the ad targeted at buyer/buying decision maker/influencer/user/all (a mere visual) or any body else, we have obtained the following information from male respondents.
5.3.4.1. Year wise frequency table on perceived market segment: (Male Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Buyer</th>
<th>Buying Decision Maker</th>
<th>Influencer</th>
<th>User</th>
<th>A mere Visual</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>08</td>
<td>06</td>
<td>08</td>
<td>09</td>
<td>03</td>
<td>01</td>
<td>35</td>
</tr>
<tr>
<td>1964</td>
<td>10</td>
<td>08</td>
<td>06</td>
<td>09</td>
<td>02</td>
<td>00</td>
<td>35</td>
</tr>
<tr>
<td>1966</td>
<td>05</td>
<td>10</td>
<td>02</td>
<td>00</td>
<td>12</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>1972</td>
<td>07</td>
<td>03</td>
<td>04</td>
<td>13</td>
<td>02</td>
<td>06</td>
<td>35</td>
</tr>
<tr>
<td>1976</td>
<td>06</td>
<td>09</td>
<td>08</td>
<td>06</td>
<td>06</td>
<td>00</td>
<td>35</td>
</tr>
<tr>
<td>1982</td>
<td>07</td>
<td>00</td>
<td>02</td>
<td>00</td>
<td>21</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1994</td>
<td>03</td>
<td>00</td>
<td>03</td>
<td>00</td>
<td>22</td>
<td>07</td>
<td>35</td>
</tr>
<tr>
<td>1996</td>
<td>04</td>
<td>00</td>
<td>05</td>
<td>00</td>
<td>21</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1999</td>
<td>00</td>
<td>03</td>
<td>04</td>
<td>02</td>
<td>17</td>
<td>09</td>
<td>35</td>
</tr>
<tr>
<td>2000</td>
<td>00</td>
<td>00</td>
<td>05</td>
<td>00</td>
<td>22</td>
<td>08</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>39</td>
<td>47</td>
<td>39</td>
<td>128</td>
<td>47</td>
<td>350</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The market segment targeted in the ads and the time frame in the analysis are not associated or are independent.

Alternative Hypothesis (H1): The market segment targeted in the ads and the time frame in the analysis are associated or are not independent.

Requisite data can be obtained from table number 5.3.4.1

Calculated value of chi square = 213.06

Tabulated value of chi square = 61.07

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to (6-1)(10-1) = 45.
Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus the target audience has experienced change with time as company became unfocused afterwards.

Test for Proportions:


Alternative Hypothesis (H1): Significant change occurred in the parameter, mere visual, between the periods 1963-1976 and 1982-2000

Requisite data can be obtained from table number 5.3.4.1

The calculated value of $Z = 9.95387$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, mere visual, between the two periods under consideration.

b. Null Hypothesis (H0): No change has taken place in the addressed customer group namely the buyer and user between the periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the addressed customer group namely the buyer and users between the periods 1963-1976 and 1982-2000.
Requisite data can be obtained from table number 5.3.4.1

The calculated value of “Z” = 7.00

The critical value of Z at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the addressed customer group namely, the buyers and users, between the two periods under consideration.

Initially Targeted Buyers and user → A mere visual, Unfocused

Thus buyers and users are replaced by all customers (indiscriminating any special addressee) with the change in the company’s segmentation strategy. Here, changes are significant.

Note: Once again, this change in focus might have weakened the bond between the company and its customers.

Similar study, carried out on female respondents, has resulted in the following table.
5.3.4.2. Year wise frequency table on perceived market segmentation (Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Buyer</th>
<th>Decision Maker</th>
<th>Influencer</th>
<th>User</th>
<th>Mere Visual</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>03</td>
<td>02</td>
<td>03</td>
<td>06</td>
<td>00</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1964</td>
<td>05</td>
<td>06</td>
<td>00</td>
<td>03</td>
<td>00</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>1966</td>
<td>03</td>
<td>03</td>
<td>00</td>
<td>00</td>
<td>05</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1972</td>
<td>02</td>
<td>00</td>
<td>02</td>
<td>06</td>
<td>02</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td>1976</td>
<td>05</td>
<td>04</td>
<td>02</td>
<td>03</td>
<td>01</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1982</td>
<td>02</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>09</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td>1986</td>
<td>01</td>
<td>01</td>
<td>01</td>
<td>00</td>
<td>08</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1994</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>10</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>00</td>
<td>02</td>
<td>02</td>
<td>03</td>
<td>06</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>2000</td>
<td>00</td>
<td>00</td>
<td>02</td>
<td>02</td>
<td>07</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>18</td>
<td>14</td>
<td>23</td>
<td>49</td>
<td>25</td>
<td>150</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The market segment targeted in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The market segment targeted in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.4.2

Calculated value of chi square = 104.95

Tabulated value of chi square = 61.07

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to (6-1)(10-1) = 45.
Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus the target audience has experienced change with time as company became more confident about its market positioning.

Test for Proportions:

a. Null Hypothesis (H0): No change has taken place in the parameter, mere visual, between the periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the parameter, mere visual, between the periods 1963-1976 and 1982-2000

Requisite data can be obtained from table number 5.3.4.1

The calculated value of Z = 5.4096

The critical value of Z at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the parameter, mere visual, between the two periods under consideration.

b. Null Hypothesis (H0): No change has taken place in the addressed customer group namely the buyers between the periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the addressed customer group namely the buyers between the periods 1963-1976 and 1982-2000.
The calculated value of $Z = 3.5342$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the addressed customer group namely, the buyers, between the two periods under consideration.

Thus buyers are replaced by all customers (indiscriminating any special addressee) with the change in the company's segmentation strategy. Here, changes are significant.

