Using Self-Concept to Assess Advertising Effectiveness

ABHILASHA MEHTA
Gallup & Robinson, Inc.

Concept Convergence Analysis (CCA) provides a framework to use psychological variables such as self-concept to better assess advertising performance. Segmenting audiences based on their self-concept can provide valuable insight into the effectiveness of advertising in influencing consumers. Additionally, the convergence of consumer self-image and perceived brand image can be an important mediating variable in consumer decisions regarding the advertised brand: Purchase intent was found to be stronger for respondents whose self-image and perceived brand image are congruent. Through the application of CCA, a new technique using psychological profiles based on self-concept, it is shown how copy research results could be better utilized for actionable decision making. The case of a fragrance brand is presented.

CURRENT ADVERTISING EFFECTIVENESS studies and copy research systems typically include an in-depth analysis of the advertising performance results within relevant subgroups. The subgroup variables, however, tend to be limited to demographic and usership ones such as those related to age, sex, income, household size, category and brand usage, usage frequency, and ownership. While these analyses are important and helpful in better understanding the performance of the test advertising, other ways of classifying respondents can be as revealing, or more so, as general demographic and usership breaks. How people think and feel about themselves can influence significantly how they react to a commercial's content and execution, as well as to the advertised product. Preferences may develop for certain brands because consumers perceive the particular brand as reflecting their own self-image or projecting an image that they aspire to possess. These influences can be particularly important when value-expressive attributes or image of the product rather than functional attributes and informational claims are used in the advertising.

There is evidence to suggest analyses using psychological segmentation based on variables such as self-concept can be valuable in understanding the dynamics of the advertising effects. Additionally, the effects of self-image and brand-image congruity has been extensively explored in academic consumer research literature and results have generally shown that self-image/brand-image congruity can moderate consumer preferences. With issues of brand equity as important as they are now, brand-image measures have become an integral part of copy-testing systems and are used to evaluate the extent to which the advertising has communicated the intended brand image. Using these brand-image results in relation to respondent's self-image should offer deeper insight regarding the overall performance of the advertising. The interaction of consumer self-image and perceived brand image can be expected to moderate the extent to which the advertising will be persuasive to a particular individual.

Concept Convergence Analysis (CCA) has been designed to provide a framework to identify valuable psychological segments, based on self-concept, who may react more or less positively to the test advertising as compared to a broader general audience. Further, CCA offers insight into the advertising effectiveness process by showing how perceptions of the self and the advertised brand interact to influence the overall performance of the advertising.

STUDY OBJECTIVES

The objectives of the study are to provide a conceptual background for CCA and present a case study to show how CCA may be used to better understand the advertising performance. Marketing implications are also discussed.

Theoretical Background

The self-concept construct Self-concept may be defined as "the totality of the individual's thoughts and feelings having reference to himself as an object" (Rosenberg, 1979). More simply, it is the person's perception of oneself. It is important to note that self-concept denotes the subjective thoughts and perceptions about oneself rather than an objective evaluation of the person.

Self-concept is composed of multidimensional characteristics and includes physical as well as psychological attributes and interacts with the various roles a person must take on. Although the self-concept is highly complex, it is well organized and works in a consistent way. It guides the psychological functioning of an individual by helping maintain the consistency within an individual. Self-related prototypes, or self-schemata that make up one's self-concept, organize and guide processing of self-related as well as other information (Markus, 1977). The selection, abstraction, interpretation, and integration of incoming information is based upon the self schemas each individual possesses (Kihlstrom, 1981). New experiences are easily absorbed if consistent with the existing structure and rejected or altered to fit if inconsistent or pose a threat (Snygg and Combs, 1949).

Self-concept and product-image congruity Consumer psychologists agree that products and brands are an important part of how individuals define themselves. Tucker (1957) argued ". . . that consumers can be defined in terms of either the products they acquire or use or in terms of the meanings products have for them or attitudes towards products." Products and brands have symbolic meanings and project certain images. The purchase, display, and use of goods communicates symbolic meaning to the individual and to others (Grubb and Grathwohl, 1967). This subjective meaning of a product is expected to tie in closely with one's self-image to have impact on consumer preferences. Self-image/product-image congruity models have been delineated to explain the effect of the cognitive matching process between consumer self-concept and perceived product image of a given product on consumer decisions regarding that product.

