

Category Attitude Measures: Exemplars as Inputs

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The role of exemplars in formation of attitudes toward a category has, surprisingly, been ignored in prior consumer research. In the present research we seek to develop a better understanding of the relationship between category exemplars (e.g., the products in a brand category) and overall attitudes toward the category. Attitude measures that incorporate evaluations of individual branded products may be useful, both conceptually and practically, and can complement more traditional multi-attribute measures of attitude. Across 3 studies we present evidence that a composite index of attitudes toward category exemplars, weighted by exemplar typicality, is related to overall category attitudes, sometimes more strongly than a traditional multi-attribute index. We also demonstrate that elaboration upon the individual exemplars further strengthens the relationship between category attitudes and this composite index. Theoretical implications for attitude theory, as well as managerial implications, are discussed.

More and more companies are managing brands that consist of multiple products, and recent research in brand categorization (e.g., Boush & Loken, 1991; Dawar & Anderson, 1994; Schmitt & Dube, 1992) highlights the importance of considering brands as categories of products. As a result, consumers have become more likely to perceive brand categories in terms of individual exemplars (i.e., products in the brand portfolio). The importance of understanding the role of these individual products in formation of consumers' *attitude toward a brand* has increased for brand managers as their portfolios of products under a single brand name continue to increase (Laforet & Saunders, 1994).

The importance of understanding the role of category members in category attitude formation extends beyond brand management to service, product, and social market-

ing contexts. Understanding how consumers' attitudes toward the airline industry are formed by perceptions of the individual airlines, how consumers' attitudes toward candy bars in general may be related to their perception of individual candy bars, or how consumers' attitudes toward charity organizations are determined by the particular charity organizations salient to the consumers, are all questions that hinge on understanding the role of exemplars in attitude formation. Although recent research has begun to examine aspects of the relationship between category exemplars and category attitudes (Lord & Lepper, 1999; Sia et al., 1997, 1999), this research has been limited to social (rather than product) stimuli, and has not assessed the measurement implications of using multiple category exemplars as attitudinal inputs.

The focus of this research is to demonstrate that a composite index of attitudes toward category exemplars (i.e., the individual, specific members of a category) is related to the overall category attitude, in the same way that a composite index of salient beliefs about the category can be used to predict overall category attitudes (Fishbein & Ajzen, 1981). Al-

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though it seems apparent, for example, that an attitude toward a brand (e.g., Kraft) might be measured on the basis of the category members underlying that attitude, i.e. the products of the brand (e.g., Kraft cheese, Kraft macaroni & cheese), prior research has overlooked the benefits of developing a simple but systematic measure of category brand attitudes that incorporates these category members. A primary reason for the interest by practitioners in multi-attribute models is because of their diagnostic ability. They allow specific marketing communication programs to be developed to increase category attitudes (e.g., by increasing consumers' beliefs about an important or salient attribute). A measure that is based on multiple exemplars may serve a different, but also important, use in marketing. Marketing communications might be developed to increase the influence of positively evaluated products of the brand on overall brand attitudes.

A second objective of this research is to explore factors that may affect the stability and consistency of exemplar evaluations as attitudinal inputs. Situational or individual factors may affect the influence of category exemplars on category attitudes just as the ability of attribute beliefs to affect attitudes may be influenced by a variety of situational or individual factors (cf. Bodenhausen, Schwarz, Bless, & Wanke, 1995).

EXEMPLARS AS ATTITUDE INPUTS

Traditional Attitudinal Inputs

Attitude researchers (Eagly & Chaiken, 1993) generally agree that an evaluative response to an attitudinal object can be influenced by three types of input: by *cognitive* input (e.g., evaluation of candy bars may be affected by our belief that they taste sweet and chocolaty), by *affective* input (e.g., evaluation of the Hallmark brand may be determined by positive or negative emotional experiences with Hallmark products) and by *behavioral* input (e.g., people's food preferences may be influenced by behavioral experiences, such as the types of foods they ate as children). Furthermore, a composite index of any of these three classes of input is more predictive of an evaluative response toward an attitude object, than a single cognition, affect, or behavior (Eagly & Chaiken, 1993; Fishbein & Ajzen, 1975).

Consistent with this traditional approach, in marketing we have viewed brand attitudes as consisting of a composite of *cognitive* inputs, that is, a constellation of attributes or product benefits that are associated with the brand. Similarly, attitudes toward products and services have been viewed as being based on features, beliefs, or benefits. Often, measurement of product or brand attitudes has been based on traditional multi-attribute attitude theories that view attitudes as a function of salient favorable or unfavorable beliefs about the brand (Ajzen & Fishbein, 1980).

The Role of Exemplars in Attitude Formation

Exemplars have been increasingly recognized as an important type of category representation that are useful for making judgments relevant to a category (Boush, 1993; Dawar, 1996; John, Loken, & Joiner, 1998; Loken & John, 1993; Medin, Altom, & Murphy, 1984; Mussweiler & Strack, 2000; Nosofsky, Clark, & Shin, 1989; Sia et al., 1997; Smith & Zarate, 1992). In fact, recent research has demonstrated that exemplars are likely to be activated when people are reporting their attitudes toward a social category (as compared to when completing a semantic definition task, Sia et al., 1997). Although people use category exemplars to assess a variety of social category attitudes (Sia et al., 1999), the systematic effects of evaluations of the multiple existing exemplars in a category on category attitudes have not been explored. We propose that people's attitudes towards certain groups of products or services (e.g., American Express products, charity organizations, candy bars) should be related to a composite index of evaluations of specific exemplars of the group, a relationship we examine in this research.

