ASSESSMENT OF BRAND PERSONALITY AND ITS RELATIONSHIP WITH HUMAN PERSONALITY: A CASE OF MOTOR BIKES IN HARYANA

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ABSTRACT

Link between Human-Brand Personality has been a topic of choice for researchers. Despite efforts, understanding on this subject matter is still in nascent stage. India as a country is unexplored for Human-Brand Personality relationship. This study is an attempt to fill this gap. Brand Personality in this study was operationalized using Brand Personality Scale, Human Personality was operationalized using BIG FIVE. Study identified that all traits of Aaker are not applicable for brand personality measurement of bikes in Haryana. Study further revealed that there are 9 dimensions of Brand Personality of bikes (Sophistication, Spirited, Up-to-Date, Competence, Honest, Ruggedness, Technical, Imaginative and Outdoorsy). Study also concluded mild relationship between Brand Personality of bikes and Human personality of its users.

1. Introduction

Existence of differences in human personality can be traced back to human inception. Difference in personality has attributed to change in the way people react to external stimuli. Contemporary marketing has started giving more emphasis on the choice and purchase behavior of customers arising out of personality differences. Understanding of the purchase behavior and its relationship with human personality takes the researchers back to the times of Plato, Aristotal, and Maciavelli when exploration of personality was first documented. Travelling through the works of Sigmund Freud, Carl Jung, Abraham Maslow and Hans Eysenck, literature has witnessed filtration of explanation of personality theory to its current stage of FIVE FACTOR theory of personality which is widely accepted (Robie, Brown, & Bly, 2005) to measure the personality of an individual. During this time, personality has been an important topic throughout the evolution of modern marketing.

Introduction of brands is also considered as an important event in history of marketing. Industrialization has made usage of brands more prominent. In modern marketing, brands play multiple roles like of a legal instrument, logo, identity system, value system and personality (Chernatony & Riley, 1998) to name few. Over the years, marketing practice has been to communicate about a brand rather than a product. Continuous marketing efforts, associating brands in communications to many other living and non living things have resulted into multiple roles of brands (Grassl, 1999) and acquiring personalities by brands (Keller,

1998). The practice gave rise to a separate construct in marketing called Brand Personality. Aaker (1997) has scaled up the discussion on brand personality in 1997 by giving a measurement called Brand Personality Scale (Aaker, 1997). Scale has 42 traits in it which were further reduced to 15 facets and 5 dimensions (Sincerity, Excitement, Competence, Sophistication and Ruggedness). Brand Personality eventually became compulsory pill for marketer with its impact being judged for aspects like customer acceptance of brand, feeling, perception, behavior and brand management (Freling & Forbes, 2005), attitudes of consumer (Freling & Forbes, 2005; Madrigal & Boush, 2008), quality of brand (Hayes *et. al.*, 2006; Ramaseshan & Taso, 2007), strength of brand (Schiffman & Kanuk, 2009), and competitive advantage (Solomon, 2010) etc.

2. Review of Literature

Consumption patterns according to the personality of consumers have been matter of research at least from mid 20th century (Levy, 1959). Though, earlier attempts of establishing relationships between human and brand personality have failed (Evans, 1959), (Kuehn, 1963). Researchers (Kuehn, 1963) were not accepting the studies resulted into failures and advocated to look at the methodological flaws in studies which has failed to establish relationship between human and brand personality. Since then, numerous attempts have been recorded in literature to find out Human – Brand Personality relationship. This study is also one of the attempts to find out relationship between two constructs. It is hypothesized that:

H1: There is relationship between Brand Personality and Human Personality

Attempts to document the relationship were simplified in 1997 by emergence of Brand Personality Scale (Aaker, 1997). Researchers now had a tested scale using which brand personality can be measured (This study has adopted this scale to measure Brand Personality). Until Aaker gave brand personality scale, there was no robust measurement tool to measure brand personality. This was one of the prominent reasons that post Aaker work, studies on brand personality and relationship between human-brand personality has increased multifold. Aaker scale to measure brand personality has been validated for clothing brands, formula one racing etc. Many countries like India, Thailand, America, Australia to name a few have accepted the brand personality scale as robust measure of brand personality. Based on above literature, it's expected that Aaker scale will be validated without change in India also. Hence it is hypothesized that:

H2: Aaker's BPS scale is applicable without change in India

Over the time, BPS received support and evolved as the most widely accepted measure of brand personality. In between, there have been studies which have questioned the applicability of Aaker scale across nations (Aaker,

Benet-Martínez, & Garolera, 2001), (Chu & Sung, 2010), (Sung T. , 1999) as number of dimensions would change with nations and traits adopted by Aaker may or may not apply to all countries. This made the author to validate the traits suggested by Aaker for measuring brand personality and to validate the dimensions of brand personality in India through this study.

