The role of the social-identity function of attitudes in consumer innovativeness and opinion leadership

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Abstract

Attitudes serving the social-identity function relate nonsocial objects (e.g., products) to social objects (e.g., people). As new products tend to be more exciting than old, familiar products, the authors suggest that these attitudes influence innovativeness and opinion leadership. Based on recent research on attitude functions and adoption of consumer innovations, this research examines the relationship between the social-identity function, innovativeness, and opinion leadership, in addition to expertise and involvement; the two traditional antecedents of innovativeness and opinion leadership. The results across two product categories show that social-identity function exerts a strong impact on innovativeness and opinion leadership. © 2000 Elsevier Science B.V. All rights reserved.

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JEL classification: D11; D12

Keywords: Consumer attitudes; Consumer behavior; Motivation
1. Introduction

The recent resurgence of interest in the motivational underpinnings of cognitive constructs (Kruglanski, 1996) has stimulated interest in issues relating to the psychological needs served by attitudes (cf., Greenwald, 1989). One related and important stream of research concerns attitude functions (cf., Shavitt, 1992). Functional theories of attitudes (cf., Katz & Stotland, 1959; Sarnoff & Katz, 1954) ask the question: Why do people hold the attitudes they do? Development of new methods to measure attitude functions helped overcome the operational difficulties that have plagued research on attitude functions (Herek, 1987). We suggest that attitude functions may play an important role in the adoption and the diffusion of consumer innovations (Gatignon & Robertson, 1985). The success of new consumer products rests on the construct of innovativeness, which introduces the product (innovation) to the social system, and opinion leadership, which provides social legitimacy to the innovation. Thus, it is important to develop an understanding both innovativeness and opinion leadership.

2. Theoretical background and research hypothesis

Functional theorists classify attitudes according to the functional needs that they meet (Snyder & DeBono, 1989; Shavitt, 1989a). General classifications categorize attitude functions as utilitarian, ego-defensive, knowledge, value-expressive, and social-adjustive (Smith, Bruner & White, 1956). One important objective of consumer psychology is to be able to persuade consumers and change their attitudes. According to the functional theorist, the prerequisite for changing an attitude is to determine the psychological need served by the attitude (Shavitt, 1989a).

This role of attitude functions opens a plethora of opportunities to investigate persuasion processes (Johar & Sirgy, 1991; Park, Milberg & Lawson, 1991; Shavitt, 1992). Indeed, most applications of attitude functions in consumer behavior investigate the persuasiveness of advertising messages (cf., Park, Jaworski & MacInnis, 1986; Snyder & DeBono, 1985). For example, Shavitt and Lowrey (1992) investigate the impact of product-related and audience-related factors on the persuasiveness of value-expressive and utilitarian advertising messages. Other applications examine objects serving different attitude functions (cf., Shavitt & Fazio, 1991; Sirgy, Johar, Samli & Clairborne, 1991). For instance, in their investigation of brand extensions,
Park et al. (1991) explore functional (utilitarian function) and prestige (social-adjustive function) related brand names. Our research studies the social-identity attitude function within the context of consumer innovations. Shavitt (1990) associated the self-expression (value-expressive) and social interaction (social-adjustive) role of attitudes to symbolize the social-identity function. Social-identity function defines a larger symbolic category of attitudes (Abelson, 1982; Sears & McConahay, 1973) and mediates the self and the other interactions (Smith et al., 1956). This function discriminates between individuals who prefer to display their true inner self and those for whom attitude helps to harmonize into important social situations (Snyder & DeBono, 1989).

Products help one achieve private and public identity goals (Abelson & Prentice, 1989; Shavitt, 1989a). Product perception is a social process if the perceiver perceives the product, either consciously or unconsciously, as a social entity. Products also help in defining self and to maintain important self-definitions (cf., Belk, 1988) and, often provide people with a characteristic they feel they lack. In fact, people exhibit self-enhancing biases when making judgments about product they own, the mere ownership effect (Beggan, 1992). The products that perform the social-identity function: (1) mediate the self and other relationships, (2) instill pride in a person as they help the person to fit in desired social settings, and (3) determine the centrality of the object to the person.