Note: Once again, this change in focus might have weakened the bond between the company and its customers.

Initially targeted \(\rightarrow\) Later Years targeting was unfocused

Buyers

Comparative Study:

The target audience has experienced change with time as company became unfocused afterwards.

5.3.5. Analysis for mode of promotion:

Against question number 6, which enquired whether product under consideration promoting the product directly/indirectly/based on attributes/based on tradition or any thing else, we have obtained the following information from male respondents.
5.3.5.1. Year wise frequency table on mode of promotion (Male Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Directly</th>
<th>Indirectly</th>
<th>Based on Attributes</th>
<th>Based on Tradition</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>09</td>
<td>05</td>
<td>12</td>
<td>08</td>
<td>01</td>
<td>35</td>
</tr>
<tr>
<td>1964</td>
<td>10</td>
<td>06</td>
<td>14</td>
<td>04</td>
<td>01</td>
<td>35</td>
</tr>
<tr>
<td>1966</td>
<td>12</td>
<td>09</td>
<td>02</td>
<td>05</td>
<td>07</td>
<td>35</td>
</tr>
<tr>
<td>1972</td>
<td>07</td>
<td>08</td>
<td>06</td>
<td>10</td>
<td>04</td>
<td>35</td>
</tr>
<tr>
<td>1976</td>
<td>09</td>
<td>10</td>
<td>06</td>
<td>06</td>
<td>04</td>
<td>35</td>
</tr>
<tr>
<td>1982</td>
<td>07</td>
<td>08</td>
<td>08</td>
<td>09</td>
<td>03</td>
<td>35</td>
</tr>
<tr>
<td>1986</td>
<td>07</td>
<td>05</td>
<td>01</td>
<td>15</td>
<td>07</td>
<td>35</td>
</tr>
<tr>
<td>1994</td>
<td>07</td>
<td>07</td>
<td>00</td>
<td>16</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1999</td>
<td>06</td>
<td>09</td>
<td>00</td>
<td>13</td>
<td>07</td>
<td>35</td>
</tr>
<tr>
<td>2000</td>
<td>00</td>
<td>10</td>
<td>01</td>
<td>16</td>
<td>08</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>74</td>
<td>77</td>
<td>50</td>
<td>102</td>
<td>47</td>
<td>350</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The mode of promoting the product, suggesting appeals in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The mode of promoting the product suggesting appeal in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.5.1

Calculated value of chi square = 93.7

Tabulated value of chi square  = 51.133

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to \((5-1)(10-1) = 36\).

The null hypothesis is rejected and the alternative hypothesis is accepted.

Thus, the appeal of the ads changed with the time.
Test for Proportions:

a. Null Hypothesis (H0): No change has taken place in the mode of promotion of Boroline through direct appeal and attribute based appeal between the time periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the mode of promotion of Boroline through direct appeal and attribute based appeal between the time periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.5.1

The calculated value of $Z = 5.5898$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the mode of promotion of Boroline through direct appeal and attribute based appeal between the two periods under consideration

b. Null Hypothesis (H0): No change has taken place in the mode of promotion of Boroline through indirect appeal and tradition based appeal between the time periods 1963-1976 and 1982-2000.
Alternative Hypothesis (H1): Significant change has taken place in the mode of promotion of Boroline through indirect appeal and tradition based appeal between the time periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.5.1

The calculated value of $Z = 3.95788$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the mode of promotion of Boroline through indirect appeal and tradition based appeal between the two periods under consideration.

In Initial years
- direct and attribute based appeal

In the later years
- indirect and tradition based appeal

Similar study, carried out on female respondents, has resulted in the following tables.
5.3.5.2. Year wise frequency table on mode of promotion (Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Directly</th>
<th>Indirectly</th>
<th>Based on Attributes</th>
<th>Based on Tradition</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>01</td>
<td>01</td>
<td>04</td>
<td>08</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>1964</td>
<td>09</td>
<td>00</td>
<td>06</td>
<td>00</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1966</td>
<td>06</td>
<td>07</td>
<td>00</td>
<td>00</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>1972</td>
<td>01</td>
<td>02</td>
<td>02</td>
<td>09</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>1976</td>
<td>03</td>
<td>04</td>
<td>05</td>
<td>00</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td>1982</td>
<td>02</td>
<td>03</td>
<td>00</td>
<td>10</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1986</td>
<td>00</td>
<td>05</td>
<td>00</td>
<td>09</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>1994</td>
<td>01</td>
<td>05</td>
<td>00</td>
<td>08</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>01</td>
<td>04</td>
<td>00</td>
<td>07</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td>2000</td>
<td>00</td>
<td>04</td>
<td>02</td>
<td>06</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>35</td>
<td>19</td>
<td>57</td>
<td>15</td>
<td>150</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The mode of promoting the product, suggesting appeals in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The mode of promoting the product suggesting appeal in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.5.2

Calculated value of chi square = 101.57

Tabulated value of chi square = 51.13

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to, (5-1)(10-1) = 36.

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus, the appeal of the ad changed with the time.
Test for Proportions:

a. Null Hypothesis (H0): No change has taken in the mode of promotion of Boroline through direct appeal between the time periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the mode of promotion of Boroline through direct appeal between the time periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.5.2

The calculated value of $Z = 3.5728$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the mode of promotion of Boroline through direct appeal between the two consecutive periods under consideration.

b. Null Hypothesis (H0): No change has taken place in the mode of promotion of Boroline through indirect appeal between the time periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has taken place in the mode of promotion of Boroline through indirect appeal between the time periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.5.2
The calculated value of $Z = 1.3541$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is less than tabulated value.