Which Exemplars Predict Category Attitudes?

Several issues were considered in developing a composite index of exemplars. Our first consideration involved deciding which existing exemplars to include in the index. Within a multiple-exemplar criterion, certain category exemplars may be more predictive of category attitudes than other exemplars. Typical category exemplars, more than atypical ones, more easily come to mind (Mervis & Rosch, 1981), yield more rapid responses to identification tasks involving the category (Mervis & Rosch, 1981), and are more likely to influence attitude-behavior relationships (Lord, Desforges, Ramsey, Trezza, & Lepper, 1991) and category judgments (Rothbart & Lewis, 1988; Smith & Zarate, 1992). Research also confirms that a task that activates typical exemplars of a category for attitude assessment often yields activation of more than one exemplar (Sia et al., 1999). Therefore, because more typical exemplars are more central to the category representation, we would expect a composite index of more typical exemplars to predict attitudes better than a composite index of less typical exemplars.

How Should Exemplars be Combined?

A second consideration in developing a multi-exemplar measure of attitude was determining how the exemplars should be combined into a composite index. Although a variety of combinatorial approaches might be used, we have selected a multi-exemplar approach that is analogous to traditional multi-attribute, or expectancy-value, approaches. In our case,

two subjective ratings are multiplied together for each exemplar, and the products are summed across all relevant (salient or typical) exemplars. (In multi-attribute models, two subjective ratings are multiplied together for each attribute, and the products are summed across all salient [cf. Fishbein & Ajzen, 1975] or important [cf. Wilkie & Pessimier, 1973] attributes.) In the context of our research, the two subjective ratings for our measure include (a) an evaluation of the exemplar, in terms of perceived positivity–negativity (i.e., how favorable or unfavorable does the person feel about the exemplar), and (b) the perceived typicality of the exemplar (i.e., how typical is the exemplar as a member of the category). This index weights the impact that an individual’s evaluation of a specific exemplar has on overall category attitudes by that exemplar’s typicality. Because typical exemplars are more central to category representations our composite index allows the most typical exemplars to have a greater impact on the overall category evaluation.

In summary, the first objective of this research is to empirically validate that a composite index of attitudes toward category exemplars is related to overall category attitudes, in the same way that a composite index of salient beliefs about the category is related to overall category attitudes. Studies 1, 2, and 3 examine these relationships. The global measure of category attitudes, with which the composite index is correlated and evaluated against, is based on evaluative semantic differential scales (just as in the multi-attribute literature, where a multi-attribute index is correlated with an evaluative semantic differential measure of attitude).

H1a: A composite index of exemplars, in which an evaluation of each exemplar is weighted by the exemplar’s perceived typicality, will be related to a global semantic differential measure of attitude.

H1b: A composite index of exemplars, in which an evaluation of each exemplar is weighted by the exemplar’s perceived typicality, will be more strongly related to the overall category attitude when the most typical exemplars are included than when the least typical exemplars are included in the index.

EXEMPLAR COMPOSITE STABILITY

The second objective of this research is to explore factors that may affect the stability and consistency of the proposed attitudinal inputs (i.e., exemplar evaluations and typicality) and the resulting effects on attitude–multi-exemplar index consistency. Past research suggested that people’s representations become more stable when they engaged in extensive elaboration of information (Abelson, 1988; Petty & Cacioppo, 1986; Petty, Haugtvedt, & Smith, 1995). In Studies 2 and 3, we examine whether factors that increase consumers’ elaboration of exemplar information will increase the strength of the

multi-exemplar index’s relationship with category attitudes, relative to when those factors are absent. We increase elaboration of the exemplars by asking study participants to describe ways in which exemplars are similar to one another. Of course, it has also been demonstrated, in a variety of contexts, that temporarily accessible stimuli may also play a role in cognitive processes (e.g., Bodenhausen et al., 1995; Higgins & King, 1981; Sia et al., 1997). Exemplars may become more strongly related to the category attitude if they are made more accessible (e.g., through recent activation or elaboration). As a result, we expect that participants exposed to the elaboration manipulation will show stronger relationships (i.e., correlations) between the composite measure of exemplars and global attitudes than participants who are not exposed to the manipulation.

In Studies 1 and 3, we also examine individual difference variables (familiarity and experience with the category), which have been shown to influence both category stability and the relationship between a category and its exemplars (e.g., Alba & Hutchinson, 1987; Barsalou, 1992; John et al., 1998; Lord et al., 1991). Individuals with greater experience and familiarity are thought to possess rich, well-organized knowledge structures (Alba & Hutchinson, 1987), and more stable cognitive structures (cf. Wanke, Bless, & Schwarz, 1998). Our objective is to determine whether prior elaboration of the category members (exemplars), as indicated by greater familiarity and experience with exemplars, enhances the consistency between a multi-exemplar measure of attitude and the overall category attitude measure.

H2a: Correlations between the multi-exemplar composite index and global category attitudes will be greater for participants who initially elaborate on the exemplars than for those who do not.

H2b: Correlations between the multi-exemplar composite index and global category attitudes will be greater for participants who have higher (rather than lower) levels of familiarity and experience with the category.

Do Exemplars Determine Category Attitudes?

