

Impact of Model Imagery and Product Information on Brand Attitude and Purchase Intention across Age Groups

The target segment for many marketers of mobile handsets, cuts across diverse age groups. It is important for marketers to understand how best to leverage their communication strategy to maximize appeal across relevant age groups or at least to ensure positive attitudes across the age groups covered in its target audience. This paper attempts to study if exposure to selected communication cues results in variances in attitude towards brand and purchase intentions across five different age groups. The impact of two different types of communication cues (model imagery and product information) are studied in a controlled environment for a mobile handset brand and the analysis indicates that there are significant variations across age groups. On the basis of this study a framework to analyze impact of Age on attitude formation is also proposed.

Keywords: Brand Attitude, Purchase Intention, Communication Cues, Age Groups

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Introduction and objectives

This paper seeks to study the difference, if any, in brand attitude and purchase intention, across different age groups in response to the same communication cues.

Attitude towards the Brand (Ab) is the consumers' evaluation of particular brands on an overall basis (Assael, 1995). Many studies have focused on understanding how advertisements affect consumers' attitudes toward advertised brands (Gardner, 1985). Research shows that attitude towards a brand significantly impacts intention to buy that brand (Brown and Stayman, 1992; Homer, 1990; MacKenzie et al., 1986). Purchase intention (PI) is one type of judgment about how an individual intends to buy a specific brand. It can be used as the closest substitute of actual consumer behaviour to determine effectiveness of element/s of the marketing mix (Assael, 1995).

Traditionally, brand attitudes formed upon exposure to advertising have been explained as outcomes of the brand beliefs engendered by the brand ad (Lutz 1975, Olson and Mitchell, 1975). The ad appeals in turn are based on consumer buying motives which can be grouped broadly into "utilitarian" and "image" categories. The utilitarian motive relates to a consumer's need to manage his or her physical environment. Image advertising persuades, by inviting the viewer to contemplate the personality impressions, the use of the brand will help him or her to project, or the pleasurable social situations the advertised brand's use will bring, or the emotional and/or hedonic experiences the viewer may fantasize through the brand's use (Mittal, 1990).

For a product category like mobile handsets which straddles both utilitarian and image/lifestyle categories, an insight into how informative copy (highlighting relevant features) or model imagery (highlighting desired image) impact brand attitude is very relevant. One also needs to analyze whether these cues evoke similar associations across different customers. For marketers of mobile handsets, the target customers cut across many age groups. Even if the younger age groups, are not owners of mobile handsets they are usually adept users through shared consumption. They are also influencers and future customers (Sharma and Dasgupta, 2009). Tweenagers' increasing influence on decisions regarding household purchases includes purchases of new technological products of which they often have more technical knowledge than their parents (Chordas, 2001).

It is important for marketers to understand how best to leverage their communication strategy to maximize appeal across relevant age groups. This paper attempts to study if differences exist in response to image or product information cues, and if yes then what would be the implications for mobile handset marketers.

Literature review

The image of a product/brand is created by the incidental cues that appear in the setting of the ad (Childers and Houston 1984). An ad's images are affective (Rossiter and Percy 1983) or peripheral processing cues that influence consumer cognition (Scott 1994). Images influence (Tsal 1985), and create more favourable brand attitudes (Rossiter and Percy 1987; Mitchell and Olson 1981). They provide superior recall compared to low-imagery copy (Babin and Burns 1997; Unnava and Burnkrant 1991), and help consumers evaluate products when they relate to verbal messages in the ad (Edell and Staelin 1983).

There is substantive research to suggest that copy is the most important element in advertising effectiveness (Madden et al., 1988; Stewart, 1989). Fang and Rosen (2000) find that inclusion of source contact information (URL) leads to more positive attitudes. Studies analyzing the effects of associations for highly informational advertisements suggest that (positive) associations are generated at the cost of message processing and result in a negative effect on brand evaluations (Coulter and Punj, 2007; Kiselius and Sternthal, 1984). An easy to process advertising message generates associations and positive stimulus-based thoughts and the effects of these associations depend on their favourableness (Praxmarer and Gierl 2009).