Null hypothesis is accepted. Thus, no significant change has taken place in the mode of promotion of Boroline through indirect appeal between the two consecutive periods under consideration.

In Initial years ________________ In the later years indirect appeal

Direct appeal

Comparative Study:

The mode of promoting the product suggesting appeal in the ads and the time frame in the analysis are associated or are not independent. For men the mode of promoting the product has undergone significant change. The direct and attribute based appeals are replaced by indirect and tradition based appeal. But no such trend is noticeable from the responses of female respondents

5.3.6. Analysis on projected product attributes:

Against question number 7, which enquired which particular attribute consisting of skin cream, family cream, antiseptic cream, medicated cream and beauty cream given most importance in the ads, we have obtained the following information from male respondents.
5.3.6.1. Year wise ranking of attributes (Male Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Skin Cream</th>
<th>Family Cream</th>
<th>Antiseptic Cream</th>
<th>Medicated Cream</th>
<th>Beauty Cream</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>4.25</td>
<td>4.06</td>
<td>4.29</td>
<td>3.93</td>
<td>3.17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1964</td>
<td>3.92</td>
<td>4.65</td>
<td>4.13</td>
<td>4.00</td>
<td>3.97</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1972</td>
<td>3.58</td>
<td>2.54</td>
<td>3.77</td>
<td>3.77</td>
<td>4.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beauty</td>
</tr>
<tr>
<td>1976</td>
<td>3.53</td>
<td>2.81</td>
<td>3.39</td>
<td>3.08</td>
<td>3.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beauty</td>
</tr>
<tr>
<td>1982</td>
<td>3.25</td>
<td>2.63</td>
<td>3.59</td>
<td>3.21</td>
<td>2.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family</td>
</tr>
<tr>
<td>1986</td>
<td>2.50</td>
<td>2.96</td>
<td>3.18</td>
<td>2.83</td>
<td>2.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1994</td>
<td>2.91</td>
<td>2.50</td>
<td>2.62</td>
<td>2.48</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin</td>
</tr>
<tr>
<td>1999</td>
<td>2.43</td>
<td>2.89</td>
<td>3.10</td>
<td>2.47</td>
<td>1.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>2000</td>
<td>2.69</td>
<td>3.18</td>
<td>2.78</td>
<td>2.60</td>
<td>2.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family</td>
</tr>
</tbody>
</table>

Similar study, carried out on female respondents, has resulted in the following table.

5.3.6.2. Year wise ranking of attributes (Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Skin Cream</th>
<th>Family Cream</th>
<th>Antiseptic Cream</th>
<th>Medicated Cream</th>
<th>Beauty Cream</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>4.80</td>
<td>4.27</td>
<td>4.87</td>
<td>3.73</td>
<td>3.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1964</td>
<td>4.46</td>
<td>3.54</td>
<td>4.16</td>
<td>3.60</td>
<td>4.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beauty</td>
</tr>
<tr>
<td>1966</td>
<td>3.41</td>
<td>4.34</td>
<td>3.91</td>
<td>3.18</td>
<td>3.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family</td>
</tr>
<tr>
<td>1972</td>
<td>4.64</td>
<td>3.00</td>
<td>3.27</td>
<td>3.09</td>
<td>5.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beauty</td>
</tr>
<tr>
<td>1976</td>
<td>4.19</td>
<td>2.90</td>
<td>3.09</td>
<td>2.55</td>
<td>4.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beauty</td>
</tr>
<tr>
<td>1982</td>
<td>3.00</td>
<td>4.73</td>
<td>4.27</td>
<td>3.20</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family</td>
</tr>
<tr>
<td>1986</td>
<td>4.20</td>
<td>4.50</td>
<td>4.10</td>
<td>3.50</td>
<td>2.45</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Family</td>
</tr>
<tr>
<td>1994</td>
<td>3.45</td>
<td>3.67</td>
<td>3.88</td>
<td>2.67</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1999</td>
<td>3.28</td>
<td>4.01</td>
<td>4.13</td>
<td>3.00</td>
<td>2.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Antiseptic</td>
</tr>
<tr>
<td>2000</td>
<td>3.60</td>
<td>3.50</td>
<td>3.60</td>
<td>2.50</td>
<td>3.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Beauty</td>
</tr>
</tbody>
</table>
Comparative Study:
5.3.6.3. Year wise comparative study on importance of attributes:

<table>
<thead>
<tr>
<th>Year</th>
<th>The attribute given the highest preference by men</th>
<th>The attribute given the highest preference by women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>Antiseptic</td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1964</td>
<td>Family</td>
<td>Beauty</td>
</tr>
<tr>
<td>1966</td>
<td>Antiseptic</td>
<td>Family</td>
</tr>
<tr>
<td>1972</td>
<td>Beauty</td>
<td>Beauty</td>
</tr>
<tr>
<td>1976</td>
<td>Beauty</td>
<td>Beauty</td>
</tr>
<tr>
<td>1982</td>
<td>Family</td>
<td>Family</td>
</tr>
<tr>
<td>1986</td>
<td>Antiseptic</td>
<td>Family</td>
</tr>
<tr>
<td>1994</td>
<td>Skin</td>
<td>Antiseptic</td>
</tr>
<tr>
<td>1999</td>
<td>Antiseptic</td>
<td>Antiseptic</td>
</tr>
<tr>
<td>2000</td>
<td>Family</td>
<td>Beauty</td>
</tr>
</tbody>
</table>

To carry out attribute analysis we have calculated average ranks assigned by the respondents. The attributes for which the average rank value is maximum, has been considered as the projected attribute. The entire analysis has been undertaken separately for male and female respondents. Thereafter we have conducted a gender wise comparative study.