Although this research does not directly test for causal relationships between variables, we explore factors that may, in fact, imply a causal relationship between category attitudes and exemplars underlying the category (cf. Sia et al., 1999). Whereas, the traditional multi-attribute approaches to attitude formation generally assume that beliefs underlie (and determine) attitudes, it is unclear whether exemplars have the same effect. Are consumers’ attitudes toward a brand name (e.g., Kraft) determined by favorable or unfavorable beliefs associated with the brand name (e.g., high quality, cheesy, convenient to use), or are they determined by consumers’

evaluations of the salient set of (Kraft) branded products (e.g., Kraft macaroni and cheese, Kraft singles, etc.)? Prior research does seem to argue that exemplars can be determinant inputs to attitudes, at least in some cases, since exemplars are activated when individuals assess social attitudes (Sia et al., 1997). And, certainly, previous research has demonstrated that other inputs can be used when attitudes are assessed; for example, attributes (as demonstrated by research on multi-attribute models) and automatic affective responses (e.g., Bargh, 1996). If exemplars are the primary determinants of category attitudes, then it seems likely they would be chronically accessible or salient to the consumer regardless of whether exemplar elaboration has just occurred. If exemplars are predictive, but not always determinant, attitudinal inputs, then they may be quite susceptible to temporary accessibility or changes in salience as a result of an elaboration manipulation, which in turn should increase the strength of the correlation between global attitudes and the multi-exemplar index (cf. Sia et al., 1997).

In Studies 2 and 3, we explore whether correlations between the multi-exemplar composite index and global attitudes are more or less susceptible to the effects of an elaboration task in which individuals are asked to compare the similarities of the exemplars. In addition, we examine if overall category attitude changes (as a result of the elaboration manipulation) are accompanied by changes in the multi-exemplar index. If exemplars were determinant of category attitudes we would expect both constructs to change concomitantly.

In summary, Studies 1, 2, and 3 examine the relationship between a multi-exemplar index and category attitudes (H1a) across diverse types of categories, and Studies 1 and 2 further examine whether typical (more than atypical) exemplars predict attitudes (H1b). Studies 2 and 3 examine whether increasing the accessibility of exemplars through elaboration increases their predictive power (H2a), and Studies 1 and 3 examine whether individuals who are familiar and experienced with a category (presumably having chronically accessible exemplar information) report greater consistency between a multi-exemplar index and category attitudes (H2b). Throughout the research, we have included measures of the more traditional multi-attribute index, for comparison purposes.

STUDY 1

Method

Procedure and Measures. The two categories selected as stimuli in Study 1, charity organizations and candy bars, were selected on the basis of several factors. First, both categories are known and somewhat familiar to respondents, although respondents are probably less familiar with charity organizations than with candy bars. Second, the selected cate-

gories represent two different types of categories (one is a product category and one is a service category). Third, both are categories that have multiple exemplars that vary in typicality with respect to the category.

For the charity organization category, participants completed one of two questionnaires. The first group of respondents ($n = 80$) completed a survey designed to provide measures for the multi-exemplar index. The second group ($n = 83$) completed a survey with measures for the multi-attribute measure. This between-subjects design provided a measure of the components of each composite index (exemplar or attribute), uncontaminated by responses to the other composite index. We took a different approach with the candy bar category: Respondents completed a single questionnaire with measures for both the multi-exemplar and multi-attribute indexes of attitudes. In this case we had respondents provide information about both multi-exemplar and multi-attribute components so we could examine the relationship between both indexes and category attitudes simultaneously in a regression analysis.

The key dependent measures and algebraic formulas are summarized in Appendix 1, and the specific exemplars and salient beliefs used are shown in Appendixes 2 and 3. Exemplars were chosen on the basis of pretest measures, and included the most typical exemplars in each category as well as other exemplars that ranged in their typicality in each category. As shown in Appendix 1, the typicality of each exemplar was measured on 7-point typicality scales. Exemplar evaluations for the charity category were measured on two, averaged, 7-point evaluative scales, also shown in Appendix 1. For each individual, an exemplar's typicality rating (recoded from -3 to $+3$) was multiplied by its corresponding evaluation rating (also recoded from -3 to $+3$), and the products were summed across all exemplars as a multiple-exemplar index of attitude (see Appendix 1). To more completely examine the exemplar-category attitude relationship, other indexes were developed, in which only the seven most typical, or the five most typical, exemplars were included in the composite. In subsequent discussions, we refer to these indexes as the full-exemplar, seven-exemplar, and five-exemplar composite indexes. Finally, an index of the five least typical exemplars was computed. We included five, rather than seven, of the least typical exemplars in this index to avoid an overlap in exemplars used in the five-most-typical and the five-least-typical exemplar indexes.

To obtain the multi-attribute measure of attitude, salient attribute beliefs and evaluations associated with each category were measured (based on results of an elicitation pretest with an independent sample, as specified by Ajzen & Fishbein, 1980), shown in Appendix 3. Category attribute beliefs were measured on 7-point likelihood scales, and attribute evaluations were measured on 7-point good-bad scales. For each individual, each attribute belief (recoded from -3 to $+3$) was multiplied by its corresponding attribute evaluation (recoded from -3 to $+3$) and the products were summed

across the set of salient beliefs as a multi-attribute index of attitude. This type of multi-attribute measure has been the prototype measure of attitude in consumer research (cf. Hoyer & MacInnis, 1997).

Finally, the global attitude measure for the charities category was measured on four 7-point semantic differential scales (see Appendix 1), with one eliminated on the basis of scale analyses. The remaining three items were combined and averaged for the global attitude measure (coefficient $\alpha = .80$). In the candy bar category, five 7-point semantic differential scales were averaged to measure global attitudes (coefficient $\alpha = .90$), also shown in Appendix 1.