Innovations, because they are generally exciting and trend setting, become primary candidates for eliciting the social-identity function. For example, if cars are important for portraying self-image for Sam, then Sam is highly likely to own a state-of-art model of car. Thus, it is our contention that the social-identity function of attitude plays an important role in the adoption and the diffusion of innovations. To gain a better understanding of this phenomenon, we investigate the relationship between the social-identity function and the parameters of consumer innovations: innovativeness and opinion leadership. To be comprehensive in our investigation, we also incorporate two traditional innovation research variables, that is, expertise and involvement.

2.1. Opinion leadership

In a social system, communication flows from the source to the opinion leaders, who pass it on to the others in the social system (Katz & Lazarsfeld, 1955). Indeed, opinion leadership is considered an important factor in word-
of-mouth communication, which contributes towards the success of an innovation (cf., Childers, 1986; King & Summers, 1970). Opinion leadership reflects an individual’s ability to influence other individuals’ attitudes or overt behavior in a desired way in a particular domain.

The important gate-keeping role of opinion leaders makes it imperative to understand its antecedents. We conjecture that one unexplored antecedent of opinion leadership is the social-identity function. People for whom a product performs the social-identity function feel that their desired social identity is contingent on owning the product. Product ownership and experience facilitates consumers learning about the product (Hoch & Deighton, 1989). Public access to ownership and, thereby, learning, paints the owner as informed. Therefore, we hypothesize that these owners are more likely to become opinion leaders.

H1: The social-identity function of attitudes positively impacts opinion leadership.

2.2. Innovativeness

Innovativeness is the bottom-line type of behavior in the diffusion process (Rogers, 1995). Innovators launch a new idea into a system by importing the idea from outside the system. Thus, it is important to develop an understanding of innovativeness. In addition, a good understanding of the process of diffusion of innovations requires an understanding of innovativeness (Gatignon & Robertson, 1991). Consistent with Gatignon and Robertson (1985), we contend that innovativeness is domain specific. For consumer products, this implies that a person might be an innovator in one product category (say computers) and a follower in another product category (say cars). Keeping this domain specific nature of innovativeness in mind, we adopt Goldsmith and Hofackers’ (1991) theorizing of innovativeness as the predisposition to learn about and adopt products in a specific domain.

Attitudes serving the social-identity function facilitate the acceptance of a person in a particular social setting (Katz, 1960). The attitudes, operationalized by the object, facilitate the image the person wants to portray. As the social-identity function facilitates the acceptance of a person in a particular social setting, the person is likely to adopt innovations in that domain. Thus, we expect the social-identity function to positively influence innovativeness.
**H₂**: The social-identity function of attitudes positively impacts innovativeness.

One way to become an opinion leader in a product domain is to consistently own contemporary models of that product (Rogers, 1995). Thus, we expect innovativeness to determine opinion leadership.

**H₃**: Innovativeness will have a positive influence on opinion leadership.

### 2.3. Expertise

Consumer knowledge manifests itself in finely differentiated and hierarchically organized knowledge structures, with well-developed consumption rules, and firmly entrenched beliefs about product performance (Sujan, 1985). Consumer knowledge has two components: familiarity and expertise (Jacoby, Troutman, Kuss & Mazursky, 1986). A consumer acquires familiarity by virtue of product related experiences, whereas expertise is the consumer’s ability to perform product related tasks successfully (Alba & Hutchinson, 1987).

Previous research has shown that innovators are heavy users of the relevant product category (Rogers, 1995). Although expertise is different from familiarity gained by virtue of experience with the product (Alba & Hutchinson, 1987), these two are expected to correlate (Gatignon & Robertson, 1991). Further, as experts understand a product domain better than novices do, the perceived risk of adoption of an innovation should be lower for experts. Thus, we expect expertise to be an antecedent of innovativeness.