According to the dual coding theory (Paivio 1971), pictures are recorded in memory as imaginary codes and words as verbal codes. It is more likely for pictures to have dual codes (i.e. stored as the picture and the word representing that picture), resulting in the 'picture superiority effect' (Edell and Staelin, 1983; Childers and Houston, 1984). Words do not completely lack imagery value, but certain words are more likely to form images than other words (Mukherjee 2002).

There is considerable, but not unanimous consensus about the nature of the features projected from the visual imagery onto the brand (Bulmer and Buchanan-Oliver 2004), supporting the fact that the relevance of an advertisement cannot be established objectively but must be considered in the terms of each individual.

Demographic characteristics have also been found to influence attitude towards brands. Stout and Rust (1993) highlighted, that older viewers provide more descriptive emotional response than younger viewers. Groups of female consumers defined by demographic variables, were found to vary in their attitude towards firms/products associated with stereotyped role portrayals (Lundstrom and Sciglimpaglia (1977), Lysonski and Pollay 1990). Orth and Holancova (2004), studied variances in male and female responses to sex role portrayals while

DeLorme and Reid (1999), examined brand communication interpretations across older and younger moviegoers, with the older moviegoers expressing distrust of brands placed in movies.

Literature review reveals that both image and information cues have a significant impact on consumer responses. Different studies have also looked at how demographic characteristics affect the responses to given cues. However in most of this research, the impact of the communication cues on brand attitudes has been studied for only specific consumer types and specific age groups (at the most two). There is a gap in the area of analyzing differences in responses across a range of age groups.

The research question which needs to be addressed therefore, is as follows- "Does exposure to the image and information cues result in variance in brand attitudes and purchase intention across age groups?"

Research Design and Methodology

An experimental study was designed to study the impact of the chosen communication cues in a controlled environment. The stimuli were two variants of a full page colour ad for a dummy brand of mobile handsets. Both ads were identical in all respects except one. The first ad used the image cue, showing the picture of a young female model holding a phone. In the second ad, detailed product information highlighting the trendy features, replaced the model image. The brand's communication was designed to reflect its positioning as a trendy product.

Communication cue was the manipulated variable with two variants-

- i) Model Image (picture)
- ii) Product Information

Five age groups were taken for the study-

- i) 10-12 years (tweenagers)
- ii) 13-17 years (teenagers)
- iii) 18-24 years (youth)
- iv) 25-34 years (young adults)
- v) 35-45 (adults)

The experiment was administered to 220 SEC A residents of Delhi. Participants in each age group were randomly assigned to one of the two treatments.

Hypothesis

The following null hypotheses were tested:

H01 = There is no significant difference in attitude towards the mobile handset brand across tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with a model's picture.

H02 = There is no significant difference in attitude towards the mobile handset brand for tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with detailed product information and no model imagery.

H03 = There is no significant difference in purchase intention for a mobile handset brand, across tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with a model's picture.

H04 = There is no significant difference in purchase intention for a mobile handset brand, across tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with detailed product information and no model imagery.

Measures

Attitude towards the brand was measured, using the 7 point semantic differential scales developed by MacKenzie and Lutz (1989): good/bad, pleasant/unpleasant and favourable/unfavourable (Cronbach's alpha 0.96). PI was measured using the established 7 point scale: not at all likely to buy / very likely to buy (Mitchell and Olson 1981).

Findings

The Kruskal Wallis (KW) test was used to analyze variance across multiple age groups as the data did not conform to normality (McDonald 2009). The test was significant for both the image and product information cues indicating variation in Ab across the age groups. However in case of PI, the test was found to be significant only for the product information cue. Significant KW tests were followed by Dunn's multiple comparison post test.

The Model Image Cue: The null hypothesis H01, that there is no significant difference in attitude towards the mobile handset brand across tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with a model's picture, was rejected at the 0.05 significance level ($p=0.0004$).

For the mobile handset brand tweenagers differed significantly with young adults and adults ($p<0.05$) (Table 1). Tweenagers recorded the highest mean rank for Ab (145.4) followed by teenagers. Adults had the least mean rank for Ab (62.58).

