

**EMPIRICAL TESTS OF THE IMPLICIT ASSOCIATION TEST:
DEMONSTRATING THE EFFECT OF IMPLICIT ATTITUDES ON CONSUMER INVOLVEMENT,
BRANDING, AND ADVERTISING RESPONSE**

Chair: Mark R. Forehand, University of Washington

Rationale for Special Session

Attitude is a central construct in much of social psychology, consumer behavior and marketing research in general. Theories of attitude formation and change (e.g., Fishbein 1963; Petty and Caccioppo 1986) and the attitude and behavior relationship (e.g., Ajzen and Fishbein 1980; LaPiere 1934) have been developed and tested to understand attitude antecedents and consequences. Despite the profound importance of attitudes to consumer behavior research, there are several factors that can impede accurate measurement of attitude. First, consumers often respond to explicit attitude measures even when they do not possess an established attitude on the subject in question (Hawkins and Coney 1981). This can create the appearance of attitude where one really does not exist. Second, consumers may possess attitudes that are not introspectively accessible (Fazio 1986; Fazio et al. 1986). In this situation, an explicit request for an attitude may prompt the consumer to generate a new attitude, even though an initial attitude exists (Greenwald and Banaji 1995). Third, consumers may distort their reported attitudes if their true attitude violates social-desirability norms. These distortions are particularly likely when an accurate response would be impolite or prejudicial (Demo 1985; Dovidio and Fazio 1992) or would jeopardize the subject's self-image (Dovidio and Fazio 1992; Gaertner and Dovidio 1986; Sirgy 1982). Thus, explicit measures must necessarily assume that the subject has (1) formed an attitude, (2) is aware of (i.e., has access to) his or her attitude and (3) is willing to accurately share it with the researcher. For many reasons, it may be a tenuous assumption that all three conditions can be met in a given situation (Jacoby et al. 1992).

In response to these failings of explicit measures of attitude, the Implicit Association Test (IAT) was developed. The IAT measures the ease or difficulty with which a subject associates a *target-concept* (target) with an *attribute dimension* (attribute) (Greenwald et al. 1998). Targets (i.e., attitude objects) can be presented as words, pictures, colors, logos or icons. Attributes are presented as oppositely valenced descriptors of a category (i.e., pleasant-unpleasant, self-other). In a series of trials, participants categorize and re-categorize targets and

attributes along a pre-set classification scheme. The speed with which they complete these tasks (a response latency) is the key measure in this test. By varying the pairings of targets and attributes, the IAT is able to measure how closely associated the targets are with the attributes. When targets and attributes are easily associated (compatible), mean response latency should be smaller (i.e., processing will be faster). The more (less) a subject associates a target with an attribute, the smaller (larger) the latency, indicating a more positive (negative) attitude toward the target.

The research in this session studies several applications of the Implicit Association Test to consumer behavior and marketing. The first project (Williams et al.) establishes a methodology for assessing consumer involvement by utilizing self-other categorizations in the Implicit Association Test. The authors were able to measure consumer involvement with various magazine titles and correlate these implicit measures with existing explicit measures of consumer involvement. The second project (Tietje et al.) validates the IAT in a consumer-branding context. Specifically, it demonstrates the applicability of this measurement technique to the assessment of consumer attitudes toward rival products that have strong relationships with consumers (Macintosh and IBM computer platforms). The third project (Forehand and Perkins) utilizes the IAT test to demonstrate the effect of unconscious processing of advertising elements on subsequent attitude toward the brand in the advertising and the advertising itself. This project revealed that pre-existing attitudes toward a spokesperson influence consumer response to ads featuring a voiceover by the spokesperson. More importantly, this effect was demonstrated at an implicit level, as consumer attitudes were influenced by the spokesperson even when the consumers could not identify whom the spokesperson was.

Audiences Likely to be Interested: From a methodological standpoint, this session is relevant to any researcher or practitioner who assesses consumer attitude in the course of his or her research. From an theoretical standpoint, this session will be of particular interest to researchers interested in issues

relating to branding, consumer involvement, and/or advertising response.