**H₄**: Expertise would have a positive influence on innovativeness.

Experts by definition are knowledgeable in the concerned domain. They own information not possessed but sought by others. In addition, the leadership status of opinion leaders is due to their technical competence (Rogers, 1995). Therefore, there is a higher likelihood for an expert to be an opinion leader in comparison to a novice.

**H₅**: Expertise will have a positive influence on opinion leadership.
2.4. Involvement

Involvement signifies long-term interest in a domain and plays a central role in defining self-concept (Bloch, 1981). Consumer involvement with products depends on the personal relevance of that product (Celsi & Olson, 1988; Park & Hastak, 1994). Persons involved with a product category gain experience with the product and acquire product-related knowledge. In this way, one can argue that involvement is an antecedent of expertise. Further, scholars assert that knowledge renders the world more comprehensible and predictable (Alba & Hutchinson, 1987). As this assertion is more cognitive than motivational, scholars have argued that knowledge is an unlikely candidate for arousing intense forms of personal involvement (Thomsen, Borgida & Lavine, 1995). To test these contradictory explanations, we propose two alternative hypotheses.

\( H_6: \) Involvement will have a positive influence on expertise.

\( H_{6ALT}: \) Involvement does not influence expertise.

People are involved with a product category that is central to their beliefs about self (Bloch, 1981; Boninger, Krosnick & Berent, 1995; Petty & Cacioppo, 1979). People for whom the concerned product performs the social-identity function hold the product as being central to them and, therefore, are likely to be involved with the product.

\( H_7: \) The social-identity function of attitudes is positively related to involvement.

Innovativeness in the concerned domain implies adopting relevant innovations, which requires an understanding of the innovation. One way to gain this understanding is by being involved with the concerned domain.

\( H_8: \) Involvement positively influences innovativeness.

Finally, we expect involvement to positively influence opinion leadership. Opinion leaders have knowledge that is useful to others. This repository of information that the opinion leaders accumulate is by virtue of being involved with the concerned domain.
H_0: Involvement positively influences opinion leadership.

3. The study

3.1. Measures

We use self-reported measures to operationalize products serving the social-identity function of attitudes for two products, viz., cars and computers. Indeed, we use a mixture of object based (product categories – Shavitt, 1989b) and individual difference (self-report measure) approaches to measure the social-identity function of attitudes (also see Clary, Snyder, Ridge, Miene & Haugen, 1994). We adopt four items, pertinent to our conceptualization, from the scale developed by Traylor and Joseph (1984) to measure context specific involvement and Childers’ (1986) version of the product-specific opinion leadership scale developed by King and Summers (1970). Following Sujan (1985), we use ten multiple-choice questions to measure expertise. To measure domain specific innovativeness, we adapted the three-item scale developed by Goldsmith and Hofacker (1991). Research on reverse polarity (cf., Herche & Engelland, 1996) recommends against using negatively worded items; thus we deleted the three reverse polarity items from Goldsmith and Hofacker’s (1991) six-item scale to get the three-item scale.

Based on our definition of the construct of social-identity function of attitudes, we generated four items to capture the construct. To verify face validity of these items, two fourth year doctoral students, not concerned with this research, performed a card sorting exercise. These students were given definitions of each construct along with cards with one item printed on each card (thus, they had 14 cards each). The classification of the items was 100% correct. Finally, three of the four items were used to measure social identity function (see section on measure validation – Table 1). The first item captures the construct directly by asking the importance of respondents’ friends knowing that the respondent owns the product. The second item emphasizes the importance of owning the “latest style”. Note that the emphasis is on “latest style” and not on either technological advancement (that is, innovativeness) or inner gratification (that is, involvement). The third item captures the construct indirectly by asking whether product ownership determines the respondents’ likelihood of preference for a person.
Table 1
Confirmatory factor analysis