TABLE 1 - Model Image Cue: Variance in Attitude Towards Brand

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0.05?
age1 vs age2	16.86	No
age1 vs age3	18.1	No
age1 vs age4	30.71	Yes
age1 vs age5	42.17	Yes
age2 vs age3	1.241	No
age2 vs age4	13.86	No
age2 vs age5	25.31	No
age3 vs age4	12.62	No
age3 vs age5	24.07	No
age4 vs age5	11.45	No

The null hypothesis H03, that, there is no significant difference in purchase intention across tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with a model's picture, was accepted, as variance in PI across age groups was not significant (p=0.129).

The product information cue: The null hypothesis H02 that there is no significant difference in attitude towards the mobile handset brand for tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with detailed product information and no model imagery, was rejected at the 0.05 significance level (p= 0.0006).

For the mobile handset brand, significant variation in Ab was found between teenagers and youth (p<0.05). Significant variation was also observed in case of adults vis-a-vis teenagers and young adults, and in case of youth vis-à-vis young adults (p<0.05) (Table 2). Mean rank for Ab was highest for teenagers (157.9) and lowest for young adults (103.7).

TABLE 2 - Product Information Cue: Variance in attitude towards brand

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0.05?
age1 vs age2	11.59	No
age1 vs age3	-16.93	No
age1 vs age4	13	No
age1 vs age5	-17.08	No
age2 vs age3	-28.52	Yes
age2 vs age4	1.408	No
age2 vs age5	-28.67	Yes
age3 vs age4	29.93	Yes
age3 vs age5	-0.1496	No
age4 vs age5	-30.08	Yes

The null hypothesis H04, that, there is no significant difference in the purchase intention for a mobile handset brand, across tweenagers, teenagers, youth, young adults and adults when exposed to an advertisement with detailed product information and no model imagery, was rejected at the 0.05 significance level (p<0.0001).

For the mobile handset brand, youth were found to differ significantly with all age groups (p<0.05) except adults. Tweenagers were also found to differ significantly in their PI vis-à-vis adults (p<0.05), (Table 3). Overall mean rank was high across all age groups. Youth exhibited the highest mean PI rank (188.1) while tweenagers had the lowest (146).

TABLE 3 - Product Information cue : Variance in Purchase Intention

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0.05?
age1 vs age2	8.874	No
age1 vs age3	-32.06	Yes
age1 vs age4	-3.563	No
age1 vs age5	-21.75	No
age2 vs age3	-40.93	Yes
age2 vs age4	-12.44	No
age2 vs age5	-30.62	Yes
age3 vs age4	28.5	Yes
age3 vs age5	10.31	No
age4 vs age5	-18.19	No

Discussion and Managerial Implications

The experiment clearly demonstrates that the product information cue resulted in variation in both Ab and PI across a wider range of age groups as compared to the image cue.

The ad with the model image, not surprisingly had the most positive impact on Ab for tweenagers. Their high Ab for the image cue is consistent with previous research where pictures and caricatures have been shown to have high attraction for children. Considering that the image used was that of a young model there seems to be a good connect with the teenage and youth, leading to favourable Ab while possibly for the same reason the older age groups do not connect with the brand.

Ab for adults was ranked lowest for the image cue, but was the second highest in case of the product information cue. Though the trendy positioning of the brand, is the same across both treatments, the copy outlining the product attributes that support this positioning seems to resonate with the adults who have responded with very favourable Ab. Both cues seemed to work well for the youth, who demonstrated fairly high Ab for the image cue, and also recorded the highest Ab across all groups for the

product information cue. Since mobile handsets are a high involvement category, clearly the detailed information about features and benefits is important in shaping Ab. Inputs about the features and attributes have had a greater positive impact on adults and youth. While the less favourable reaction from the teenagers and tweenagers is understandable given their higher inclination towards pictures, young adults surprisingly recorded the lowest Ab across all age groups, though it was higher than their Ab in the image cue. It is possible that their purchase motivations may be different and that the overall positioning did not appeal to this age group.