Familiarity and Experience. In the charities survey, respondents reported on how familiar and how much experience they had with each of the individual exemplars. Familiarity with each of the individual charities was measured using a 7-point scale ranging from 1 (*not at all familiar*) to 7 (*extremely familiar*). Experience with each exemplar was measured using a 7-point scale ranging from 1 (*have donated no money or time*) to 7 (*have donated lots of money or time*). Responses to each of the eleven exemplars were summed and a median split was used to create high and low familiarity and experience groups.

Participants

Participants in the study were 233 male and female undergraduate students, 163 who completed the charity organization surveys and 70 who completed the candy bar survey, who participated as partial fulfillment of requirements for an introductory marketing course.

Results

The data support the first hypothesis (H1a), that the multi-exemplar index is significantly related to global category attitudes, as shown by Pearson correlations reported in Table 1. For both charities and candy bar stimuli, and regardless of whether the multi-exemplar index included the full eleven exemplars, the seven most typical, or the five most typical exemplars, correlations of these exemplar indexes with global attitudes were all significant ($p < .001$) and moderate in size. The data suggest efficiencies in using five to seven of the most typical exemplars, since the correlations were not significantly lower (z 's $< 1^1$) when using smaller numbers of exemplars (i.e., 11 vs. 7 exemplars; 11 vs. 5 ex-

emplars). In support of hypothesis (H1b), the relationship between the multi-exemplar index and global attitudes, using the five least typical exemplars in the composite measure, was lower than the same relationship using the five most typical exemplars (i.e., a drop from $r = .40$ to $r = .25$, for the charities data and from $r = .59$ to $r = .31$ for the candy bar data); however, this drop was significant only for the candy bar stimuli (z 's = 1.07, *ns*, for the charities stimuli, and 2.06, $p < .05$, for the candy bar stimuli).

Three additional findings in Study 1 were noteworthy (see Table 1). First, the multi-attribute measure was, unsurprisingly and consistent with prior research, strongly related ($p < .001$) to global attitudes. Second, while the multi-attribute index appears to be superior to the three multi-exemplar indexes in predicting global category attitudes for the charities data, the three comparisons (for full, seven, and five exemplars) fell below conventional significance levels (z 's = 1.79, 1.94, and 1.79, respectively), and the differences for the candy bar data were nonsignificant (all z 's < 1). Third, for the candy bar data, the global measure of attitude, regressed on the two composite indexes (the multi-attribute index and the full-exemplar index), yielded a significant overall regression ($p < .001$), with highly significant regression coefficients ($p < .001$) for both composite indexes. Thus, at least for the candy bar category, the multi-exemplar index contributed independently (over and above the contribution of the multi-attribute index) to global attitudes.

TABLE 1
Studies 1 and 2: Correlation and Regression Analysis—
Multi-Exemplar Index, Multi-Attribute Index, Category Attitudes

Correlations	Charity		
	Candy Bars	Organizations (Study 1)	Organizations (Study 2)
Multi-exemplar index and global attitudes			
Full-exemplar index	.58***	.40***	.57***
7-exemplar index	.63***	.38***	.57***
5-exemplar index	.59***	.40***	.61***
Multi-attribute index and global attitudes	.56***	.61***	.68***
Multiple Regressions			
R ²	.50***	N/A ^a	.48***
Regression coefficients			
Multi-attribute index	.35***	N/A ^a	.45**
Full-exemplar index	.48***	N/A ^a	.34*

^aInformation is not available since, in Study 1, different groups rated exemplars and attributes.

* $p < .05$. ** $p < .01$. *** $p < .001$.

¹The z -score formula for testing differences in size of two correlations can be found in Cohen and Cohen (1983).

Familiarity and experience. Consistent with Hypothesis (H2b), and shown in Table 2, the multi-exemplar index was closely related to category attitudes for the high familiarity but not the low familiarity respondents (and for the 7-exemplar index the difference between high and low familiarity groups was significant, $z = 2.16$, $p < .05$). Similarly, the multi-exemplar indexes were more strongly related to category attitudes for high than for low experience respondents ($z = 2.47$, $p < .05$, for the 7-exemplar index).

Data in Table 2 also show that, in contrast to the findings for the multi-exemplar indexes, the relationship between the multi-attribute index and category attitudes was relatively unaffected by individuals' level of familiarity ($z < 1$) or experience ($z < 1$).

Discussion

The results of the first study support Hypothesis (H1a) and provide partial support for Hypotheses (H1b) and (H2b). The data confirm that a composite score of typical exemplar evaluations predicts overall category attitudes. In fact, the correlations between overall category evaluation (global attitudes) and the exemplar composite measures were comparable to predictions of overall category attitudes by a composite score of salient attribute beliefs.

An index consisting of the most typical exemplars was more strongly related to overall category evaluations than an index consisting of the least typical exemplars, although the difference was significant in only one of the two categories tested. A regression analysis showed that the multi-exemplar index provided non-redundant information about global category attitudes (when considered in combination with a multi-attribute index). Finally, it appeared that familiarity and experience with category exemplars (i.e., prior elaboration) strengthened the relationship between the multi-exemplar index and category attitudes while not affecting the

relationship between the more traditional multi-attribute index and overall category attitudes.

STUDY 2

Although the charity data from Study 1 yielded interesting effects for familiarity and experience, these individual difference variables were not manipulated factors. In Study 2, we examine the effects of experimentally manipulating individuals' elaboration about exemplars in the charity organization category on the relationship between the multi-exemplar index and global category attitudes. A between-subjects randomized experiment was conducted in which participants received one of two levels of an elaboration manipulation. The experimental group received a list of nine charity organizations and was asked to think of "the ways in which these charity organizations are similar" and to write down up to five different ways in which the organizations were similar. The control group received no elaboration task.