It has been observed that, in certain years, namely, 1963, 1972, 1976, 1982, 1999 the attribute analysis conferred similar results for both men and women. But for some other years, namely, 1964, 1966, 1986, 1994, and 2000, our attribute analysis conferred dissimilar results. It can be said that, the years when the attribute analysis projected similar results for both men and women, the attributes were strongly projected through the ads. But in the years, where value analysis gave dissimilar results, the attributes were weakly projected through the ads.
| Gender | Significance Level | Description | Regression Coefficient | Constant
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>5%</td>
<td>The strength of attribute measured through average ranking is declining over the years. Regression Coefficient is negative.</td>
<td>$R=0.925, S=6.251-0.041t$</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>10%</td>
<td>The strength of attribute measured through average ranking is declining over the years. Regression Coefficient is negative.</td>
<td>$R=0.603, S=6.046-0.027t$</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>5%</td>
<td>Only constant is significant.</td>
<td>$R=0.009$ (small), $S=3.813+0.0004t$</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>5%</td>
<td>This attribute is uniformly used over the years.</td>
<td>$R=0.191, S=4.481-.007t$</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5%</td>
<td>The strength of attribute in ranking is declining over the years. Regression Coefficient is negative.</td>
<td>$R=0.92, S=6.897-0.042t$</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5%</td>
<td>The strength of attribute in ranking is declining over the years. Regression Coefficient is negative.</td>
<td>$R=0.669, S=4.641-0.019t$</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>5%</td>
<td>The strength of attribute in ranking is declining over the years. Regression Coefficient is negative.</td>
<td>$R=0.787, S=6.423-0.043t$</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5%</td>
<td>The strength of attribute in ranking is declining over the years. Regression Coefficient is negative.</td>
<td>$R=0.406, S=5.552-0.024t$</td>
<td></td>
</tr>
</tbody>
</table>

$s$ is multiple correlation coefficient, $y$ is the dependent variable, defining the various attributes of Boroline under study, namely, skin cream, family...
cream, antiseptic cream, medicated cream and beauty cream. Therefore, the year is the independent variable or predictor. The above study has shown that the importance of the attributes have declined over the years.

5.3.7. Analysis for Cultural Cues:

Against question number 8, which enquired, whether the culture was portrayed through religion/art/grooming/anything else, we have obtained the following information from male respondents.

5.3.7.1. Year wise frequency table on projection of culture (Male Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Religion</th>
<th>Art</th>
<th>Grooming</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>17</td>
<td>07</td>
<td>09</td>
<td>02</td>
<td>35</td>
</tr>
<tr>
<td>1964</td>
<td>00</td>
<td>04</td>
<td>12</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>1966</td>
<td>03</td>
<td>06</td>
<td>05</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>1972</td>
<td>14</td>
<td>03</td>
<td>08</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>1976</td>
<td>02</td>
<td>04</td>
<td>10</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>1982</td>
<td>18</td>
<td>04</td>
<td>06</td>
<td>07</td>
<td>35</td>
</tr>
<tr>
<td>1994</td>
<td>22</td>
<td>06</td>
<td>02</td>
<td>05</td>
<td>35</td>
</tr>
<tr>
<td>1996</td>
<td>14</td>
<td>11</td>
<td>01</td>
<td>09</td>
<td>35</td>
</tr>
<tr>
<td>1999</td>
<td>18</td>
<td>06</td>
<td>01</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>2000</td>
<td>14</td>
<td>11</td>
<td>01</td>
<td>09</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>122</td>
<td>62</td>
<td>55</td>
<td>111</td>
<td>350</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): Culture projected in the ads and the time frame in the analysis are not associated.
Alternative Hypothesis (H1): Religion and art in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.7.1

Calculated value of chi square = 116.191

Tabulated value of chi square = 40.113

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to $(4-1)(10-1) = 27$.

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus an association between the culture, projected through religion, art and the time frame in the analysis is reflected over the years.

Similar study, carried out on female respondents, has resulted in the following tables.

5.3.7.2. Year wise frequency table on projection of culture (Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Religion</th>
<th>Art</th>
<th>Grooming</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>07</td>
<td>03</td>
<td>05</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1964</td>
<td>01</td>
<td>04</td>
<td>03</td>
<td>07</td>
<td>15</td>
</tr>
<tr>
<td>1966</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>1972</td>
<td>06</td>
<td>05</td>
<td>02</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>1976</td>
<td>00</td>
<td>00</td>
<td>05</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>1982</td>
<td>06</td>
<td>05</td>
<td>00</td>
<td>04</td>
<td>15</td>
</tr>
<tr>
<td>1994</td>
<td>09</td>
<td>04</td>
<td>00</td>
<td>02</td>
<td>15</td>
</tr>
<tr>
<td>1996</td>
<td>09</td>
<td>03</td>
<td>00</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td>1999</td>
<td>10</td>
<td>04</td>
<td>00</td>
<td>01</td>
<td>15</td>
</tr>
<tr>
<td>2000</td>
<td>10</td>
<td>02</td>
<td>00</td>
<td>03</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td>31</td>
<td>17</td>
<td>44</td>
<td>150</td>
</tr>
</tbody>
</table>

Test for Association:
Null Hypothesis (H0): Culture projected in the ads and the time frame in the analysis is not associated.

Alternative Hypothesis (H1): Culture projected in the ads and the time frame in the analysis is associated.

Requisite data can be obtained from table number 5.3.7.2

Calculated value of chi square = 88.256

Tabulated value of chi square = 40.113

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to, \((4-1)(10-1) = 27\).