Another factor to be kept in mind is that this is a new brand for which no prior knowledge or associations exist. For this reason also, product information copy may play a more important role.

Purchase intention did not vary significantly across any of the age groups for the picture cue and all age groups displayed a fairly high PI rank, though adults were again the lowest as in the case of Ab. The teens and youth exhibited high PI commensurate with their high Ab, however PI for tweenagers (though high overall), was the lowest across age groups unlike Ab which was the highest. PI for teens was also relatively low in case of the product information cue. This is not surprising as tweenagers in India are not purchasers or owners of mobile handsets.

For the product information cue, the highest PI exhibited by youth and adults is again in line with their high Ab for this cue and varies significantly with tweenagers. The PI ranks and their variances across age groups are in line with the Ab ranks and variances except for young adults where the PI is moderately high and does not vary significantly with that of adults unlike in case of Ab. A slightly higher PI vis a vis their attitude towards the brand is not surprising because they may be willing to try the brand even if they do not have a highly favourable brand attitude to begin with. Also PI is not solely dependent on Ab and therefore differences can emerge.

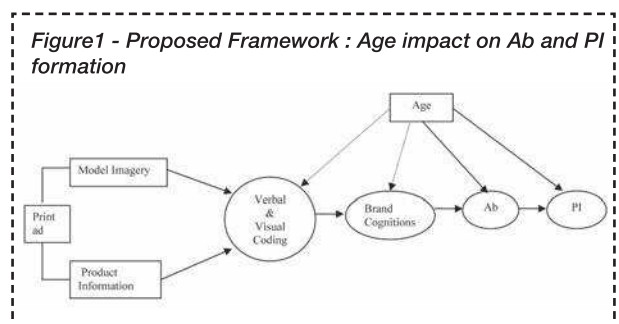
In any case it is clear that for a high involvement category like mobile handsets, product information appears to be quite important and can favourably impact brand attitudes particularly for the older age groups. Since this holds for a brand which is positioned on lifestyle, it should definitely be applicable for a mobile handset brand positioned on utilitarian/functional or technological platform. Marketers must ensure that there is sufficient information provided even if it is not the most dominant cue used in the ad creative. For mobile handset marketers, the focus would be on teens and older age groups as customers and influencers while tweenagers may be important more as future customers.

The most common persuasive strategy employed in advertising to children is to associate the product with fun and happiness, rather than to provide any factual

product-related information (Seiter 1993). That is held out in the high rating given by tweenagers to the image dominant ad. Image plays an important role in establishing the favourability of brand associations and can be leveraged as a communication cue in the mobile handset category. However marketers should be careful about the kind of imagery selected because the appeal of specific images may vary across the age groups. The type of image/model used should largely be driven by the age-group which is the prime focus for the brand (based on its positioning and target audience). If the target audience for a brand does span more than one age group, marketers must avoid making the mistake of assuming that age groups closer to each other will be similar in responses to the same communication cues. For instance teenagers & youth and youth & young adults have exhibited significant differences for both Ab and PI in case of the product information cue.

It must be highlighted here, that the differences in Ab and PI will also depend on the type of image and the exact content and wording of the copy used in the ad. It is possible that observed variances in Ab and PI may play out differently if the model image or product information copy is changed.

As per Paivio's (1971) dual coding theory, the model image cue and the product information cue will lead to differential verbal and visual coding which in turn will impact brand cognitions. The dual mediation model (MacKenzie, Lutz, and Belch, 1986), further establishes that brand cognitions impact Ab which in turn impacts PI. A framework (Figure 1) on impact of age on Ab and PI can be proposed based on the findings of this research applied to the relationships propounded in the above two models.



As per our proposed framework, age does have a differential impact on Ab and PI in response to the given cues in the print ad. Age can influence PI directly or through Ab. This is illustrated in the research findings, which show that while responses of some age groups are similar for Ab and PI, it is not so for all age groups. Age can impact Ab and PI differently – for instance the tweenagers have a very high Ab for the model imagery cue, but low PI because this age group does not have decision making and/or purchasing power. The indirect

impact of age on Ab and PI though its impact on the verbal and visual coding process and on brand cognitions is to be expected but needs empirical support.