<table>
<thead>
<tr>
<th>Item description</th>
<th>Standardized loadings: cars</th>
<th>Standardized loadings: computers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opinion leadership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, do you talk to your friends and neighbors about ______. (1 = very often, 5 = never)</td>
<td>0.6907</td>
<td>0.6502</td>
</tr>
<tr>
<td>When you talk to your friends and neighbors about ______ do you: (1 = give a great deal of information, 5 = give very little information)</td>
<td>0.8083</td>
<td>0.7818</td>
</tr>
<tr>
<td>During the past six months, how many people have you told about ______ (1 = told a number of people, 5 = told no one)</td>
<td>0.7664</td>
<td>0.6884</td>
</tr>
<tr>
<td>Compared with your circle of friends, how likely are you to be asked about ______. (1 = very likely to be asked, 5 = not at all likely to be asked)</td>
<td>0.8459</td>
<td>0.8447</td>
</tr>
<tr>
<td>In a discussion on ______, which of the following happens often 1 = tell your friends about ______, 5 = your friends tell about ______)</td>
<td>0.8170</td>
<td>0.7118</td>
</tr>
<tr>
<td>Overall in all of your discussions with friends and neighbors, are you: (1 = often used as a source of advice, 5 = not used as a source of advice)</td>
<td>0.6521</td>
<td>0.6631</td>
</tr>
<tr>
<td><strong>Innovativeness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, I am the first in my circle of friends to buy a new model of _____ when it appears in the market. (1 = disagree, 5 = agree)</td>
<td>0.8091</td>
<td>0.8193</td>
</tr>
<tr>
<td>Compared to my friends I have owned a lot of _____ (1 = disagree, 5 = agree)</td>
<td>0.6281</td>
<td>0.6557</td>
</tr>
<tr>
<td>In general, I am the first in my circle of friends to know the title/brand of latest _____ (1 = disagree, 5 = agree)</td>
<td>0.6733</td>
<td>0.7234</td>
</tr>
<tr>
<td><strong>Involvement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You can tell a lot about a person by seeing which brand of _____ he/she uses. (1 = disagree, 7 = agree)</td>
<td>0.7555</td>
<td>0.7637</td>
</tr>
<tr>
<td>When I use a _<strong><strong>, others see me the way I want hem to see me</strong></strong> help me express who I am. (1 = disagree, 7 = agree)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>_____ is me. (1 = disagree, 7 = agree)</td>
<td>0.5187</td>
<td>0.5564</td>
</tr>
<tr>
<td><strong>Social-identity function</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important for my friend to know that I have a good _____ (1 = disagree, 7 = agree)</td>
<td>0.8013</td>
<td>0.7951</td>
</tr>
<tr>
<td>I take pride in owning the latest available technology in _____. (1 = disagree, 7 = agree)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>I like to own a _____ with latest style. (1 = disagree, 7 = agree)</td>
<td>0.8783</td>
<td>0.7445</td>
</tr>
<tr>
<td>I generally like a person who owns a good _____ (1 = disagree, 7 = agree)</td>
<td>0.6211</td>
<td>0.6879</td>
</tr>
</tbody>
</table>

a For two group (products) overall fit statistics: $\chi^2 = 848.9$, d.f. = 168, $p < 0.001$, GFI = 0.9037, NNFI = 0.7672, CFI = 0.8138, Standardized RMR = 0.0537. Further, all factor loadings are significant at 1% level.

b Item deleted after confirmatory factor analysis.
3.2. Context

Data were collected for two product categories: cars and computers. The order in which the items for these products were presented was randomized to eliminate any order effects. Cars were chosen because they are publicly consumed products that witness frequent incremental enhancements (innovations). On the other hand, computers represent products that can be described as being primarily privately consumed and have also seen a lot of innovations lately. Following Bearden and Etzel (1982), we would expect social-identity function to be more important for publicly consumed products and involvement to be important for privately consumed products. We use a pretest to classify cars and computers along the public–private continuum. We adopted the six-item–six-point scale of Bearden and Etzel (1982) for the pretest. The mean for cars and computers were 5.32 and 3.17, with 1 signifying private consumption and 6 depicting public consumption.