Measures

Following the elaboration manipulation, participants completed (a) survey measures of global attitudes (i.e., attitudes toward charity organizations), (b) measures of exemplar typicality and exemplar evaluations for eleven charities, including the nine used in the elaboration task, and (c) measures of seven category attribute beliefs and seven attribute evaluations. The control group completed these same measures and in the same order. All measures were the same as those used in the Study 1 charity organization questionnaires.

We measured global category attitudes at two points in the survey, immediately following the elaboration task, and again, following both sets of multi-exemplar and multi-attribute composite measures. Since the two attitude measures did not yield significantly different findings in subsequent analyses, and since the one that appeared first may be a better indicator of the impact of the elaboration task, that is, is less "contaminated" by the subsequent measures, we used only the first measure (coefficient $\alpha = .87$) in reporting data for Study 2.

Participants were 89 undergraduate marketing students who participated in the study as part of a class research requirement.

Results

Composite scores. Exemplar composite and attribute composite scores were computed in the same manner described for Study 1. First, to examine whether the results of Study 1 were replicated, we report results for only the control condition, shown in Table 1. The data replicate Study 1 and

TABLE 2

Study 1: Correlations With Global Category Attitudes, by Familiarity and Experience With Exemplars of Charity Organizations

<i>Multi-Exemplar Index and Global Attitudes</i>	<i>Full-Exemplar Index</i>	<i>7-Exemplar Index</i>	<i>Multi-Attribute Index</i>
Familiarity			
High	.51***	.57***	.54***
Low	.21	.13	.65***
Experience			
High	.60***	.62***	.64***
Low	.19	.14	.58***

*** $p < .001$.

support H1a, that the multi-exemplar index was moderately and significantly correlated ($p < .001$) with global category attitude. This result occurred for all three exemplar indexes. As in Study 1, the data suggest efficiencies in using five to seven of the most typical exemplars, since the correlations were not significantly lower when using smaller numbers of exemplars (z 's < 1). The correlation using the five-least-typical exemplars was lower than the correlation using the five-most-typical, although, as in Study 1, not significantly so (r 's = .46 and .61, $z < 1$).

In the control condition, the multi-attribute measure slightly outperformed all three multi-exemplar measures in predicting attitudes, although not significantly so (all z 's < 1). The overall multiple regression, predicting category attitudes from the 11-exemplar and multi-attribute composite indexes, was significant ($p < .01$), with significant ($p < .05$) regression weights for both the multi-attribute and 11-exemplar indexes (see Table 1).

Elaboration effects. In evaluating the effects of the exemplar elaboration manipulation, we chose the exemplar index that incorporated the seven most typical exemplars included in the similarities task. We did not include all eleven for this analysis since, from a theory standpoint, we have argued in favor of including only the most salient or typical exemplars in the set (compare to multi-attribute discussions, e.g., Fishbein & Ajzen, 1981). Results support Hypothesis (H2a). The correlation between global attitudes and the multi-exemplar measure was significantly higher in the similarity elaboration condition ($r = .80$) than in the control condition ($r = .57$), $z = 2.05$, $p < .05$. Although elaborating on similarities among the individual charity organizations (i.e., the category exemplars) decreased the correlation between the multi-attribute and global attitude indexes ($r = .45$) relative to the control group ($r = .68$), the decrease was not significant ($z = 1.57$, $p > .10$).

Changes in attitudes. Next, we examine whether overall category attitude changes (as a result of the elaboration manipulation) are accompanied by changes in the multi-exemplar index.

Relative to the control group, participants in the similarities condition reported more favorable global category attitudes, $M = 6.04$ versus 5.68 , $t(87) = 1.98$, $p = .05$, as well as a modest increase in the multi-attribute attitudes, $M = 19.29$ versus 13.07 , $t(87) = 1.79$, $p = .08$. However, the multi-exemplar attitude mean was not significantly different for the similarities and control groups, $M = 63.16$ versus 61.95 , $t(87) < 1$, for the five-most-typical index, and $M = 83.49$ versus 82.88 , $t(87) < 1$, for the seven-most-typical index). These data, while merely suggestive, imply that exemplar evaluations (as summarized in the multi-exemplar index) may be less likely than category attributes (as summarized in the multi-attribute in-

dex), to mirror changes in global category attitudes, and therefore less likely to underlie global category attitudes. Alternatively, the aspects of global attitudes that changed may have been more likely to be those reflected in the attribute than the exemplar composite index.

Discussion

Results of Study 2 provide further support for the relationship between a multi-exemplar composite measure and overall category attitudes. Consistent with Study 1, there was a significant correlation between the multi-exemplar index and overall category attitudes. Also as expected, elaborating on exemplars increased people's reliance on them in determining category attitudes. However, an examination of overall category attitudes, multi-exemplar, and multi-attribute means seemed to suggest that exemplar evaluations may be less likely to mirror changes in category attitudes than the traditional attribute-based measure. Although exemplar elaboration affected mean category attitudes and the multi-attribute index, it had no impact on the multi-exemplar index.

STUDY 3

The primary objective of Study 3 was to replicate the findings of Studies 1 and 2 for a brand category. American Express was the brand name selected, since it has a strong brand image and sells a variety of products and services varying in typicality.

Procedure

Participants were randomly assigned to either the experimental or control condition and completed a written questionnaire. In all conditions, participants were first asked to complete measures of familiarity and experience for each of six American Express exemplars (existing products and services). Familiarity and experience measures appeared at the start of the survey in Study 3 in order to eliminate potential influences of the elaboration manipulation on perceived familiarity and experience.