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus, an association between the culture projected and the time frame in the analysis is reflected over the years

Comparative Study:

The association between culture projected and the time frame in the analysis is reflected over the years

5.3.8. Analysis for projected value system:

Against question number 9, which enquired whether the female figures portrayed in the ads, represented achiever/situation depended/blurring gender role/over aggressive/manly/feminine/insignificant/simple/dynamic or
any thing else, we have obtained the following information from male respondents.

5.3.8.1. Year wise frequency table on perceived value system
(Male Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Achiever</th>
<th>Situational Dependence</th>
<th>Blurring Gender</th>
<th>Over Aggressive</th>
<th>Manliness</th>
<th>Femininity</th>
<th>Insignificant</th>
<th>Simple</th>
<th>Dynamic</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>00</td>
<td>02</td>
<td>01</td>
<td>00</td>
<td>24</td>
<td>01</td>
<td>03</td>
<td>01</td>
<td>02</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>1964</td>
<td>00</td>
<td>06</td>
<td>02</td>
<td>01</td>
<td>18</td>
<td>00</td>
<td>01</td>
<td>03</td>
<td>03</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>1966</td>
<td>00</td>
<td>02</td>
<td>00</td>
<td>00</td>
<td>04</td>
<td>05</td>
<td>08</td>
<td>00</td>
<td>16</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>1972</td>
<td>00</td>
<td>07</td>
<td>00</td>
<td>01</td>
<td>16</td>
<td>01</td>
<td>02</td>
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<td>35</td>
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<tr>
<td>1976</td>
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<td>02</td>
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<td>08</td>
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<td>08</td>
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<td>35</td>
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<td>1982</td>
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<td>05</td>
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<td>35</td>
</tr>
<tr>
<td>1994</td>
<td>00</td>
<td>12</td>
<td>00</td>
<td>02</td>
<td>03</td>
<td>01</td>
<td>03</td>
<td>02</td>
<td>02</td>
<td></td>
<td>35</td>
</tr>
<tr>
<td>1996</td>
<td>01</td>
<td>05</td>
<td>00</td>
<td>03</td>
<td>00</td>
<td>05</td>
<td>02</td>
<td>03</td>
<td>03</td>
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<td>35</td>
</tr>
<tr>
<td>1999</td>
<td>02</td>
<td>01</td>
<td>01</td>
<td>07</td>
<td>01</td>
<td>02</td>
<td>05</td>
<td>03</td>
<td>00</td>
<td></td>
<td>35</td>
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<td>2000</td>
<td>00</td>
<td>04</td>
<td>00</td>
<td>07</td>
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<td>05</td>
<td>05</td>
<td>04</td>
<td>06</td>
<td></td>
<td>35</td>
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<td></td>
<td>04</td>
<td>46</td>
<td>06</td>
<td>23</td>
<td>08</td>
<td>82</td>
<td>38</td>
<td>32</td>
<td>31</td>
<td></td>
<td>350</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The value system projected through the female figures in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The value system projected in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.8.1

Calculated value of chi square = 834.45

Tabulated value of chi square = 103.07
Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to \((10-1)(10-1) = 81\)

Thus the null hypothesis is rejected and the alternative hypothesis is accepted. Thus, value system and life style have undergone sea changes over the years. In early years feminine values were given emphasis while in later years, over aggressive values are given importance.

Test for Proportions:

a. Null Hypothesis (H0): No change has taken place in the value system, projected through the female figures, in the ads showing feminine values, between the periods 1963-1976 and 1982-2000

Alternative Hypothesis (H1): Significant change has occured in the value system, projected through the female figures, in the ads showing feminine values, between the periods 1963-1976 and 1982-2000

Requisite data can be obtained from table number 5.3.8.1

The calculated value of \(Z = 6.8177\)

The critical value of \(Z\) at 5% level of significance = 1.6449.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the value system, projected through the female figures in the ads, showing feminine values, between the two periods under consideration.
b. Null Hypothesis (H0): No change has occurred in the value system, projected through the female figures, in the ads showing over aggressiveness values, between the periods 1963-1976 and 1982-2000.

Alternative Hypothesis (H1): Significant change has occurred in the value system, projected through the female figures, in the ads showing over aggressiveness values, between the periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.8.1.

The calculated value of $Z = 3.2369$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value is greater than the critical value, Null hypothesis is rejected. Thus, a significant change has taken place in the value system, projected through the female figures in the ads, showing over aggressiveness values, between the two periods under consideration.

Initially feminine values were given importance

In the later years over aggressiveness was given importance

Similar study, carried out on female respondents, has resulted in the following table.
5.3.8.2. Year wise frequency table on perceived value system

(Female Responses):

<table>
<thead>
<tr>
<th>Year</th>
<th>Achiever</th>
<th>Situation Depended</th>
<th>Blurriing Genders</th>
<th>Over Aggressive</th>
<th>Manly</th>
<th>Feminine</th>
<th>Insignificant</th>
<th>Simple</th>
<th>Dynamic</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>00</td>
<td>01</td>
<td>01</td>
<td>00</td>
<td>00</td>
<td>10</td>
<td>01</td>
<td>02</td>
<td>01</td>
<td>00</td>
<td>15</td>
</tr>
<tr>
<td>1964</td>
<td>00</td>
<td>04</td>
<td>01</td>
<td>00</td>
<td>00</td>
<td>05</td>
<td>02</td>
<td>02</td>
<td>01</td>
<td>00</td>
<td>15</td>
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<tr>
<td>1966</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>01</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>11</td>
<td>15</td>
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<tr>
<td>1972</td>
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<td>00</td>
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<td>00</td>
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<tr>
<td>1976</td>
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<td>02</td>
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<td>1982</td>
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<td>04</td>
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<td>1994</td>
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<td>01</td>
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<tr>
<td>1996</td>
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<tr>
<td>1999</td>
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<td>03</td>
<td>01</td>
<td>00</td>
<td>00</td>
<td>01</td>
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<td>15</td>
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<td>2000</td>
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<td>01</td>
<td>01</td>
<td>01</td>
<td>04</td>
<td>07</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Test for Association:

Null Hypothesis (H0): The value system projected through the female figures in the ads and the time frame in the analysis are not associated.