Based on the self-consistency motivation theory, Sirgy (1982) argued that consumers approach products that have images that are similar to themselves. It was hypothesized that under conditions of low discrepancy between product image and self-image, there is positive self-congruity resulting in an *approach* motivation which should lead to a positive consumer decision making in relation to that product. Alternatively, when there is high discrepancy between product image and self-image, it results in low self-congruity which should lead to an *avoidance* motivation, and consumer decision making for that product should be negative. Support for this has been found in numerous studies (see Sirgy, 1982). Belk (1988) argued individuals prefer products that match their self-concept since these purchases provide a means of self-expression.

The impact of symbolic product meanings on consumer decision making is, thus, mediated by self-concept *regardless* of the richness of the particular product symbol itself. And because symbolism and image are important tools in advertising and can affect purchase decisions primarily when they connote an association with the self, self-concept can be expected to play a central role in influencing advertising effectiveness (Hong and Zinkhan, 1995). Products/brands or advertising, as a result, can be expected to be accepted o rejected based on how they fit with th existing self-concept structure.

Studies have been conducted in a variety of product categories (such as cars shampoos, etc., as well as retail outlet and type of homes) and with advertising featuring varying product images to explore product choice in terms of the congruency of the product in the choice set with the individual's self-concept (see Sirgy, 1982, 1985). Although sometimes weak, the results have been generally supportive of the hypothesis that consumers prefer, intend to buy, or use brands/products/stores which are more congruent with their self-concept (Belch, 1978 Hong and Zinkhan, 1995; Malhotra, 1988)

There is, however, evidence to suggest not all products are considered as being descriptive of the self (Hamm and Cundiff, 1969; Landon, 1974). Conspicuousness of product use as well as products that rely heavily on image lend themselves most readily to self-concept moderations.

Actual and ideal self-concept Various conceptualizations for self-concept have been used in the literature including actual self-concept (defined above), ideal concept (how one wishes to be perceived), and, occasionally, social self-concept (how one is in the presence of others). Along the lines of the self-consistency motivation theory to explain the moderating role of actual self-concept, Sirgy (1982) postulated that self-esteem motivation should mediate the ideal self-concept process. That is, consumers would *approach* products with images that serve to enhance and boost their self-esteem and *avoid* those that do not. There has been general support for the theory.

Attempts have been made to identify variables that may influence whether the

actual or ideal self-concept would be more impactful in consumer decision making. Product conspicuousness, social class, personality typology, and level of self-esteem are among those that have received some attention. Results have been equivocal with regard to the differential role of actual and ideal self-concept and consumption conspicuousness (Malhotra, 1988). Actual self-concept was used in the present study.

Measurement issues Among the earliest attempts in measurement of self-concept in consumer research was a Q-sort which grouped products on dimensions such as "most like me" to "least like me" (Sommers, 1964). The Q-sort was also later used in several studies after modifications were made to it such as using a rating scale with a predetermined distribution (Belch, 1978; Belch and Landon, 1972, 1977), or having personality adjectives sorted along the self-concept dimensions such as "most like me" to "least like me" (French and Glaschner, 1971; Sanchez et al., 1975). Semantic differential scales have been commonly used, as have the adjective checklist and Stapel scales. Likert-type scales have also gained in popularity. Respondents are asked to indicate the extent to which they agree or disagree that certain unipolar personality adjectives/traits apply to them, and these ratings are used as a measure of self-concept. The same adjectives are also used to measure product image by asking respondents whether they agree or disagree that these adjectives apply to the product (e.g., Grubb and Hupp, 1968).

Self-concept is a broad and multidimensional construct. As a result, the particular attributes used to measure self-concept in any study have been dependent upon the specific needs of that research. While this is often perceived by researchers as a limi-

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tation, the flexibility to customize the measures of self-concept to a specific need makes it particularly useful and attractive for use in applied advertising research studies in the industry. Appropriate measures of self-image can be used as relevant. Likert-type rating scales were used in the present study to measure self-

TABLE 1
Advertising Performance Summary for Total Sample

	Total Sample (%)	Norm (%)
Intrusiveness		
Recall	16	16
(Base)	(183)	
Major Measures		
Purchase Intent	18	20
Brand Rating	27	28
Commercial Liking	41	44
Diagnostics		
Liked Something	69	71
Disliked Something	70a	53
Imaginative	73	73
Enjoyable	57	53
Arousing	53a	45
Worth Remembering	48	48
Thought Provoking	45	40
Poor Taste	39a	22
Offensive	37a	21
Personally Relevant	32	32
One of the Best	29	26
(Base)	(155)	

Note: "a" indicates significantly higher than norm at the 90% level of confidence.

concept and brand image. The selected items were reflective of measures most suitable to the product category under study.