Next, participants in the experimental conditions completed an open-ended question that asked them to list the similarities between the six exemplars, using the same procedure described in Study 2. The control condition did not complete an open-ended elaboration question.

Next, survey questions were completed in the following order:

1. Multi-exemplar measures (evaluations of each of the six American Express exemplars and the perceived typicality of each exemplar).
2. Global category attitudes toward American Express products and services in general.

3. Multi-attribute measures (seven attribute beliefs regarding American Express products and services in general and evaluations of these seven attributes).
4. A second measure of global category attitudes toward American Express products and services.

Measures

Familiarity with each of the six American Express products or services was measured on 7-point scales ranging from 1 (*not at all familiar*) to 7 (*extremely familiar*). Experience with each exemplar was measured on 7-point scales ranging from 1 (*no experience at all*) to 7 (*great deal of experience*).

The measures for the multi-exemplar index (typicality and exemplar evaluation) were the same as in Studies 1 and 2, but included only six exemplars (the same ones used in the elaboration manipulation), as shown in Appendix 2. The brand category's six most typical exemplars were determined in an open-ended pretest using an independent sample of respondents. Students, similar to those participating in the main study, were asked to list the products or services that "come to mind" when they think of the American Express brand name. In Study 3, we included only these six exemplars, and did not examine the relative influence of number and typicality of exemplars included in the index as in Studies 1 and 2.

Multi-attribute measures included seven attribute beliefs and seven attribute evaluations. Salient attributes, shown in Appendix 3, were based on results of a pretest in which respondents were asked to list the positive and negative attributes or characteristics of American Express products and services "that come to mind" (cf. Fishbein & Ajzen, 1975). The attribute belief and attribute evaluation measures used the same scale formats as described in Studies 1 and 2. The multi-attribute and multi-exemplar indexes were computed in the same manner as in Studies 1 and 2.

The global category attitude toward "American Express products and services" was assessed on the same scales discussed in Studies 1 and 2. As in Studies 1 and 2, three of the four attitude items were summed and averaged (coefficient = .92, for the first global attitude measures, and .94 for the second global attitude measure that appeared later in the survey).

Participants were 79 undergraduate marketing students who completed the survey as part of a marketing course requirement.

Results

Composite index performance. In the control condition, we examined the overall relationship of the two composite indexes with global category attitudes, using only the global attitude measure that followed the appropriate composite measures. That is, in computing the correlation between the multi-attribute index and global category attitudes,

we used the global attitude measures that immediately followed the multi-attribute measures. In computing the correlation between the multi-exemplar index and global attitudes, we used the global attitude measures that immediately followed the multi-exemplar measures.

Consistent with Studies 1 and 2 and Hypothesis (H1a), results showed that the multi-exemplar index was significantly correlated with global attitudes ($r = .52, p < .01$). However, in this study, the multi-attribute index was only marginally related to global attitudes ($r = .35, p < .10$). The difference between these two correlations was not significant ($z < 1$).

The overall multiple regression, predicting category attitudes from the 6-exemplar and multi-attribute composite indexes, was significant ($R^2 = .27$), with a significant regression weight for the 6-exemplar index ($.42, p < .05$) but not the multi-attribute index ($.18, p > .05$). For this particular brand category, a multi-exemplar index was more closely related to overall brand attitudes than was the more traditional multi-attribute index.

Effects of similarities elaboration. Relative to the no-elaboration control group, asking people to elaborate on the exemplars (i.e., by listing similarities between the six American Express products) increased the correlation between the multi-exemplar index and global attitudes ($r = .83$ for the similarities condition vs. $r = .52$ for the control condition). This difference between the control and the similarities conditions was significant ($z = 2.78, p < .01$), as in Study 2. The correlation between the multi-attribute index and global category attitudes did not significantly change across the two conditions, although in both cases the correlation was nonsignificant ($r = .30, ns$, and $r = .35, ns$, for similarities and control conditions, respectively).

Familiarity and experience. As described in Study 1, a median split was performed on both sets of summed scores, and the sample was divided into high and low familiarity groups and into high and low experience groups. Contrary to expectations, correlations between the multi-exemplar index and global attitudes were not significantly different for high ($r = .77$) and low ($r = .56$) experience groups ($z = 1.34, p > .10$), and were not different for high ($r = .70$) or low ($r = .61$) familiarity groups ($z < 1$). Although the results were directionally consistent, prior elaboration (as operationalized by familiarity and experience with the brand's exemplars) did not affect the relationship between the multi-exemplar index and overall brand attitudes.

Changes in attitude and composite indexes. Mean changes as a function of the elaboration manipulation for category attitudes, for the multi-attribute index, and for the multi-exemplar index, were all nonsignificant ($p > .05$). There-

fore, in Study 3, implications could not be drawn about causality relating to concomitant changes in constructs.

Discussion

Results from Study 3 replicate Studies 1 and 2 in supporting the relationship between overall category attitudes and the category's exemplars, this time in the context of the brand category American Express. As expected, having individuals elaborate on the exemplars in the brand category further increased the correlation of the multi-exemplar measure with global category attitudes but did not significantly impact the multi-attribute-global category attitudes correlation. Contrary to expectations, individuals' familiarity and experience with American Express did not impact the relationship between the multi-exemplar index and brand category attitudes.