Alternative Hypothesis (H1): The value system projected in the ads and the time frame in the analysis are associated.

Requisite data can be obtained from table number 5.3.8.2

Calculated value of chi square = 159.23

Tabulated value of chi square  = 103.07

Calculated value is greater than tabulated value, at 5% significant level when degrees of freedom equals to , (10-1)(10-1) = 81.
Thus, value system and life style have undergone significant changes over the years. In early years feminine values were given emphasis while in later years, value system did not remain specific.

Test for Proportion:

a. Null Hypothesis (H0): No change has taken place in the value system, projected through the female figures, in the ads showing feminine values, between the periods 1963-1976 and 1982-2000

Alternative Hypothesis (H1): A significant change has taken place in the value system, projected through the female figures, in the ads showing feminine values, between the periods 1963-1976 and 1982-2000

Requisite data can be obtained from table number 5.3.8.2

The calculated value of $Z= 4.8988$

The critical value of $Z$ at 5% level of significance = $1.6449$.

Calculated value is greater than critical value.

Null hypothesis is rejected. Thus, a significant change has taken place in the value system, projected through the female figures in the ads, showing feminine values, between the two periods under consideration

b. Null Hypothesis (H0): there is no change in the over aggressiveness values, projected through the female figures, in the ads between the periods 1963-1976 and 1982-2000
Alternative Hypothesis (H1): Significant change has taken place in the value system, projected through the female figures, in the ads showing over aggressiveness values, between the periods 1963-1976 and 1982-2000.

Requisite data can be obtained from table number 5.3.8.2

The calculated value of $Z = 0.2427$

The critical value of $Z$ at 5% level of significance = 1.6449.

Calculated value less than critical value.

Null hypothesis is accepted. Thus, a significant change has taken place in the value system, projected through the female figures in the ads, showing over aggressiveness values, between the two consecutive periods under consideration.

Initially feminine values were given importance → In the later years value system did not remain specific

Comparative Study:

Thus, value system and life style have undergone significant changes over the years. According to the female respondents, in early years feminine values were given emphasis while in later years, value system did not remain specific. In the contrary, men opined that in the later years, over aggressive values are given importance.
5.4. CONCLUSION:

The statistical treatment undertaken using the information generated from survey gives us the following conclusive views:

1. Boroline enjoys a strong brand recall for its antiseptic properties and a very weak brand recall for its beauty related properties.

2. The use of sign/symbol/image, for projecting depicted in the ads, has undergone significant change over the years. The said cues projected a social orientation in the initial years and a religious orientation in the later years according to the male respondents. But according to the female respondents, no change has taken place between the two periods, under consideration in respect to the social customs projected in the ads where as the religious practices have undergone a significant change.

3. We have observed that, the choice of targeted age group varied over the years. Young and teenagers were targeted till mid 70s, while in the later years no specific age group was projected. In fact, in the later years Boroline might have targeted all age groups. 


easily strike out segment for it in a growing market. But in the later years, the growth slowed down and the product climbed up to the maturity stage. An aggregation strategy was a right fit. On the contrary, a mass marketing
could be a better approach in the 60s and an outdated policy to consider in the 90s. Thus, aggregation strategy adopted in the later years was good according to the PLC strategy but inappropriate according to the business environment considerations.

4. The company targeted buyers in the initial years and in the later years did not target any specific group. The market segment has undergone changes with time as company became unfocused afterwards.

5. For male respondents, the mode of promoting the product had undergone significant change. The direct and attribute based appeals were replaced by indirect and tradition based appeal. But no such trend is noticeable from the responses of female respondents

6. It has been observed that, in certain years, namely, 1963, 1972, 1976, 1982, 1999 the attribute analysis drew similar inferences for both men and women. But for some other years, namely, 1964, 1966, 1986, 1994, and 2000, our attribute analysis conferred dissimilar results. It can be said that, the years when the attribute analysis projected similar results for both men and women, the attributes were strongly projected through the ads. But in the years, where value analysis gave dissimilar results, the attributes were weakly projected through the ads.
7. The value system and life style have undergone significant changes over the years. According to the female respondents, in early years feminine values were given emphasis while in later years, value system did not remain specific. On the other hand, the male respondents opined that in the later years, over aggressive values are given importance.

All the above conclusions give a clear projection of company’s marketing strategy. The advertiser tried to promote its product relying on its primary benefits, promising to satisfy a lower level of needs of the customers. Thus the ad- themes were made based on social customs and events. This had happened in the initial years. In those days, the organization was in the growth stage in the PLC. The market was all most competition free. This was the time when the company adopted a direct and attributes based rational ad appeal in its ad strategy. The organization adopted a concentration strategy for segmentation and targeted young buyers. This was the time when women are portrayed in the ad depicting feminine values.

In the later years, when Boroline moved on to the maturity stage of the PLC, GD Pharmaceuticals sought to promote its product relying on higher level of needs like, establishment and retention of peace, prosperity, well being, wisdom etc. Thus the ad themes were made, on the basis of religious cues. This might be the time, when the company started facing mushrooming
competition in the market. Thus company might have speculated that, it could not stand taller in the market by its attribute based positioning. Therefore, the company wisely adopted an indirect and tradition based ad appeal which might be emotional in nature. The company adopted an aggregation strategy in the segmentation front, inviting people from all age groups and without addressing any specific customer representative from the market. Later years it has projected over aggressiveness values through the projected female figures in the ads. This might imply that in the later years the company was too desperate to catch hold of its market share to arrest a fall.