Using CCA in copy research

While self-concept has been recognized as a useful construct for explaining consumer choice and studied extensively in the academe, it has not been systematically or consistently used as a variable in current advertising research and copy-testing systems. The following case study shows how using self-concept can provide insight into the advertising effectiveness testing and evaluation process.

CASE STUDY: MEN'S FRAGRANCE BRAND

Background and objectives

A large, well-established cosmetic and fragrance company was interested in evaluating the performance of a commercial for a relatively new brand of a men's fragrance. The commercial was highly nonverbal, filled with suggestive images and music.

Procedure

The commercial was tested among a general audience (18+ years) of 191 men and women from 10 metropolitan areas across the country. Data was collected through Gallup & Robinson's InTeleTest system for commercial testing. It is an in-context, in-market system that uses a videocassette to carry the test advertising. Commercials were embedded within a new unaired (pilot) program. Respondents, naive to the true purpose of the study, were recruited to participate in a television program test. The videotape containing the program, along with commercials inserted in pods as in a natural broadcast, was watched at home. Day-after measures via a telephone interview were taken for recall, idea com-

TABLE 2
Advertising Performance Summary by Age

	Age (yrs)	
	18–34 (%)	35+ (%)
Intrusiveness		
Recall	16	16
(Base)	(55)	(128)
Major Measures		
Purchase Intent	26a	13
Brand Rating	33a	19
Commercial Liking	55a	33
Diagnostics		
Liked Something	81a	64
Disliked Something	62	73
Imaginative	79	70
Enjoyable	64	54
Arousing	67a	46
Worth Remembering	57	43
Thought Provoking	60a	36
Poor Taste	31	44
Offensive	26	43a
Personally Relevant	38a	27
One of the Best	36a	24
(Base)	(42)	(103)

Note: "a" indicates subgroup is significantly higher than other subgroup at the 90% level of confidence.

munications, and buying interest. Additional measures of persuasion, diagnostics, and specific commercial reactions were collected after reexposure to the test commercial among recallers as well as nonrecallers of the commercial.

Key measures

Recall was measured as the percent of respondents who could prove recall of the test advertising on a brand-aided cue the

day-after exposure. Measures of persuasion on a full-sample basis included overall brand rating, likelihood to purchase the brand, and commercial liking. Based on the ARF/CRVP (Haley and Baldinger, 1991), a 6-point rating scale was used for overall brand rating, and 5-point rating scales for purchase intent and commercial liking. Commercial reactions were measured by 4-point agree/disagree scales for ad-related statements and adjectives. The

brand image was measured on several attributes on 5-point agree-disagree Likert-type scales. During the recruitment phase, respondents also answered a series of general questions about themselves including a similar 5-point agree/disagree Likert scale of various personality attributes (all of which were part of the larger brand-image battery). These ratings for the self were used as a measure of self-concept and for identifying psychological segments.

Results

There were no significant differences between men and women for the key measures including recall, brand rating, purchase intent, and other diagnostics. Only commercial liking was somewhat higher among women as compared to men (45 percent versus 32 percent, top 2 boxes). Results have been presented for men and women combined along with appropriate norms. Also, since data were collected in multiple phases in the study, subsample bases may not add up to total sample due to some missing data.

Total sample As shown in Table 1, on a total sample basis the commercial is at norm on all key measures, including recall, brand rating, purchase intent, and commercial liking. Additionally, it generates significantly high levels of dislike and is considered offensive and in poor taste by a substantial proportion of the respondents.

Age segments Typical demographic breaks such as those for age provide useful insights about the data. The test fragrance appeals more strongly to younger respondents (see Table 2) as compared to older respondents across most key measures, although not on recall. Responses on some diagnostic measures also show strengths.