GENERAL DISCUSSION

Predicting Attitudes From Exemplars

The primary contribution of the research reported here is the demonstration of a technique for estimating attitudes on the basis of category exemplars. We tested the viability of using the multi-exemplar composite index, for a variety of categories, including a brand category (American Express), a product category (candy bars), and a social service category (charity organizations). Regardless of the type of category tested, the multi-exemplar index performed quite well as a predictor of global category attitude, and compared well with the widely used multi-attribute attitude measure. Multiple regression analyses, predicting global attitudes on the basis of both the multi-exemplar and multi-attribute indexes, were consistent with the notion that the multi-exemplar index contributed significantly and yielded information independent of the multi-attribute component.

Although an index composed of typical exemplars tended to be more strongly related to global category attitudes than one composed of atypical exemplars, the differences were not always significant. Perhaps in the categories tested, even atypical members of the category, simply because they are existing members of the category, performed reasonably well in predicting attitudes. Our data suggest that this may be the case. The typicality means for the "atypical" individual exemplars in the categories used in these studies were generally around the scale midpoint (see Appendix 2). It is possible that most members of these types of categories (brand and product categories, charity organizations) are seen as being at least moderately typical of the category, simply because their membership is a given. Alternatively, it is possible that either typical or atypical exemplars can provide useful information about attitudes towards a category, due to the multiplicative feature of the exemplar index. For example, a category could

have an overall positive evaluation if all of its typical exemplars were positively evaluated and/or all of its atypical exemplars were negatively evaluated. Post hoc analyses of Study 2 data indicate that correlations between global attitude and the multi-exemplar index dropped to nonsignificance ($r = .20$) when the exemplar evaluations were not weighted by typicality (i.e., the typicality measures were omitted from the calculation of the index). These data suggest that weighting each exemplar by typicality improves the predictive ability of the index. Thus, while it appears that both typical and atypical exemplars can be included in the index (as long as items are weighted by typicality), we would argue that the advantage of using typical rather than atypical exemplars in the composite index is not only suggestive empirically but is also theoretical (i.e., typical members more strongly represent the category).

Exemplar Accessibility and Use

The relationship between the multi-exemplar index and global attitudes increased when respondents initially elaborated on the similarities of the exemplars (Studies 2 and 3). On the one hand, this finding may suggest that, for the categories tested, exemplar information may not have been chronically accessible to respondents (but was made accessible through an elaboration task). On the other hand, it may simply be the case that almost any type of information is vulnerable to effects of temporary accessibility.

We do know that the correlations between the multi-attribute index and attitudes were not significantly reduced as a function of temporary accessibility of exemplars (Studies 2 and 3). We also know that changes in global attitudes were mirrored by changes in the multi-attribute (but not the multi-exemplar) index (Study 2). These data on elaboration, in total, suggest that exemplars may be more distal determinants (than attribute beliefs) of category attitudes. Additional research is needed to examine more definitively the causal effects of exemplars on category attitudes. Although research by Sia et al. (1997) argues persuasively that exemplars are accessible at the time of attitude assessment, it remains unclear the conditions under which exemplar accessibility is related to attitudinal input. The nature of initial learning of a category (e.g., through product experience vs. through advertising), or the manner in which category attitudes have been recently retrieved (e.g., through exemplar prompts vs. attribute or other prompts), are examples of factors that may impact whether exemplars or attributes are proximal determinants for attitudes. These findings are consistent with recent research that suggests certain attitudes are relatively temporary constructions that are heavily influenced by information that is currently available (e.g., Wilson & Hodges, 1992). Future research should continue to examine under what conditions individuals rely on different bases when assessing their brand, product, and other marketing-relevant activities.

Familiarity and Experience

In Study 1, we found that (for charity organizations) high familiarity and high experience groups yielded stronger relationships between the multi-exemplar index and category attitudes. The results from Study 3 (for the American Express category) were less impressive. Perhaps our sample was fairly homogeneous with respect to their familiarity and experience with American Express products (i.e., all undergraduate college students) and lacked sufficient familiarity to yield elaboration effects. Alternatively, American Express may be a brand category that is characterized by brand attitudes that are based on individual products. If American Express marketing communications have made the typical individual products (e.g., credit cards and travelers checks) in their brand portfolio the focus of their efforts, and as a result highly accessible, it might be that most consumers' attitudes are based on these exemplars, regardless of familiarity and experience with other American Express products. In any event, further research is needed on familiarity effects, perhaps incorporating a number of types of categories that vary systematically on factors relating to exemplar set, familiarity, and/or type of category.

Conclusions and Implications for Consumer Attitude Measurement

Although a great deal of attention has been devoted to understanding the cognitive, affective, and behavioral representations of attitudes, and a composite of any of these three components has been linked to attitudes, the representations of exemplars underlying category attitudes has been surprisingly ignored by attitude researchers. Adding to existing research which shows that exemplars are, in fact, activated during attitude assessment (Sia et al., 1999), our research is the first demonstration that a summed score of exemplar evaluations weighted by exemplar typicality, across typical exemplars, can predict attitudes toward the category.

However, much could be gained by assessing how the particular category or the types of exemplars under consideration moderate the impact of exemplars on attitudes. The nature of the category, including its size, breadth, the manner in which it was originally formed (e.g., by exemplar experience versus through attribute information), or whether the category is principally taxonomic or goal-derived, may affect the degree to which a multi-exemplar index predicts category attitudes. It may be that there are differences in the roles exemplars play in influencing brand attitudes for brand categories that have different "promotional histories". A brand that originally, and for a long period of time, promoted itself at the brand level rather than in terms of individual products, may have brand attitudes that are strongly linked to the category label (i.e., the brand), and that are based on the attributes associated with the brand in general. In contrast, a brand that has always been associated

with multiple products (e.g., Healthy Choice), and that has run promotions focusing on these individual products, may be more likely to have a brand attitude that is based on a subset of typical exemplars. In addition, the types of exemplars that are examined, such as whether the exemplars are specific products (e.g., Healthy Choice Chicken Noodle Soup) or whether the exemplars are subcategories (e.g., Healthy Choice soups), may also impact category attitudes differently.