Level of Completeness of Papers: All three papers are at an advanced stage with data collection and analysis completed, and all papers have already established support for specific hypotheses. Two of the papers also have ongoing experiments and would have more findings to report by the time of the conference.

CONSUMER INVOLVEMENT CAN BE MEASURED BY THE IMPLICIT ASSOCIATION TEST

Kip Williams, University of New South Wales

Michael Edwardson, University of New South Wales

Cassandra Govan, University of New South Wales

Ladd Wheeler, University of New South Wales

The Implicit Association Test (IAT) has previously been used to identify unconscious preferences and stereotypes by the use of a computer categorization task (e.g., Greenwald, McGhee, & Schwartz, 1998). When highly associated category labels share a response key, reaction time to categorize a presented word is faster than if less highly associated words share a response key. In two studies, we demonstrated how the IAT could also be used to measure consumer "involvement" with a product (i.e., magazine).

In Study 1, 74 women who were regular readers of two popular magazines, half who preferred one and half who preferred the other, participated. After providing descriptive words for "me" and "not-me" categories, and for the two magazines, participants completed the categorization task. As expected, we found that participants performed faster when they categorized "me" and the preferred magazine. However, by comparing the difference between reaction times to "me" and preferred magazine vs. "me" and the non-preferred magazine for both groups, we found that one magazine showed stronger associations than the other. We interpreted this "difference between the differences" to indicate stronger consumer involvement for one magazine.

In Study 2, we replicated this finding with 82 women who were similarly classified but for two other magazines. In both studies, differences in IAT scores were positively correlated with an explicit measure of involvement—The Personal Involvement Inventory (Zaichkowsky, 1985; Mittal, 1995). Theoretical and practical implications of using the

IAT for measuring consumer involvement will be discussed.

THE ROLE OF IMPLICIT ATTITUDES IN MARKETING: APPLICATIONS OF THE IMPLICIT ASSOCIATION TEST

Brian Tietje, Cal Poly State University, San Luis Obispo

Frederic Brunel, Boston University

Cathi Collins, Boston University

Tony Greenwald, University of Washington

Our program of research investigates consumers' implicit attitudes, as measured using the Implicit Association Test (IAT, Greenwald, McGhee, and Schwartz, 1998), in a branding and advertising context. A series of three studies demonstrate that the IAT is a useful methodological tool for measuring and differentiating brand attitudes and brand identity. Further, the IAT is able to circumvent self-presentation and social desirability response biases sometimes associated with explicit measures, and provides a way to tap into respondents' "true" attitudes.

Study 1 establishes the IAT as a valid measure of consumer brand attitudes. Attitudes towards two brands of footwear were measured using both traditional explicit measures and the IAT among 54 participants. Brand attitudes across both implicit and explicit methods were consistent, and both measures revealed a preference for the more familiar brand of footwear. As anticipated, this study provides an initial demonstration of the face validity of the IAT in a branding context.

Study 2 also measured brand attitudes both via explicit measures and the IAT. In contrast to other implicit techniques such as priming, the IAT demonstrates sensitivity to individual differences across explicit brand attitudes, brand ownership, and usage frequency. The IAT was also used to measure brand identity, or the strength of the association between a brand and one's self-concept. Study participants who were loyal to Macintosh computers exhibited a significant implicit brand identify, while those who primarily use a PC-based computer did not. These results demonstrate the IAT's potential for revealing distinctive dimensions of a consumer's brand knowledge structure.

Study 3 demonstrates how the IAT can reveal the dissociation between implicit and explicit measures when consumers engage in self-presentation management. In particular, we examined

the difference between implicit and explicit measures of attitude toward the ad (Aad) based on the race of spokespersons for athletic footwear ads. Implicit Aad and explicit Aad were not correlated. However implicit Aad was correlated with explicit race attitude, racism, diversity and discrimination scales. The results indicate that self-presentation or social desirability biases affect explicit measures asymmetrically across social group concepts.