TABLE 3
Advertising Performance Summary By Psychological Segments

| | Psychological Segments | | |
	Adventurous (%)	Sensual/Elegant (%)	Sensitive (%)
Intrusiveness			
Recall	23a	23a	6
(Base)	(44)	(41)	(47)
Major Measures			
Purchase Intent	28a	21a	8
Brand Rating	40a	29	16
Commercial Liking	57a	46a	26
Diagnostics			
Liked Something	74	71	66
Disliked Something	51	75a	82a
Imaginative	79a	83a	60
Enjoyable	72b	54	46
Arousing	68b	50	44
Worth Remembering	68b	48	32
Thought Provoking	55a	48	32
Personally Relevant	53b	31a	16
One of the Best	43b	27	20
Offensive	28	40	44a
Poor Taste	23	40a	50a
(Base)	(47)	(48)	(50)

Notes: "a" indicates subgroup is significantly higher than one other segment at the 90% level of confidence.

"b" indicates subgroup is significantly higher than both segments at the 90% level of confidence.

Psychological segments Psychological segments based on self-concept were also used to study reactions among the sample. Factor-analysis of the self-reported self-concept attribute ratings yielded four separate psychological segments, which were then reduced to three segments for the present analysis: the *Adventurous* group loaded highly on attrib-utes such as adventurous, exotic, and mysterious; the *Sensual* and *Elegant* segments had highest ratings for the attributes sensuous and sexy, elegant, sophisticated, and stylish; and the *Sensitive* segment factor loadings were highest on attributes such as sensitive, romantic, and traditional.

Results show significant differences on

how the commercial performs within these psychological subgroups. As shown in Table 3, the Adventurous and Sensual/Elegant segments exhibit strongly favorable reactions, higher than the Sensitive segment on most key dimensions, including recall, purchase intent, brand rating, and commercial liking.

Reactions for other diagnostics are strongest for the Adventurous segment followed by those for the Sensual/Elegant segment. Response to the commercial is consistently strongly negative among respondents in the Sensitive segment on all measures.

It is worth noting that the reactions toward the commercial among the Adventurous and Sensual/Elegant group are generally more, or equally, positive as reactions from the younger demographic group. These results suggest that the Adventurous and Sensual/Elegant psychological segments should prove to be a more viable target for the commercial/product than the younger demographic segment. Furthermore, as is clear from Table 4, these particular psychological segments span across various demographic groups including age. For example, the Adventurous group, which is most responsive to this brand and its advertising, consists of all ages of men and women. Education as well as income levels for this group are also distributed across all subgroups. Results are similar for the Sensual/Elegant segment, while the Sensitive segment skews somewhat more older with higher income and education levels.

Self-concept/brand-image convergence

The moderating role of self-concept is further established via a self-concept/brand-image convergence analysis. Self-concept/brand-image "distance" scores were computed to assess the impact of the

TABLE 4
Demographic Breaks by Psychological Segments

	Psychological Segments		
Age (yrs)	Adventurous (%)	Sensual/Elegant (%)	Sensitive (%)
18–34	36	33	21
35–44	32	19	25
45+	32	49	54
Sex			
Male	48	49	42
Female	52	51	58
Education			
Up to high school	39	23	27
Some college	25	40	23
College graduate and up	36	37	50
Income ($'000)			
<30	32	21	23
30–50	32	35	25
50+	25	37	42
(Base)	(44)	(43)	(48)

convergence of the self-ratings and brand ratings on purchase intent.

At the respondent level, the "distance D" score was computed for each respondent as the sum of the difference between the brand and self-ratings across all attributes as follows:

$$D_j = \sum_{i=n} (P_{ij} - S_{ij})$$

where D_j = overall linear discrepancy between the jth respondent's self-image and brand-image rating