3.3. Sample

Two hundred and twenty-six undergraduate students at a large midwestern US university participated in the study for extra credit. Two hundred and twenty-four responses were usable. All the students were within one year of finishing their undergraduate education and most of them already had jobs. One could argue that student sample is not suitable for our context, that is, cars and computers. On the contrary, as we are more interested in basic psychological processes than generalization, a student sample is appropriate. In fact, for research like ours that focuses on process generalization as opposed to effect generalization, scholars recommended using student samples (cf., Calder, Phillips & Tybout, 1981, 1982; Mook, 1983). For instance, Kardes (1996, p. 287) recommends student research participants for “basic research on causal mechanisms”. Moreover, in a case very similar to ours, where students may not be experienced with purchasing cars or computers, Petty and Cacioppo (1996) persuasively argue that the effects of experience on judgment can be modeled effectively in laboratory settings with student participants. Finally, in a comparison of laboratory and field studies, Locke (1986) found substantively equivalent results in studies relating to industrial-organizational psychology, organizational behavior, and human resource management. Therefore, we think that there is ample precedence and evidence for us to use college students to study consumer behavior relating to cars and computers.
3.4. Results

We adopted Gerbing and Anderson’s (1988) scale development paradigm to develop a scale for the social-identity function of attitudes. To test our proposed model, we use Anderson and Gerbing’s (1988) two-step approach for structural equation modeling. First, exploratory factor analysis on the social-identity function of attitudes items identified one factor with an eigenvalue greater than 1 for cars, but in the case of computers there were two factors with eigenvalues greater than 1. The first factor had an eigenvalue of 6.40 and the second factor had an eigenvalue of 1.07. Eigenvalues are a measure of variance explained (or analytic importance) by a factor. An eigenvalue of 1 implies that a factor explains variance equal to that of an item. As there was a large difference between the eigenvalues of the first and second factor and the second eigenvalue was very close to one. Although, there are numerous rules of thumb that one could use to determine the number of factors (we refer the readers to Nunnally and Bernstein (1994, pp. 482–483) for a review), usually a cutoff of 1 for eigenvalues is used to suggest the number of factors. However, this cutoff is just a rule of thumb. As we have large differences between the first and the second eigenvalues and the second eigenvalue is very close to 1, we used our judgment and theory to interpret social-identity function as a unidimensional construct. Note that in the case of cars we had only one factor with this eigenvalue rule of thumb. Therefore, we believe that the exploratory factor analysis results indicate that the construct of the object’s invoking the social-identity function of attitudes is unidimensional.

Subsequently, we used LISREL to: (1) obtain the factor loadings for the confirmatory factor analysis and (2) test our hypotheses by estimating a structural equation model. LISREL is a software that uses maximum likelihood estimation to analyze covariance structures to model relationships between multiple latent variables. Usually, a researchers uses multiple items (observed variables) to measure a latent variable. Specifically, we estimate a four-construct, viz., social-identity function, opinion leadership, innovative-ness, and involvement confirmatory factor model. High-standardized residuals, high modification indices, and low factors loading were used to refine the scales. We used low factor loadings, high modification indices, and high normalized residuals to refine the measures. Specifically, we use a multi-group analysis. As each respondent answered questions on both cars and computers, a multi-group analysis is appropriate. Table 1 has the factor loadings for the two product domains. Overall, the factor loadings are sat-
isfactory. For the two products, the overall fit statistics for the measurement model signal mixed results. For the two products, the $\chi^2$ statistic is significant (see Table 1: $\chi^2 = 848.9$, d.f. = 168, $p = 0.00$). This anomaly of $\chi^2$ statistic not agreeing with other measures of overall goodness of fit statistics is common for larger sample sizes (cf., Bagozzi & Warshaw, 1990; Stump & Heide, 1996). The NNFI (0.7672) and CFI (0.8138) values are below the recommended levels, whereas GFI (0.9037) and Standardized RMR (0.0537) meet the recommended cutoff levels. At the very least, these fit statistics signal that future research should further refine the measure for the social-identity function.