UNCONSCIOUS PROCESSING OF SPOKESPERSON INFORMATION: THE INFLUENCE OF IMPLICIT COGNITION

Mark Forehand, University of Washington

Andrew Perkins, University of Washington

The present research reexamines the effects of celebrity spokespeople on consumer attitudes and behavior. Theories of implicit cognition propose that many attitudes and behaviors are influenced by past experience even though that experience is unavailable to self-report or introspection (Greenwald and Banaji, 1995). Applied within the context of spokesperson response, these theories suggest that spokesperson endorsement may have differing effects at explicit and implicit levels of cognition. During explicit processing, consumers should consider information that is both available in memory (at an explicit level) and diagnostic when forming attitudes toward a specific target, such as a television advertisement. This may include the spokesperson's perceived category knowledge and credibility as indicators of the advertisement's quality and the endorsed product's value. In contrast, during implicit processing, consumers do not have access to these "rational" inputs and their responses should therefore be driven by the consumer's general attitude toward the spokesperson.

The first study assessed consumer response to celebrity voiceovers in advertising and found that consumer attitude toward a spokesperson is positively related with consumer response to advertisements featuring a voiceover from that spokesperson. In the study, participants observed television advertisements that included narration by well-known celebrities. The nature of consumer processing was determined by assessing participant ability to identify the celebrity in an unexpected cued-recall test after ad exposure and evaluation. Consumers who were able to identify the celebrity may have been processing the spokesperson information at an explicit, conscious level. However, consumers who were not able to identify the celebrity could not have been processing the spokesperson information at an explicit level and any effects of the

spokesperson on the attitudes of these participants are therefore necessarily implicit in nature. Supporting an implicit effect, a positive relationship was found between pre-existing attitude to the spokesperson and attitude to the brand featured in the ad utilizing the spokesperson's voice, even when the consumer could not identify the spokesperson used in the ad. However, these "implicit-processing" participants did not demonstrate a positive relationship between pre-existing spokesperson attitude and attitude toward the ad. It is argued that this divergence occurred because the first study utilized explicit measures of attitude. These explicit measures likely caused participants to search out diagnostic cues to the attitude they were requested to report. When evaluating the advertisement, the participants were able to identify numerous explicit cues to attitude (the message in the ad, the quality of the ad's visuals, etc). However, when evaluating the brand, fewer explicit cues were available and this allowed the implicit and unconscious effect of pre-existing spokesperson attitude to surface.

To more accurately assess the differential effects of spokesperson information at explicit and implicit levels of processing, a second study has been designed that uses the IAT methodology. Rather than use a measured variable (recall of the spokesperson) to determine implicit processing, Study 2 will collect both explicit and implicit measures of attitude. In so doing, Study 2 will clarify the effects of implicitly processed information on subsequent attitude toward the brand and attitude toward the ad. It will also demonstrate the sensitivity of the IAT to recently information exposure. The data collection for this experiment is underway and will be available for presentation before the conference.

VALIDATING THE IMPLICIT ASSOCIATION TEST: COMPARING IMPLICIT AND EXPLICIT MEASUREMENT ACROSS BRANDS

Dominika Maison, University of Warsaw

Ralph Bruin, Medical Data Management

Implicit attitudes and their relation to explicit attitudes are subject of many psychological researches (especially in the context of prejudices and stereotypes). In order to research implicit processes, often the reaction time paradigm is employed. One such method is the Implicit Association Test (Greenwald, McGhee, & Schwartz 1998). Because many aspects of consumer perception, attitudes and decisions are automatic and beyond the conscious control of consumers, the IAT seems to be a promising tool also for researching implicit

consumer's processes. The goal of three studies was to find out to what extent the IAT method can be applied to the area of consumer research and if the IAT effect can be an indication of consumers' implicit attitudes.