i = the specific image component used to assess both brand and self-image

n = number of ith image components used

P_{ij} = the jth respondent's brand-image rating on the ith image component

S_{ij} = the jth respondent's self-image rating on the ith image component

Based on this score, the sample was broken into three groups, respondents with high, medium, and low levels of self-image/brand-image convergence, and purchase intent was compared for the three groups. Results show purchase intent is significantly influenced by self-image/brand-image convergence levels: Mean rating is 2.9, 2.6, and 2.2 among the high, medium, and low convergence groups, respectively, $F(2, 134) = 4.61, p \leq .018$. Respondents who see the brand as similar to themselves are more interested
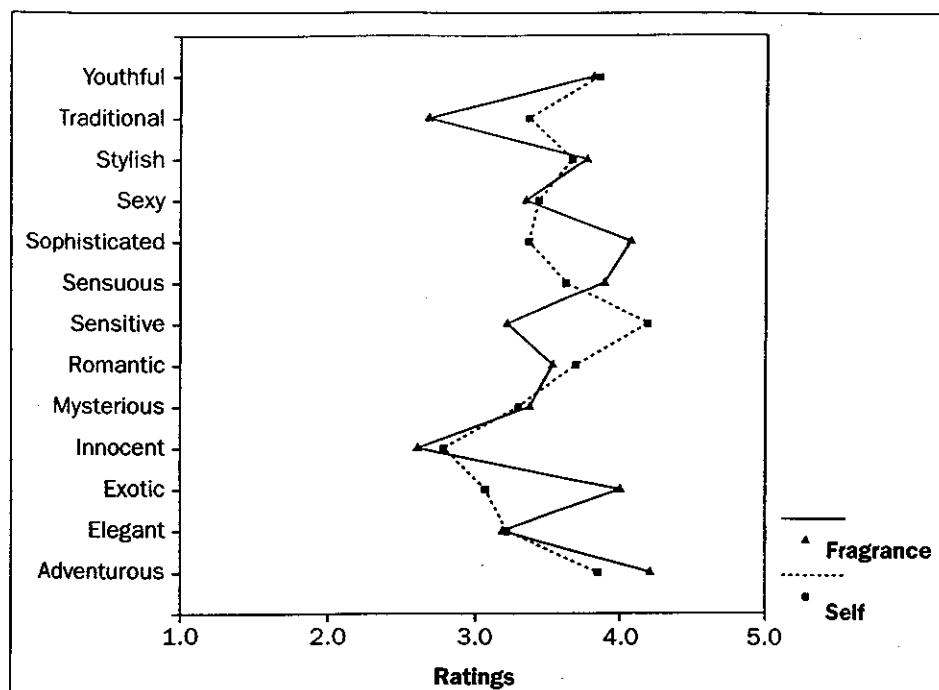
Figure 1a Fragrance Commerical: Self-Image and Brand-Image Convergence among Respondents with Strong Purchase Intent*

*Top 2 boxes in 5-point scale

image/brand-image convergence level are significantly higher for those with stronger purchase intent.

Figures 1a and 1b graphically present the convergence between self-image and brand-image ratings among those with strong purchase intent and among those with weak purchase intent, respectively. The figures clearly show higher convergence between the ratings among the former group as compared to the latter group.

DISCUSSION AND MARKETING IMPLICATIONS

Self-concept was found to be a useful moderating variable in evaluating advertising performance. Its use helped gain a deeper understanding of the advertising process. Self-image and perceived brand-image convergence levels influenced persuasion, and respondents with high self-
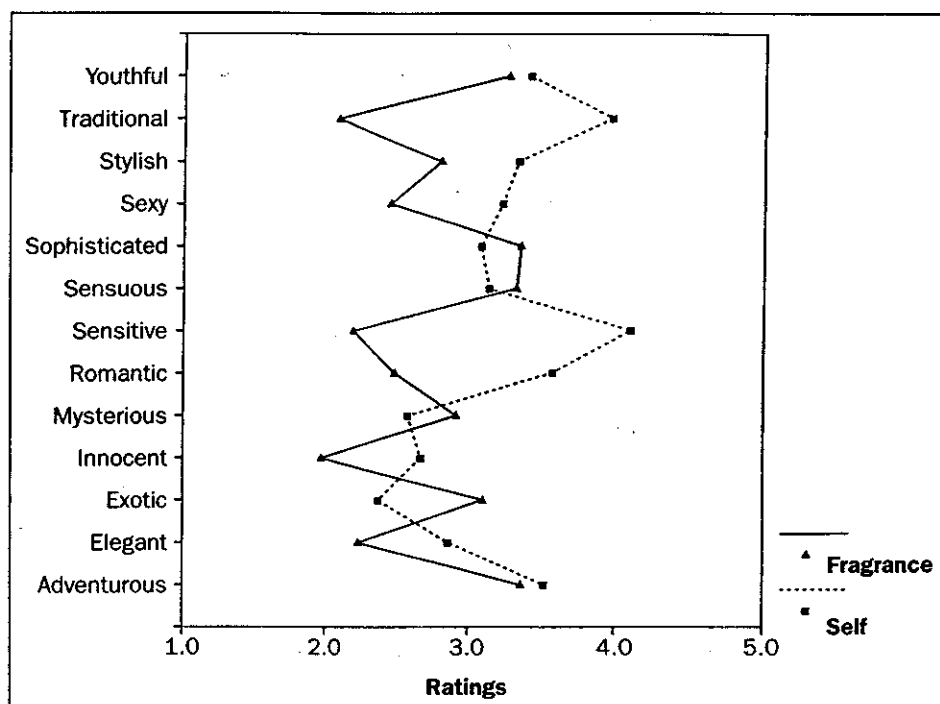
in buying the brand, while those who perceive the brand to be different as compared to themselves are less likely to be interested in buying the brand.