Discriminant validity was assessed my means of average variance extracted and the confidence interval around $\phi^2$ between these constructs (Table 2). With two exceptions (one for each product), the average variance extracted was greater than the recommended 0.5 cut off (Bagozzi & Yi, 1988) and in all cases it was greater than the appropriate squared structural link ($\phi$). Discriminant validity was further established as none of the confidence intervals around the maximum likelihood estimate of $\phi^2$ ($\pm 2$ standard error) contained 1 (Anderson & Gerbing, 1988).

Nomological validity of the construct of social-identity function has been assessed in two ways: By means of correlation coefficients and by estimating the path model in Fig. 1. Table 3 displays the correlation coefficients and Table 4 summarizes the parameter estimates for the path model (Fig. 1). First, we find support for the nomological validity of the social-identity function of attitudes as it is positively correlated with involvement, innovativeness, and opinion leadership (Table 3). However, these are some anom-

<table>
<thead>
<tr>
<th>Social-identity function</th>
<th>Involvement</th>
<th>Opinion leadership</th>
<th>Innovativeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>-0.390 (0.073)</td>
<td>-0.796 (0.043)</td>
<td></td>
</tr>
<tr>
<td>Opinion leadership</td>
<td>-0.124 (0.075)</td>
<td>0.724 (0.047)</td>
<td>-0.347 (0.067)</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.033 (0.0866)</td>
<td>0.331 (0.085)</td>
<td>0.151 (0.083)</td>
</tr>
<tr>
<td>Average variance extracted</td>
<td>0.587</td>
<td>0.600</td>
<td>0.600</td>
</tr>
</tbody>
</table>

Table 2: Discriminant validity: Phi square$^a$ and average variance extracted$^b$

$^a$ Phi-square for cars followed by computers. Standard errors in parentheses.

$^b$ Average variance extracted for cars followed by computers.
alies in the case of expertise. Expertise is significantly correlated with innovativeness and opinion leadership in the case of cars, whereas for computers, expertise is positively correlated with opinion leadership. Note that for both cars and computers, the correlation between expertise and involvement was not significant.

We used structural equation modeling (LISREL 8.12) to test the proposed path model with the covariance matrix as the input (Anderson & Gerbing, 1988). Manifest indicators were created for each variable by averaging the items of each scale (cf., Kenny, 1979; Williams & Hazar, 1986). For the unidimensional scales (all our scales were unidimensional), we used the reliability coefficient (Cronbach’s alpha) to calculate the factor loadings and measurement error for each manifest variable. The path from the latent

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We use $\gamma$ is used to donate the impact of an exogenous variable, whereas $\beta$ is used to represent the influence of an endogenous variable. In addition, subscripts are used to donate “from-to” relationships, e.g., “eo” represents the impact of expertise on opinion leadership.

Fig. 1. Proposed model.
variable to its manifest variable was set equal to the square root of the reliability of the measured variable (cf., Settoon, Bennett & Liden 1996). The error variance for each manifest indicator was set equal to one minus reliability times the appropriate variance from the covariance matrix. The only exception was the reliability of expertise, which was set equal to 0.9 (Anderson & Gerbing, 1982). Specifically, we estimate the system of following equations (we summarize these equations in Fig. 1):

\[
\text{EXP} = \gamma_{ic} \text{INVL} + \xi_{\text{EXP}},
\]

\[
\text{INNV} = \gamma_{in} \text{INVL} + \gamma_{sn} \text{SIF} + \beta_{en} \text{EXP} + \xi_{\text{INNV}},
\]

\[
\text{OL} = \gamma_{io} \text{INVL} + \gamma_{so} \text{SIF} + \beta_{co} \text{EXP} + \beta_{no} \text{INNV} + \xi_{\text{OL}},
\]