Limitations and Further Research

Attitude towards brand and purchase intention are impacted by multiple factors. Every attempt was made to hold variables, other than those being tested, constant across the stimuli. The study had the advantage of experimental control but the limitation that the mindset of the respondent at the time of evaluation can only be approximated.

Further empirical research is required to establish the proposed framework which is partially supported by this study. The study is limited to only two communication cues and is specific to one product category- mobile handsets. Further research needs to look at other cues, and variants of the same cue as well (e.g different picture, different copy). It also needs to be researched whether the variations observed would be different for known brands vs unknown brands and if they would vary across product categories.

Bibliography

- Assael, H. (1995), *Consumer Behavior and Marketing Action (5th ed)*, South-Western College Publishing, Cincinnati.
- Babin, Laurie A. and Alvin C. Burns (1997), «Effects of Print Ad Pictures and Copy Containing Instructions to Imagine on Mental Imagery That Mediates Attitudes,» *Journal of Advertising*, 26 (3), 33-44.
- Bahn, K.D. (1986), «How and when do brand perceptions and preferences first form? A cognitive developmental investigation,» *Journal of Consumer Research*, 13(3), 382-393.
- Brides, E. and Briesch R.A. (2006), «The 'nag factor' and children's product categories,» *International Journal of Advertising*, 25(2), 157-187.
- Brown, S.P. and Stayman, D.M. (1992), «Antecedents and Consequences of Attitude Towards the Ad: a Meta Analysis,» *Journal of Consumer Research*, 19, 34-51.
- Brumbagh, A.M. and S.A. Grier (2006), «Insights from a Failed Experiment- Directions for Pluralistic, Multiethnic Advertising Research,» *Journal of Advertising*, 37 (Fall).
- Bruner II, G. C, P. J. Hensel and K James (2005), *Marketing Scales Handbook: A Compilation of Multi-Item Measures for Consumer Behavior and Advertising (Vol.5)*, SW: Chicago AMA and Thomson.
- Bulmer, S. and M. Buchanan-Oliver (2004), «Meaningless

or Meaningful? Interpretation and Intentionality in Post-Modern Communication,» *Journal of Marketing Communications*, 10 (Mar), 1-15.

- Childers, T.L. and M.J. Houston (1984) 'Conditions for a Picture-Superiority Effect On Consumer Memory,» *Journal of Consumer Research*, 643-654.
- Chordas, L (2001), «A New Generation In The Cross Hairs», *Best's Review*, February.
- Coulter, K. S. and G. N. Punj (2007), «Understanding The Role of Idiosyncratic Thinking in Brand Attitude Formation», *Journal of Advertising*, 36 (1), 7-20.
- Dalmeny, K. (2003), «Food marketing: the role of advertising in child health,» *Consumer Policy Review*, 13(1), 2-7.
- DeLorme D.E., Reid L.N. (1999), «Moviegoers' experiences and interpretations of brands in films revisited,» *Journal of advertising*, Vol. 28(2), 71-86.
- Edell, Julie A. and Richard Staelin (1983), «The Information Processing of Pictures in Print Advertisements,» *Journal of Consumer Research*, 45-61.
- Escalas, J.E. and J.R. Bettman (2003) «You are what they eat: the influence of reference groups on consumers' connections to brands,» *Journal of Consumer Psychology*, 13(3) 339-348.
- Gardner, M.P. (1985), «Does Attitude Toward the ad Affect Brand Attitude Under a Brand Evaluation Set,» *Journal of Marketing Research*, 22, 192-98.
- Houston, Michael J., Terry L. Childers and Susan E. Heckler (1987), «Picture-Word Consistency and the Elaborative Processing of Advertisements,» *Journal of Marketing Research*, 359-369.
- Kisielius, J. and B. Sternthal, (1984), «Detecting and Explaining Vividness Effects in Attitudinal Judgments», *Journal of Marketing Research*, 21, 54-64.
- Lindstrom, M. and P. Seybold (2003), «Brand child», Forlaget Markedsføring, Copenhagen.
- Lundstrom, William J. and Donald., Sciglimpaglia, (1977) «Sex Role Portrayals in Advertising,» *Journal of Marketing*, 41 (3), 72-79.
- Lutz. Richani J. (1975), «Changing Brand Attitudes Through Modification of Cognitive Structure,» *Journal of Consumer Research*, Vol. 1, 49-59.
- Lysonski, Steven and Pollay, Richard W, (1990), «Advertising Sexism is Forgiven, But Not Forgotten: Historical, Cross-Cultural and Individual Differences in Criticism and Purchase Boycott Intentions,» *International Journal of Advertising*, 9 (4), 317-329.
- MacKenzie S. B., Lutz R.J., Belch G.E (1986), «The Role