For many of the categories that marketers are interested in (product categories; goal-derived categories; brand categories), consumers are likely to have knowledge of a fairly large number of exemplars. Our research suggests that, where category exemplars are known and salient, category evaluations may be determined by the consumer's evaluations of the individual exemplars (products, brands, etc.). A multi-exemplar composite that combines information about exemplar evaluations and exemplar typicality may, in these cases, be an appropriate measure of overall category attitudes and may present an alternative attitude measure, complementing the traditional multi-attribute measure. Just as multi-attribute models allow specific marketing communication programs to be developed to increase category attitudes (e.g., by increasing consumers' beliefs about an important attribute), the very same functional characteristics may hold for the multi-exemplar measure. Using this index, marketers can develop ads to increase consumers' evaluations of the "prototypical" product in their brand category with the knowledge that this will increase overall brand category attitudes. Alternatively, marketers can try to convince consumers that a positively evaluated product should be seen as more typical of the brand than previously thought, again knowing that this will change overall brand categories. Whenever consumers are likely to think about a category in terms of its individual elements (exemplars), a multi-exemplar index may be an important tool for predicting and understanding category evaluations.

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APPENDIX 1

Studies 1, 2, and 3 Key Dependent Measures and Algebraic Formulas Used to Compute Multi-Exemplar and Multi-Attribute Indexes

Multi-Exemplar Index

$$\text{Formula: } \sum_{i=1}^N EE_i \cdot \text{typ}_i$$

where: EE = Exemplar i's Evaluation
 typ = Typicality of exemplar i
 N = number of exemplars in the composite

*Measures (Numbered from 7 to 1)
and Scale Endpoints*

	<i>Candy bars (Study 1)</i>	<i>Charities (Study 1,2) & American Express (Study 3)</i>
Exemplar Evaluation (e.g., "Snickers candy bars are ...")	very good — very bad	good — bad favorable — unfavorable
Typicality of Exemplar (e.g., "Snickers candy bars are ... of candy bars")	very typical — not at all typical	extremely typical — not at all typical

Multi-Attribute Index

Formula: $\sum_{i=1}^N be_i$

where: b = belief that attitude object has attribute i
e = evaluation of attribute i
N = number of salient beliefs

*Measures (Numbered from 7 to 1)
and Scale Endpoints*

	<i>Candy bars (Study 1)</i>	<i>Charities (Study 1,2) & American Express (Study 3)</i>
Belief about the attribute (e.g., "Snickers candy bars are chocolate")	very likely — very unlikely	very likely — very unlikely
Evaluation of attribute (e.g., "Being chocolate is ...")	good — bad	good — bad

Global Category Attitudes

*Measures (Numbered from 7 to 1)
and Scale Endpoints*

	<i>Candy bars (Study 1)</i>	<i>Charities (Study 1,2) & American Express (Study 3)</i>
Category attitude (e.g., "Candy bars are ...")	satisfying — unsatisfying	good — bad
	pleasant — unpleasant	favorable — unfavorable
	enjoyable — unenjoyable	positive — negative (omitted)
	good — bad	satisfactory — unsatisfactory
	enjoyable — unenjoyable	

APPENDIX 2

Studies 1, 2, and 3: Exemplars Used in Computing Multi-Exemplar Indexes, by Mean Typicality Score

	<i>Mean Typicality</i>	
	Study 1	Study 2
Studies 1 and 2: Charity Organizations		
American Red Cross	6.30	6.18
Salvation Army	6.04	5.83
American Heart Association	5.90	5.53
American Cancer Society	5.89	5.40
Minneapolis Homeless Shelter	5.39	5.43
Harriet Tubman Shelter for Women	4.66	5.15
Minnesota Association for Cancer Patients	4.66	4.93
YMCA	4.22	4.39
Greenpeace	3.80	3.88
Amnesty International	3.77	4.13
Minneapolis Day Care Association	3.35	4.39
Study 1: Candy bars		
Snickers	6.07	
Hershey's	5.89	
Milky Way	5.67	
Nestle's Crunch	5.37	
Three Musketeers	5.31	
Mars	5.26	
Butterfinger	4.97	
Twix	4.83	
Almond Joy	4.74	
Heath	4.44	
Carmello	4.20	
Pay Day	4.14	
Whatchamacallit	3.80	
NutRageous	3.71	
Clark	3.39	
Study 3: American Express		
Credit card	5.77	
Traveler's checks	5.74	
Gold card	5.36	
Financial services	4.28	
Corporate membership	4.16	
Mailing address services	3.58	

APPENDIX 3

Studies 1 and 2

Charity Organizations

Have beliefs compatible with my own

Are well-known
 Have strong reputations
 Represent worthwhile causes
 Have a relatively low percent of their funding used for administrative purposes
 Do not have recent scandals associated with them
 Have a great need for money or services

Study 1

Candy bars

Have caramel
 Are good tasting
 Are chocolaty

Have nuts
 Are high in calories
 Contain peanut butter

Study 3

American Express

Are prestigious
 Have wide acceptance and can be used almost anywhere
 Require that I pay off a balance every month
 Are expensive
 Are associated with corporate or business use
 Include many membership perks
 Have excellent service associated with them