3. Objective of Study

Study has three major objectives:

- To test the applicability of Aaker Scale of Brand Personality for Bike Brands.

- To find out the Brand Personality Dimensions

- To find out the relationship (If any) between Brand Personality and Human Personality for motor bikes.

4. Methodology

Haryana is administratively divided into four zones: Ambala, Hisar, Rohtak and Gurgaon. Current study was carried out in Gurgaon Division of Haryana. Gurgaon division has five districts in it: Gurgaon, Faridabad, Rewari, Mahendergarh and Mewat. Two of these five districts were randomly selected for this study. The random selection resulted in Faridabad and Mahendergarh districts. 125 respondents were approached in both the districts and they responded to the data collection instrument used in the study. Data preparation exercise depicted that 196 out 300 questionnaires were found relevant to be taken ahead for study.

To fulfill the objectives of this study: Three constructs were to be measured: Brand Personality, Human Personality and Demographics. Brand Personality measurement was operationalized using Aaker (1997) Brand Personality Scale. Aaker (1997) scale for measuring Brand Personality is the most widely used scale for this purpose. Human Personality of respondents was operationlized using BIG FIVE INVENTORY. BFI is most accepted measure of human personality worldwide in both practice and academia. Demographics were measured with straight questions relating to Age, Income and Qualification of respondents. Brand Personality Measurement comprised Part A, Human Personality Measurement formed Part B and Demographics made part C of the Questionnaire.

Data collected was subjected to Descriptive, Factor Analysis, Correlation Analysis, and Regression Analysis using SPSS.

5. Analysis and Interpretation

5.1. Applicability of Aaker's Brand Personality Dimensions on Bikes

Level 1: Item Analysis – Maximum Correlation

Correlation that items share with each other is an important measure for items to specify whether they belong to the construct being measured (Here Brand Personality) or not.

If all the items are belonging to the same construct they should share high correlation with each other (Churchill, 1979). Churchil's (1979) suggestion of keeping only those items in construct measurement which are correlating highly with other remaining items was adopted to find out those traits from Aaker's (1997) BPS which are not applicable for bikes brand in India. Maximum correlation that an item shares with other items in the study was identified using a correlation matrix. Minimum level of value of correlation (Maximum) that an item shares with other items was kept at 0.4. There were 6 items out of 42 items which were having maximum correlation value below 0.4. These items were highlighted with asterisk mark in Table 1. Feminine was clearly highlighted to be one trait that does not belong to the domain of brand personality of bikes as it was having a maximum correlation value of 0.20. That means that Feminine as a trait is not measuring what other traits in the study is measuring. Such items should be deleted from the scale. Yet, the items are only highlighted at this stage.

Level 2: Item Analysis – Corrected Item to Total Correlation

All the items were subjected to second correlation analysis technique in which the items are checked for their contribution in measuring the construct one by one. One item is taken at a time, and all other items are considered as a scale measuring the construct. Correlation between the item taken separately and the other items as scale is calculated. This correlation is called as Corrected Item to Total Correlation. For an item belonging to the scale of construct, the value for corrected item to total correlation should be high. Minimum acceptable value of corrected item to total correlation in this study is taken as 0.4. Corrected item to total correlation depicted that there were 9 items scoring less than 0.4 on corrected item to total correlation. These items are highlighted with an asterisk mark in Table 1. There were five items (Family Oriented, Small Town, Sentimental, Contemporary, Feminine and Smooth) which were commonly highlighted in both techniques of correlation analysis (Maximum Correlation and Corrected Item to Total Correlation). Feminine is again highlighted as the most problem creating item. Value of Corrected Item to Total Correlation for feminine is 0.030. This depicts that Feminine is absolutely not measuring what other items in the scale is measuring.

Level 3: Item Analysis – Cronbach Alpha If Item Deleted

All items were subjected to Cronbach alpha which is a measure of reliability analysis. Reliability is a measure depicting the level to which all items in a scale is measuring the same construct. High value of Cronbach alpha depicts high reliability and vice versa. For each item the value of Cronbach Alpha was calculated when the item in discussion is not considered part of the scale (For example: The Cronbach alpha if item deleted for feminine would be the value of Cronbach alpha when feminine is not considered

in calculation of Cronbach alpha). If the value of Cronbach alpha increases by deleting an item that means that this item was bringing the reliability of the scale down, and such item should be deleted. Crohbach Alpha for scale was calculated to be 0.927. There were 4 items in current study for which the value of Cronbach alpha either did not changed or it increased when these items were deleted. These items are highlighted with asterisk mark in table 1.