In the first experiment, participants categorized 4 brands of juices and 4 brands of sodas, in a standard IAT task. Analysis revealed significant correlations between explicit and implicit attitudes. The second experiment concerned the relation between explicit and implicit attitudes on the one hand, and behavior on the other hand. Objects of the research were two (in Poland) popular types of fast-food restaurants: "McDonald's" and "Milk Bar". Participants were recruited directly from those fast food restaurants. The IAT effect reflected product usage: those who ate in McDonald's showed implicit preferences for McDonald's food and those who ate in the Milk Bar had an implicit attitude favoring Milk Bar meals.

For the third experiment two comparable brands of sodas were chosen: Coca-cola and Pepsi. Participants were recruited based on declared preferences toward these beverages, as well as on the declared frequency of product usage. The implicit attitude (IAT effect) was correlated with explicit attitude (preference for one brand). However implicit preference for one brand (the IAT effect) was found only among Coca-cola users and not among Pepsi users. At the same time, in a blind test, Pepsi users could better differentiate taste of two brands than Coca-cola user. *Implications of these findings will be discussed.*

Key References for the Session

- Ajzen, Icek and Martin Fishbein (1980), Understanding Attitudes and Predicting Social Behavior, Englewood Cliffs, NJ: Prentice-Hall.
- Demo, David (1985), "The Measurement of Self-Esteem: Refining Our Methods," Journal of Personality and Social Psychology, 48 (June), 1490-1502.
- Dovidio, John F. and Russell H. Fazio (1992), "New Technologies for the Direct and Indirect Assessment of Attitudes," in Questions About Questions: Inquiries into the Cognitive Bases of Surveys, ed. Judith M. Tanur, New York: Sage, 204-237.
- Fazio Russell H. (1986), "How Do Attitudes Guide Behavior?" in Handbook of Motivation and Cognition: Foundations of Social Behavior, ed. Richard M. Sorrentino and E. Tory Higgins, New York: Guilford Press, 204-243.
- , David M. Sanbonmatsu, Martha C. Powell, and Frank R. Kardes (1986), "On Automatic Activation of Attitudes," Journal of Personality and Social Psychology, 50 (February), 229-238.
- Fishbein, Martin (1963), "An Investigation of the Relationships Between Beliefs About an Object and the Attitude Toward That Object," Human Relations, 16 (3), 233-240.
- Gaertner Samuel L. and John F. Dovidio (1986), "The Aversive Form of Racism," in Prejudice, Discrimination, and Racism, ed. John F. Dovidio and Samuel L. Gaertner, Orlando FL: Academic Press, 61-89.
- Greenwald, Anthony G. and Mahzarin R. Banaji (1995), "Implicit Social Cognition: Attitudes, Self-Esteem and Stereotypes," Psychological Review, 102 (1), 4-27.
- , Debbie E. McGhee, and Jordan L. K. Schwartz (1998), "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test," Journal of Personality and Social Psychology, 74 (June) 1464-1480.
- Hawkins, Del I. and Kenneth A. Coney (1981), "Uninformed Response Error in Survey Research," Journal of Marketing Research, 18 (August), 370-374.
- Jacoby, Larry L., D. Stephen Lindsay, and Jeffrey P. Toth (1992), "Unconscious Influences Revealed," American Psychologist, 47 (June), 802-809.
- LaPiere, Richard T. (1934), "Attitudes Versus Actions," Social Forces, 13, 230-237.
- Mittal, Banwari (1995), "A comparative analysis of four scales of consumer involvement," Psychology and Marketing, 12 (Oct), 663-682.
- Petty, Richard E. and John T. Caccioppo (1986), Communication and Persuasion: Central and Peripheral Routes to Attitude Change, New York: Springer-Verlag.
- Sirgy, M. Joseph (1982), "Self-Concept in Consumer Behavior: A Critical Review," Journal of Consumer Research, 9 (December), 287-300.
- Zaichowsky, Judith L. (1985), "Measuring the Involvement Construct." Journal of Consumer Research, 12 (December), 341-352.