where EXP, INVL, SIF, INVL, and OL stand for expertise, involvement, social-identity function, innovativeness, and opinion leadership respectively. As in Fig. 1 \( \gamma \) denotes the influence of exogenous variables and \( \beta \) represents the effect of endogenous variables. Finally, \( \xi \) symbolizes the three random error terms. We present the LISREL estimates of the above equations in Table 4. The goodness of fit statistics for the path model indicate a good fit for the proposed model (\( \chi^2 = 0.56 \), d.f. = 2, \( p = 0.75 \), GFI = 0.99, NFI = 0.99, CFI = 0.99). Anderson and Gerbing (1988) suggest nested statistical test for any proposed model. For our two-group model, we have only two degrees of freedom available and if we have any addition path, we would
have no degrees of freedom available, thus giving us a perfect fit. As our $\chi^2$ was not statistically significant we expect this nested $\chi^2$ test also to be non-significant. We did fit a sub-model of the proposed model (we deleted the paths of direct influence of social-identity function, involvement, and expertise on opinion leadership) to the data. The $\chi^2$ value with 8 degrees of freedom was 36.28. The $\chi^2$ difference test gave a $\chi^2$ of 34.72 with 6 degrees of freedom—which was statistically significant ($p < 0.01$). Thus, the proposed model gives a better fit than the reduced model and, thus, we test our hypotheses within the proposed model.

In the case of car (H1), the social-identity function is an antecedent of opinion leadership, however this assertion is not supported for computers. Indeed, the social-identity function determines innovativeness for both product categories (H2) and innovativeness determined opinion leadership for both cars and computers (H3). Although expertise determined innova-

### Table 4
Path coefficients for proposed model

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Hypothesized direction</th>
<th>Cars</th>
<th>Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\gamma_{ie}$</td>
<td>Positive/No effect</td>
<td>0.033 (0.088)</td>
<td>0.112 (0.108)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.033 (0.088)</td>
<td>0.112 (0.088)</td>
</tr>
<tr>
<td>$\gamma_{io}$</td>
<td>Positive</td>
<td>-0.088 (0.069)</td>
<td>0.227 (0.157)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-0.048 (0.073)</td>
<td>0.224* (0.092)</td>
</tr>
<tr>
<td>$\gamma_{im}$</td>
<td>Positive</td>
<td>0.103 (0.088)</td>
<td>-0.014 (0.151)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.104 (0.087)</td>
<td>-0.005 (0.087)</td>
</tr>
<tr>
<td>$\gamma_{in}$</td>
<td>Positive</td>
<td>0.271* (0.082)</td>
<td>-0.320 (0.204)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.343* (0.087)</td>
<td>0.068 (0.109)</td>
</tr>
<tr>
<td>$\beta_{co}$</td>
<td>Positive</td>
<td>0.204** (0.103)</td>
<td>0.497* (0.148)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.204** (0.103)</td>
<td>0.497* (0.103)</td>
</tr>
<tr>
<td>$\beta_{en}$</td>
<td>Positive</td>
<td>0.094* (0.024)</td>
<td>0.008 (0.037)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.110* (0.026)</td>
<td>0.078** (0.031)</td>
</tr>
<tr>
<td>$\beta_{no}$</td>
<td>Positive</td>
<td>0.044 (0.031)</td>
<td>0.089* (0.032)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.044 (0.031)</td>
<td>0.089* (0.031)</td>
</tr>
<tr>
<td>$\beta_{so}$</td>
<td>Positive</td>
<td>0.354* (0.070)</td>
<td>0.781* (0.203)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.354* (0.070)</td>
<td>0.781* (0.070)</td>
</tr>
<tr>
<td>$\phi_{as}$</td>
<td>Positive</td>
<td>2.811* (0.368)</td>
<td>1.862* (0.228)</td>
</tr>
</tbody>
</table>

*Direct effects are offered first and then total effects. Standard error in parentheses.

*Note*: Overall fit of the two-group model: $\chi^2 = 0.564$, d.f. = 2, $p = 0.754$, GFI = 1.00, NFI = 0.999, CFI = 1.00.

* $p < 0.01$.

* $p < 0.05$.
tiveness only for computer (H₄), it does seem to be an antecedent to opinion leadership for both product categories (H₅). The hypothesis linking social-identity function and involvement (H₇) was supported for both the product categories, however, involvement did not determine innovativeness or expertise (H₈ and H₆). Do note that we were skeptical of involvement determining expertise, as expertise is a cognitive construct, whereas involvement is a motivational construct (H₆ALT). The hypothesis concerning the link between involvement and opinion leadership receives support in the case of computer (H₉). In summary, we find support for (1) H₂, H₃, and H₇ for both the product categories, (2) H₁ for cars, and (3) H₄ and H₉ for computers (see Table 4 for details).