Results of all the three correlation techniques were combined to identify the items which should be deleted from further analysis. Criteria for deletion of an item was: An item highlighted (Found problematic) in any of the two correlation analysis out of three. There were 7 items which were highlighted in at least two of the correlation analysis. These items are marked "Yes" in the column titled "Should be deleted?" in Table 1. An asterisk mark is also put against these items in last column of table 1. All of these items (Down to Earth, Family Oriented, Small Town, Sentimental, Contemporary, Feminine and Smooth) are the problem items and are not contributing to the measurement of brand personality construct and hence are deleted.

The study revealed that 7 items of Aaker's scale are not applicable to brand personality of bikes in India. It can be said that Aaker's (1997) scale of brand personality is not applicable in Indian context for bikes without change in India. Scale is to be molded by deleting 7 traits before applying the scale to measure brand personality in India. This shows that hypothesis 2 (H2) is not supported in this study.

6. Dimension of Brand Personality

Left over 35 items were subjected to Factor Analysis with Principle Component Analysis as an extraction method and Varimax as rotation method (As applicability of Aaker (1997) BPS was being tested so the extraction and rotation method which Aaker adopted were used here). Applicability of factor analysis was checked using Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphercity. For any data to be eligible for application of factor analysis, the KMO value should be at-least 0.6 (Higher the value of KMO, better it is) and Bartlett's test of sphercity (measure of checking whether correlation matrix is identity matrix or not) should be significant. A significant value of Bartlett's test signifies that correlation matrix is not an identity matrix or the items in the construct are significantly correlated with each other which is primary condition of factor analysis. Eigen value of 1 was adopted as factor extraction criteria. Minimum criteria for accepting the factor loading of any item was kept at 0.4 (The same value was adopted during Item Analysis).

Factor Analysis 1

Application of factor analysis gave 0.882 as KMO value. Bartlett's test of sphercity also returned significant value suggesting that factor analysis can be applied in current

Table 1: Item Analysis

Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted (Scale – 0.927)	Maximum Correlation	Should be Deleted?
BP1 Down to Earth	0.257*	0.927*	0.416	Yes*
BP2 - Family Oriented	0.163*	0.928*	0.347*	Yes*
BP3 - Small Town	0.150*	0.928*	0.347*	Yes*
BP4 – Honest	0.481	0.925	0.431	No
BP5 – Sincere	0.331*	0.926	0.431	No
BP6 – Real	0.454	0.925	0.458	No
BP7 - Wholesome	0.601	0.924	0.499	No
BP8 - Original	0.546	0.924	0.458	No
BP9 - Cheerful	0.587	0.924	0.499	No
BP10 - Sentimental	0.398*	0.926	0.383*	Yes*
BP11 - Daring	0.505	0.924	0.432	No
BP12 - Friendly	0.559	0.924	0.403	No
BP13 - Trendy	0.562	0.924	0.550	No
BP14 - Exciting	0.442	0.925	0.550	No
BP15 - Spirited	0.586	0.924	0.491	No
BP16 - Cool	0.536	0.924	0.470	No
BP17 - Young	0.569	0.924	0.476	No
BP18 - Imaginative	0.386*	0.926	0.415	No
BP19 - Unique	0.573	0.924	0.548	No
BP20 - Up to Date	0.522	0.924	0.548	No
BP21 - Independent	0.494	0.925	0.402	No
BP22 - Contemporary	0.337*	0.926	0.386*	Yes*
BP23 - Reliable	0.502	0.925	0.444	No
BP24 - Secure	0.537	0.924	0.444	No
BP25 - Intelligent	0.555	0.924	0.440	No
BP26 - Technical	0.464	0.925	0.417	No
BP27 - Corporate	0.531	0.924	0.417	No
BP28 - Successful	0.439	0.925	0.428	No
BP29 - Leader	0.560	0.924	0.425	No
BP30 - Confident	0.511	0.925	0.428	No
BP31 - Upper Class	0.551	0.924	0.543	No
BP32 - Glamorous	0.587	0.924	0.562	No
BP33 - Good Looking	0.564	0.924	0.512	No
BP34 - Charming	0.475	0.925	0.447	No
BP35 - Feminine	0.030*	0.930*	0.205*	Yes*
BP36 - Smooth	0.271*	0.926	0.309*	Yes*
BP37 - Outdoorsy	0.454	0.925	0.425	No
BP38 - Masculine	0.517	0.924	0.538	No
BP39 - Western	0.587	0.924	0.562	No
BP40 - Toughed	0.520	0.924	0.575	No
BP41 - Rouged	0.492	0.925	0.575	No
BP42 - Hardworking	0.429	0.925	0.443	No