Lastly, it can be said that marketing of strategy adopted by GD Pharmaceutical was well framed and apt. thus Boroline was one of the very few brands in the field of personal care, that has live a very long life and had a very strong market positioning. But it’s really difficult to keep that charm of early years alive in a product which has all ready crossed its mid 70s. Thus Boroline needs a face lift, which may make a significant difference in its market share.

5.5. SEMIOTIC VS. SURVEY BASED ANALYSIS:

Mode of promoting the product: A communication test revealed that, till mid 70s, GD Pharmaceutical tried to promote Boroline for certain product related attributes. And its approach was direct. In the 90s, when it gained
confidence that it had already established an enduring position among its customers and prospects about its product attributes, it positioned itself as the supreme power. Again from the analysis of mode of promoting the product (Chapter 5, Subhead, 5.3.4) applying a chi square test as well as a test for proportion we found that, the mode of promoting the product was direct and attribute based in the early years and indirect and tradition based in the later years. Thus from the perspective of mode of promoting the product, the convergence of the views from the respondents and the technical views depicted a strong ad appeal.

Attribute Analysis: the semiotic analysis revealed that, in 1963, Boroline was projected as beauty cream. But a regression analysis based on survey revealed that, Boroline was depicted as antiseptic cream. On the other hand, in 1966, both the semiotic cues and the male responses from the survey analysis projected Boroline as antiseptic cream. The responses from the female respondents also fell into similar line, as they perceived Boroline as family cream. Thus, in 1966, Boroline adopted a stronger appeal. From mid 60s to mid 70s, the attributes revealed from the technical analysis and the survey analysis were quite dissimilar. Since 80s semiotic cues were too weak to reveal any kind of attribute based positioning of Boroline. Similarly the attribute analysis obtained from survey approach never showed any kind of trend about any specific attribute over the years. This unclear and unfocused
ad design could be detrimental for building and retaining a healthy customer base. If customers are not categorically informed the specific use value for purchasing Boroline, they might be taken over by competitors who would address the customers with a clearer and specific product positioning.

But the analysis on brand recall (5.3.1, Chapter 5), showed that, respondents widely recognized Boroline as antiseptic cream. It can be concluded that the visuals of ads were quite inconsiderate to portray any specific product attribute. There lies a gap. There is no consistency between body copy and visuals. Thereby, it may be suggested that, GD Pharmaceutical should be more careful about ad designing.

Analysis on age group wise targeting: The investigation through survey following regression analysis and the analysis based on proportion, revealed that (5.2.3, Chapter 5), GD Pharmaceutical targeted the youth in 60s and 70s but happened to be unfocused in the 80s and 90s. The semiotic analysis also confirmed the same. Thus, it can be concluded that, age wise segmentation was very strongly portrayed in the ads.
Analysis on signs/symbols/images: From the survey analysis (5.3.2), it was revealed that, the signs, symbols and images depicted social customs in the 60s and 70s but religious practice in 80s and 90s. The semiotic analysis confirmed that, the autumnal festival meant shopping, merriment and celebration in the 60s and 70s but emancipation of the supreme power by the destroying the evil spirit in the 80s and 90s. The ad of 2000 is an overall deviation from the rest of the years, as both semiotic cues and survey responses confirmed the projection of nature. Previously the women wanted to look after their skin only on special occasions like during the time of autumnal festival. Thus, purchasing of a skincare product could be a part of their celebrating the festive time. But after wards in the mid 70s, the skin care became a regular affair for the women. Thus purchasing of Boroline could no longer remain a part of festive-time activity. To address this transition in the consumer behaviour, Boroline in 80s and 90s on projected itself as the emancipation of divine power. But in 2000, Boroline again projected itself in the backdrop of the nature, as GD Pharmaceutical observed the consumers' awareness and preference for herbal products.
Bibliography:


• Micael Dahlen (2005), Returning to the website: an empirical study of advertising effectiveness and web visitor experience, Vol. 2, No. 4


• Roy Dilip (2006), Research Methodology, Netaji Subhas Open University, Kolkata.


ANNEXURE - 5.1

(ADS FOR SURVEY ANALYSIS)
পুজায়
আমার
প্রিয় স্কিন রাম ওসোলিন কে
তোলা অসম্ভব!

চ. ১. ১
পুজো

এস

গোল ....

রাতের দোকানে এক উড়
কিন্তু সাইকেল নষ্ঠা-
ফ্রোনলান
করা কুঁড়ের মুখল্লে রুপি করে
লালমায়ি মোদ্দা ভরিয়ে তুলুনতে।
ফ্রোনলান
চাড়া আর কি আরে।

ফ্রোনলান
মোড়েরটা নিন আমি।
পৃজোর
কেনাকাটায়
না হলেই নয়

বর্ণিন রোলাই
একটি রসায়নকের ক্রান্ত এবং ব্যাধির লক্ষণ থেকে রক্ষা প্রদানের জন্য

বর্ণিন হাউস, কলকাতা-৩

Boroline

লেনার পরিবেশে আপনার অক্সিজেন লেনার অলক্ষন্তক প্রদানের জন্য।
পূজোয় বোরোলীন
এর
প্রার্থনা এবং প্রতিষ্ঠিত—সুনামিক কোষল হক। কাটা ছেড়া কাটা।
কষ্ট গুঁড় হক নিয়ে শুধু সচেতন মানুষ হয়ে বিদ্বেষে নিজের জীবন মানুষের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে বিদ্বেষে নিজের জীবনে সত্যি হয়ে 