4. Discussion

The present study shows that for publicly consumed products, attitudes that serve a social-identity function play an important role in consumer innovativeness and opinion leadership. Attitudes that serve the social-identity function facilitate interpersonal interaction by communicating consumers’ consumption-related values and goals to other consumers. Social identity function is particularly important for publicly consumed products because such products reflect consumers’ personal tastes and preferences to a much greater extent than privately consumed products.

In the case of cars, experts tend to become opinion leaders; however, the social-identity function determines both innovativeness and opinion leadership. This pattern of results would be expected for a publicly consumed product, as visibility for publicly consumed goods is high (cf., Bearden & Etzel, 1982). For computers, expertise is an antecedent of both innovativeness and opinion leadership. The social-identity function is an antecedent of innovativeness but not of opinion leadership. The diminished role of social-identity function for computers relative to cars can be attributed to the fact that computers are privately consumed products.

4.1. Limitations

We highlight four limitations of our research. First, we only study the influence of personal characteristics of an individual on opinion leadership and innovativeness. Future research should investigate personal characteristics with other aspects of adoption and diffusion of consumer innovations.
such as interpersonal influence, characteristics of the innovation, the marketing activity of the innovating firm, and competitive activity (Gatignon & Robertson, 1985). Second, we only examine the social-identity function of attitudes as opposed to other functions that attitudes could perform. Given the strong results we obtain with respect to the social-identity function, future research should investigate other attitude functions. Third, as hypothesized, we did find our results to be context dependent – future research should further investigate this issue by examining other contexts. Finally, our confirmatory factor analysis results concerning the properties of our measurement model have scope to be improved.

4.2. Implications

Innovation plays a crucial role in consumer preference, competition among firms, and industry performance. Consumers prefer automobiles to streetcars, planes to trains, and small portable computers to large bulky computers. In a classic survey of 700 firms (60% industrial, 20% consumer durables, 20% consumer non-durables), new product innovations accounted for 28% of the observed growth of organizations (Booz, Allen, and Hamilton, 1982). More recently, Wind, Mahajan and Bayeless (1990) found that 25% of firms’ current sales resulted from new product innovations introduced within the last three years of the survey. All products go through the stages of introduction, growth, maturity, and decline, and recent technological advances and intensifying competition continue to shorten the duration of each of the product life cycle stages (Urban & Hauser, 1993).

Although innovation is critical to the growth and the success of any organization, consumers differ in their receptiveness to new product innovations. Some consumer segments actively seek out new product innovations and communicate the benefits of these innovations to other consumers. Other segments are much slower to adopt new innovations. Some segments (e.g., the laggard segment) are so resistant to innovation that by the time they adopt a new product it has already been replaced by a newer innovation (Urban & Hauser, 1993). Our research suggests that measuring consumers’ attitude functions concerning different product categories affords firms with the opportunity to identify those consumer segments that are likely to be most sensitive and responsive to new product offerings. Segments of consumers that hold attitudes serving the social-identity function are most likely to adopt early, provided that the new product innovation is likely to be publicly rather than privately consumed. Not only are these segments likely to in-
crease early sales and profits, they provide the added benefit of word-of-mouth communications to other segments that could also stimulate growth. Later adopters look to early adopters for information and opinion leadership that can greatly influence their purchase decisions.

In theoretic terms our research adds to current understanding of the process of adoption and diffusion of consumer innovations and sheds light on new antecedents of innovativeness and opinion leadership. Such an explanation of both innovativeness and opinion leadership has important theoretical implications as we are explaining two behavioral variables with the help of an attitudinal construct. The influence of attitude on behavior is well documented in literature, however which attitude influences what behavior is an important question for both researchers and practitioners. In addition, identifying opinion leaders and innovators is important for organizations as these leaders give the innovation legitimacy and innovators introduce it to the social system.

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References