Further, self-image/brand-image convergence levels were also compared between respondents who indicated strong purchase intent (top 2 boxes) and those with weak purchase intent (bottom 2 boxes). A self-image/brand-image "distance" score was computed for each of these two groups, those with strong purchase intent and those with weak purchase intent. Using a similar formula as used above with the exception that, instead of individual respondent ratings, mean ratings for each group were used. The "distance" score between self- and brand-image ratings for those more likely to buy the brand is 0.54 as compared to 6.28 for those less likely to buy the product. In line with the above results, the self-

Figure 1b Fragrance Commercial: Self-Image and Brand-Image Convergence among Respondents with Weak Purchase Intent*

*Bottom 2 boxes in 5-point scale

... respondents with high self-image/brand-image convergence levels were significantly more interested in purchasing the brand than those with low convergence levels.

image/brand-image convergence levels were significantly more interested in purchasing the brand than those with low convergence levels. These results are in line with previous consumer research literature.

The self-concept measures were also used to segment the sample audience. The segmentation results showed that while the commercial exhibited average performance within the broad class of respondents, it was significantly more effective within certain subgroups of respondents who shared a particular self-image profile.

The findings need to be evaluated from the perspective of the overall objectives of the marketing communications efforts. There are two important considerations for the advertiser:

1. The commercial performance is at normative levels on a full-sample basis, although there are high levels of dislike. Should one be concerned about the high levels of offensiveness—to the point of toning down the commercial to achieve a less polarized response for the full sample?

2. There are psychological segments within the population for whom the advertising is strongly motivating, notwithstanding its average performance among the general audience. Is the response from these segments sufficient enough to ignore the full-sample dislike levels and target the commercial to only those segments who are most responsive to the commercial and brand?

In a highly fragmented market, strong appeal to some segments may be desirable, especially given that the segments of interest consist of a substantial proportion of the population. Further, as noted earlier, these segments span across a wide range of demographics, including age. Media usage and other related information regarding these segments can be obtained to provide efficiencies in marketing to them.

SUMMARY AND CONCLUSION

By applying additional analytic techniques such as the CCA to copy-test results, it is possible to look beyond the descriptive data and uncover new insights about the dynamics of an ad or commercial. These may help better understand the reasons for performance which may only be hinted at by the traditional data and analysis. Depending on the brand's strategy, a commercial that is highly effective within a relevant subgroup may be more valuable than a commercial that performs at normative levels within a general audience. Similarly, a commercial that is normative within both the general audience and within all relevant subgroups will more clearly be considered normative overall.

The results of this study showed that self-concept can mediate the effectiveness of a commercial. While only a single brand in the fragrance category was studied here, previous research in the consumer behavior literature suggests that these results should be applicable to a va-

riety of product categories. Customize self-concept attributes can be explored fo use in various product categories for spe cific brands. The effects of ideal self concept in advertising effectiveness ma also be explored. Although standard de mographic classifications are helpful, us ing self-concept measures can lead t richer insights about how people thinl and feel about themselves and its influ ence on how they react to advertising anc to the advertised brand. **IAR**

ABBY MEHTA is director of research at Gallup & Robinson Inc., Pennington, New Jersey. Before joining G&R in 1993, Abby was assistant professor of advertising at the Newhouse School of Public Communications, Syracuse University. Her research interests include advertising processing and consumer psychology. She has published widely and is an active speaker at industry as well as academic conferences. Recent publications include work on advertising response modeling and celebrity advertising. Dr. Mehta holds a Ph.D. in social psychology from Syracuse University.

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