- of Attitude Towards the ad as a Mediator of Advertising Effectiveness: A Test of Competing Explanations," *Journal of Marketing Research*, 23, 130-143.
- Madden, T.J., Allen, C.T. and Twible, J.L. (1988) 'Attitude Toward the Advertisement: An Assessment of Diverse Measurement Indices Under Different Processing Sets," *Journal of Marketing Research*, 242-252.
- McDonald, J.H. (2009). *Handbook of Biological Statistics*, 2nd ed. Sparky House Publishing, Baltimore, Maryland.
- Mitchell, A.A. and Jerry C. Olson (1981), "Are product attribute beliefs the only mediator of advertising effects on brand attitude," *Journal of Marketing Research*, 18, 318-32.
- Mittal, B (1990), "The Relative Roles of Brand Beliefs and Attitude Toward the Ad as Mediators of Brand Attitude: A Second Look," *Journal of Marketing Research*, XXVU, 209-219.
- Mukherjee, Avinandan (2002), "Pictures in words or words in pictures? New insights from Indian print advertising research International," *Journal of Advertising*, 21, 67-86.
- Olson, Jerry C. and Andrew A. Mitchell (1975), «The Process of Attitude Acquisition: The Value of a Development Approach to Consumer Research,» in *Advances in Consumer Research*, Vol. 6, ed. William Wilkie, Ann Arbor, MI: Association for Consumer Research, 269-75.
- Paivio, A. (1971), *Imagery and Verbal Processes*, New York: Holt, Rinehart & Winston.
- Praxmarer, Sandra and Gierl, Heribert (2009) «The effects of positive and negative ad-evoked associations on brand attitude», *Asia Pacific Journal of Marketing and Logistics*, 21, 507 – 520
- Rossiter, John R. and Larry Percy (1983), «Visual Communication in Advertising,» in *Information Processing Research in Advertising*, ed. Richard Jackson Harris, Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 83-125.
- Scott, Linda M. (1994), «Image in Advertising: The Need for a Theory of Visual Rhetoric,» *Journal of Consumer Research*, 21, 252-273.
- Seiter, E. (1993), *Sold Separately: Children and Parents in Consumer Culture*, New Brunswick, NJ: Rutgers University Press.
- Sharma, Ruppel W. and Pinaki Dasgupta, (2009), "Marketing to Children: a Planning Framework," *Young Consumers*, 10 (3), 180-187.
- Stewart, D.W. (1989) 'Measures, methods, and models of advertising response over time," *Journal of Advertising Research*, 54-60.
- Unnava, H. Rao and Robert E. Bumkrant (1991), «An Imagery Processing View of the Role of Pictures in Print Advertisements", *Journal of Marketing Research*, 226-231.
- Fang, Xiang and Dennis L. Rosen (2000), "Source-Contact Cue Influence on Attitude Formation and Attitude Persistence", *Advances in Consumer Research*, 27, 196-201.
- Tsal, Yehoshua (1985). «Effects of Verbal and Visual Information on Brand Attitudes,» *Advances in Consumer Research*, Vol.12, ed. Elizabeth C. Hirschman and Morris B. Holbrook, Provo UT: Association for Consumer Research, 265-7.