Source: Primary Data

study for the construct of brand personality. Factor analysis returned a 9 factor solution explaining 63.32 percent of variance. Analysis of factor loading in rotated component matrix revealed that two items (Daring and Intelligent) were loading with on their respective factor with factor loading of 0.339 and 0.384 respectively. These two items were not fulfilling the criteria of factor loading of 0.4 and hence they were deleted from further study. The deletion resulted into 33 items in scale of brand personality.

Factor Analysis 2

Factor analysis was again applied for remaining 33 items. It resulted in KMO value of 0.880 signifying the adequacy of sample. Bartlett's test of sphercity gave significant results depicting that data is having the necessary correlation among items required for application of factor analysis. The two tests signal the appropriateness of factor analysis on the data in study. Further application of factor analysis revealed a 9 factor solution explaining 64.80 percent of

Table 2: Factor Loading and Reliability

Factor Solution			
Traits	Factor Loading	Factor Name	Reliability
BP34 – Charming	0.713	Sophistication	0.815
BP14 – Exciting	0.674		
BP33 - Good Looking	0.639		
BP13 – Trendy	0.561		
BP7 – Wholesome	0.467		
BP32 – Glamorous	0.457		
BP15 – Spirited	0.662	Spirited	0.734
BP9 – Cheerful	0.646		
BP8 – Original	0.589		
BP16 – Cool	0.456		
BP17 – Young	0.622	Up to Date	0.778
BP21 - Independent	0.583		
BP20 - Up to Date	0.542		
BP19 – Unique	0.497		
BP31 - Upper Class	0.448		
BP24 – Secure	0.670	Competence	0.620
BP23 – Reliable	0.645		
BP28 - Successful	0.627		
BP30 - Confident	0.587		
BP5 – Sincere	0.798	Honest	0.679
BP6 – Real	0.642		
BP4 – Honest	0.620		
BP41 - Rouged	0.763	Ruggedness	0.731
BP40 - Toughed	0.694		
BP42 - Hardworking	0.640		
BP38 - Masculine	0.448		
BP26 - Technical	0.726	Technical	0.656
BP39 - Western	0.541		
BP27 - Corporate	0.498		
BP18 - Imaginative	0.779	Imaginative	0.687
BP12 - Friendly	0.436		
BP37 - Outdoorsy	0.705	Outdoorsy	0.592
BP29 - Leader	0.558		

Source: Primary Data

variance. Analysis of rotated component matrix revealed that all items were loading on their respective factors with loading of more than 0.4 which is acceptable. The nine factors reliability was also calculated. All the nine factors were having a Cronbach alpha value greater than 0.6. Except factor 9 which is having a Cronbach alpha value of 0.59. The difference of 0.01 is not treated here as significant difference. Hence the value of 0.59 is accepted value of reliability for factor nine. The nine factors were profiled as: Sophistication having 6 traits in it (Charming, Exiting, Good Looking, Trendy, Wholesome, and Glamorous); Spirited having 4 items in it (Spirited, Cheerful, Original and Cool); Up-to-Date having 5 items in it (Young, Independent, Up-to-Date, Unique and Upper-class); Competence having 4 items in it (Secure, Reliable, Successful and Confident); Honest having 3 items in it (Sincere, Real and Honest); Ruggedness having 4 items in it (Roughed, Toughed, Hardworking and Masculine); Technical having 3 items in it (Technical, Western and Corporate); Imaginative and Outdoorsy having 2 items each - Imaginative, Friendly; and Outdoorsy, Leader respectively (Table 2).

Profiling or naming of factors was done taking reference from Aaker's work. If any factor in current study is having more than 50 percent of items which were there in any one specific dimension or facet of Aaker's original work, the name of the factor or dimension was kept as Aaker gave it in original work. This resulted into three dimensions similar to Aaker's dimension of brand personality. These dimensions were – Competence, Ruggedness and Sophistication. Facets in original work of Aaker (Spirited, Up-to-Date, Honest, Imaginative and outdoorsy) have become dimensions in this study. Out of 9 dimensions of brand personality in current study, 3 were dimensions of Aaker and 5 were facets in Aaker work. This has resulted because many of items loading on one dimension in original Aaker's work were in this study loading on different dimensions or they were not loading together.