বোরোলীন  সর্বজনীন অ্যাসেসপার্টিক কৌম কাটা কেন্দ্র, কাটা কেন্দ্র ও রক্ষা কেন্দ্রের শাসন কর্তৃপক্ষ।

বোরোলীন রাউল, কলকাতা-৩

5.১.৪
আদকের আধুনিক ডায়নে

চীবন মানে-ডায়নে। চীবন মানে-বেগ। চীবন
মানে-আবেগ। অজ্ঞ সত্যে পথে চীবনের
চরিত্রায়তন দৃষ্টে বেড়াচ্ছেন তিনি। কখনও বেড়া
ud1। কখনও আবেগ থাকে। থাকে।
সে কারণেই তোমার ভর্তীর পথে আরও ভর্তীর
সুরিত অ্যাটিসেপটিক ক্রীম বোরোলীনে।
বোরোলীন হচ্ছ খুব হারা মাস সারা দেহ—
স্বাভাবিক অত্যন্ত প্রহরী, স্বাভাবিক অধিকার
নিয়ন্ত্রণ সহকারী। সীমিত কমল প্রক্ষণ কল্প
বোরোলীন-এর সহায়তায় আর সুখ থাকবে।
বোরোলীন নামে যায়—
বোরোলীনের প্রক্ষণ। নৃন্ম করে গড় ডোল
ভর্তীর ক্ষেত্র। ফিট-ফিট-ফিট, কিংবা মাজা করে। বোরোলীন নিয়ন্ত্রণী, জীবনী
নামক, সহজ প্রতিরোধক। নিয়ন্ত্রিত
বোরোলীন যজ্ঞার মত নিরাপদ।

বোরোলীন
সুরিত অ্যাটিসেপটিক ক্রীম

চি.ডি. ফার্মাসিউটিক্যালস লিমিটেড। বোরোলীন টেক্স, ১, কিউবিল কর্ণওয়াল, কলকাতা-১০০ ০০৫

5.1.5
বড়শার আটচালা দূর্গামণ্ডপে
এক সময় হতো জোড়া মোষ বলি,
বসতো যাত্রাগান কথকতার আসর।

কাল বদলেছে। তার সম্পা বদলেছে পুকুরের রূপ। কিন্তু
১৫০ বছর আগের যত আজকের প্রথম হরিদেী পরিবর্তনের
সময়ে পুকুরের কথন বড়শায় সমাপ্ত হয়। আজকের পুকুর হয়
মাঝারী প্রাচীন পুরুষ প্রাণিদের মধ্যে। ঢাকের
বাড়োর অনন্য হয় ঐতিহ্য প্রাপ্ত। মায়ের
অতীতপ্রাপ্ত রূপ হয় ঐতিহ্য চিহ্নিত। এককে
আনন্দের নবমী হয় মায়ের কোষন। পুকুরে শেষে এখনও
রামজোড়া পুকুরের চেপের
কাঠে চেপে প্রতি যাদব সফরে।

সময়ের সম্পা পুকুরে আড়াল হয়েছে, তবে পুকুরের
নির্দিষ্টতা, তাঁর কাচার ও উৎসবের আনন্দের অনন্দ না
এখন যা বাংলার পুকুরের ঐতিহ্যবাহী আজকে বয়ে চলছে।
আজ পালনের যোগ্য ঐতিহ্যের এক অবস্থায় হয় আজ বৌঝোলিন-মায় সমাদর ঘর ঘরে।
শারদ শুভেচ্ছাসহ
বোরোলীন

5.1.7
জাগো! মা, মনের গভীরে তুমি চিরদিন আছে জানি।
তবু বছরে একবারই তোমায় চোখ ভরে দেখার সুযোগ পাই। তুমি যেন
ওঠোও...এবার পূজায় কি চাই?
তোমাকে চাই মা। জাগো দুর্গতিনাশিনী। মানুষের সব যত্ন, বিভূত
বিপূর্বয় যুথে যাক মহাশক্তির আগুনে। আসুক শান্তি। আসুক আনন্দ।
এসো মা, আলোর দেশের উজ্জ্বল প্রতিমা।
শীতলো সব সুন্দর হোক। বঙ্গজীবনের অঙ্গ

বোরোলীন

৫.১.৮
মহাশক্তির হোক প্রকাশ হদয়ে সবার

দাও শক্তি, দাও প্রাপ।
আনো হদয়ের মরা গাঙে
নব জীবনের বান।
দাও রূপি, দাও রূপি।
দাও সবাকার সমুদ্রি।
দাও নিম্নলিখিত চিত্ত,
পরমাণু নিতা করো দান।
দাও সকল অধিক চূর্ণ করিয়ে
তোমার অমিবাণ।

শারদ শুভেচ্ছায় বঙ্গজীবনের অঙ্গ বোরোলীন
শরতের আকাশ
খানিকটা মেঝ ধার দিয়েছে
বৃষ্টি ঘোঁড়া সবুজ যাসকে।
আকাশে তাই সাদা মেঝের ভেলা,
আর মাঠে কাপুলের চেউ।
মেঝের ফাঁক দিয়ে সূর্যী মামার উচিতাকি—কেউ যেন আসবে।
এমন সুর সূর কৈলাস থেকে ঘুরে আসা বাতাস, খবর দিল—‘উমা আসছেন’।
বেঁজে উঠল ঢাক, শঙ্ক; ঘটা-কার,
আনন্দময় আগমন সংবাদে আনন্দের চেউ উঠল ঘরে ঘরে।

শারদ শুভেচ্ছায় বঙ্গ জীবনের আস বোরোলীন

5.1.10.