To check the reliability of factor solution, the value of Cronbach alpha was calculated for each of the nine dimensions. All dimensions attained acceptable value of Cronbach alpha (Sophistication 0.815, Spirited 0.734, Up-to-Date 0.778, Competence 0.620, Honest 0.679, Ruggedness 0.731, Technical 0.656, Imaginative 0.687 and Outdoorsy 0.592) (Table 2). Hence this solution of factor analysis was accepted and the factors generated were considered as the dimension of brand personality of bikes in India.

Table 3: Brand Personality Dimensions of Bikes

Brand Personality Dimensions of Bikes in India		
Sophistication	Spirited	Up to Date
Competence	Honest	Ruggedness
Technical	Imaginative	Outdoorsy

Source: Primary Data

7. Relationship with Human Personality

To check if there is some specific relationship between Brand Personality and Human Personality, Stepwise Linear Regression Analysis was applied by keeping the Brand Personality Dimensions as dependable variables and BIG FIVE dimensions of Human Personality as independent variables.

Regression results depicted that there is significant relationship between Brand Personality and Human Personality for bikes. But this relationship is not very strong as the value of R Square for all significant relationships is not more than 0.12. Table 4 revealed that extraversion dimension of brand personality has significant relationship with three brand personality dimensions (Sophistication, Honest and Technical). An individual who is extraversion dimension oriented may prefer brand of bike which are perceived as sophisticated, honest and technical in terms of its brand personality. Individuals scoring high on Conscientiousness dimension of human personality may prefer a bike having Spirited, Up-to-date and Competence brand personality. A person who is neuroticism by human personality may not prefer a bike having brand personality dimension of competence. Individuals who are open in personality might prefer bikes which are perceived as honest in personality.

Table 4: Stepwise Regression Analysis

Brand Personality Dimensions	Variables Contributing Significantly (B Value - Unstandardized)		Constant	R Square	Significance of Model
Sophistication	Extraversion (0.236)		3.037	0.028	Yes
Spirited	Conscientiousness (0.224)		3.278	0.041	Yes
Up to Date	Conscientiousness (0.204)		3.062	0.028	Yes
Competence	Conscientiousness (0.254)	Neuroticism (-0.242)	3.784	0.120	Yes
Honest	Openness (0.319)	Extraversion (0.224)	2.233	0.109	Yes
Ruggedness	None		NA	NA	No
Technical	Extraversion (0.339)		2.511	0.047	Yes
Imaginative	None		NA	NA	No
Outdoorsy	None		NA	NA	No

Source: Primary Data

Although all these relationships are statistically significant but the gravity of relationship is very weak (Value of R Square is low). It can be concluded in human and brand personality relationship that there exists a weak relationship between brand personality and human personality of bikes in the administrative division of Gurgaon in Haryana. This partially supports the hypothesis 1 (H1).

8. Conclusion

Study has resulted into three important conclusions:

- 42 traits of BPS of Aaker should not be operationalized for Brand Personality bikes. 9 traits which were not found to be applicable for measuring Brand Personality of bikes are: Down to Earth, Family Oriented, Small Town, Sentimental, Contemporary, Feminine, Daring, Intelligent and Smooth. Rest of the traits suggested by Aaker are applicable for measurement of Brand Personality. Feminine trait was an immediate outlier out of the list clearly depicting that people do not associate bike with females.

- There are 9 Brand Personality dimensions of bikes: Sophistication, Spirited, Up-to-Date, Competence, Honest, Ruggedness, Technical, Imaginative and Outdoorsy.

- Though, there exists relationship between Brand Personality and Human Personality of its users it is suggested not to take that as input in decision making as the relationship is very mild.

9. Scope of Further Study

This is first of its kind study for region of Haryana. To generalize the results of this study, more studies are required to confirm or argue against the result of this study. This stands true for deletion of certain traits out of those suggested by Aaker (1997) in measuring the brand personality and concluding the Brand Personality dimensions. This study also has not recommended accepting the relationship between Brand Personality and Human Personality for bikes because of mild nature of relationship despite the statistical significance of relationship. This requires further study to establish such relationship so that a clear picture can be drawn.

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