

Importance, Elicitation Order, and Expectancy \times Value*

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Considerable confusion surrounds the role of importance in multiattribute attitude models. The present study tests a theoretical proposition as to how attribute importance is manifested in the expectancy-value formulation. Though not unequivocal, the results suggest that order of elicitation may be more valid than structured ratings as an indicant of attribute importance.

A large body of multiattribute studies exists in the consumer behavior literature [18, 29]. Most of these claim expectancy-value attitude models [5, 23] as their theoretical origin. However, a failure to apply the theoretical variable correspondence rules has also produced a set of conceptually different formulations [3, 19], now known as "adequacy-importance" models [12]. Briefly, this adequacy-importance approach uses various well-documented procedures [20, 21] to generate importance scores that are used to weight attribute-specific brand-satisfaction ratings. By contrast, expectancy-value theorists use salient outcomes whose associations with a brand or product purchase are weighted by each attribute evaluation. As will be shown below, each model produces different information relevant to marketing decisions. Hence, a combination of both approaches might be more useful than either considered separately.

Unfortunately, however, efforts to integrate the expectancy-value and adequacy-importance models have been clouded by opposing conceptual interpretations. For example, Cohen et al. [4] examined two studies [1, 28] whose authors had asserted that importance did not add to the predictive performance of expectancy-value models. They charged that importance was a variable never intended for use in the theories that were purportedly tested, and they rejected such tests on the grounds that importance had inadvertently been substituted for either expectancy or evaluation. Conversely, Hansen [11] interpreted this situation to mean

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that importance should be included and he described it as a variable in the expectancy-value model. The only two behavioral science studies that have addressed this issue produced mutually contradictory findings [10, 16]. More relevantly, no marketing studies have yet examined the nature of these variables empirically within a consistent theoretical framework.

Thus, a clearer specification of basic variable meanings may be a first step toward rescuing multiattribute attitude research from its present level of conceptual confusion [15, 22]. This paper attempts to specify and to preserve some distinctions among belief, evaluation, importance, and salience. All four variables are treated within the conceptual framework of expectancy-value theory since this approach has perhaps the longest history of acceptance across different disciplines [25].

Conceptual Development

Fishbein's explanation of attitude formation [9] contains one of the more popular expectancy-value models. Algebraically,

$$A_b = \sum_{i=1}^n b_i e_i,$$

where A_b is the attitude toward the performance of a specific behavior, b_i is the belief that this behavior leads toward or away from an i th outcome, e_i is the evaluation of that outcome, and n is the number of salient outcomes.

A salient outcome is one that serves as a determinant of the attitude toward a specific behavioral act. A necessary condition for saliency is that the individual associate the outcome with the act. However, not all associated outcomes are determiners or causes of A_b . Indeed, Fishbein [7] believes that only five to nine outcomes are salient and that these outcomes should be operationalized as the first elicited in open-ended free-response questioning.

By contrast, importance is of vital interest to a marketing manager who, in accord with copy research evidence [17, p. 199], must design a promotional campaign based on a highly restricted set of important outcomes. Consequently, it is not surprising that marketing researchers have often attempted to substitute importance for evaluation ratings [18, 25, 29], thereby fitting a heuristically valuable concept into the Fishbein formulation. However, such a substitution entails serious theoretical problems since importance is unipolar and indicates only intensity, evaluation is bipolar and ranges from strongly positive to strongly

negative. For example, having a large engine may be important *either* because one wants to accelerate quickly *or* because one is concerned about fuel economy. But resulting attitudes toward Cadillacs will differ sharply between the two cases. This information is simply not available from an importance measure which does not capture the goodness or badness of a large engine. Hence, the manager does not know if a large engine is important because the consumer desires it or wishes to avoid it. Importance can only enhance the model's predictive performance, therefore, in situations where outcomes are unequivocally positive or negative. Accordingly, there is ample evidence that inclusion of importance weights does not improve predictions obtained with beliefs or adequacy alone [18].

In sum, the present conceptualization contains the following distinctions and relationships. *Salience* refers to the identification of outcomes relevant for inclusion in the model. Only determiners of attitude should be included. *Importance* refers to the intensity of the items in the salient set. Salient outcomes of low intensity may be disregarded for some pragmatic purposes. *Evaluation* refers to the goodness or badness of an outcome regardless of its importance. Whereas there may be a relationship (as detailed below) between degree of goodness or badness and importance, there is no expected relationship between importance and the direction of evaluation. *Belief* refers to the connection between a salient outcome and a behavior such as a brand choice. Although frequently described as analogous to probability, which ranges from zero to one, beliefs range from a strong negative to a strong positive association. Thus, a behavior can be seen as avoiding or attaining an outcome. The multiplication of beliefs times evaluations is necessary to account for the impact of avoiding or attaining outcomes that may be viewed as bad or good. Specifically, the avoidance of a bad outcome and attainment of a good outcome should both contribute positively to overall attitude toward the behavior. This view accords with the hedonistic notion that man engages in behavior to attain pleasure and avoid pain.

Given these distinctions, one possible approach to combining the information from evaluation and importance would entail the inclusion of importance as a third multiplicative variable in the multiattribute model (expectancy \times value \times importance). However, evidence from psychology [8] and marketing [18] reveals that the addition of this third variable is more likely to lower than to improve attitude prediction [13]. Moreover, expectancy-value theorists have long maintained that importance is somehow captured in expectancy times evaluation [4]. Only

recently has a still untested conceptual argument been put forth to explain this manifestation [6]. The present study provides the missing test of this argument.

Expectancy \times Value, Importance, and Salience

In an initial attempt to examine the relationship of importance to the expectancy-value framework, Ryan and Etzel [26] found no consistent association between ranked importance and order of elicitation. Specifically, these authors followed Fishbein [7] and Hackman and Anderson [10] in defining salient attributes or outcomes as those elicited first by open-ended questions which asked the respondent to list what comes to mind when thinking of a particular act or object. Two student samples—one from Alabama ($N = 97$) and the other from Kentucky ($N = 121$)—responded to such an elicitation question for both Crest and Ultra Brite toothpaste and then ranked each elicited characteristic in order of perceived importance. The frequencies of elicitation appear in Table 1. For Crest, the median correlations (Kendall's tau) between ranked importance and order of elicitation were 0.67 for both samples. But for Ultra Brite, by contrast, these median correlations were -0.33 in Alabama and 0.00 in Kentucky. The authors interpreted this finding as suggesting that for some but not all brands salient characteristics (e.g., "sex appeal" in the case of Ultra Brite) may not be consciously or openly perceived as important, perhaps because of social sensitivity or other kinds of reactivity. Similar findings concerning respondents' unwillingness or inability to report socially sensitive critical attributes have been reported by Holbrook and Moore [14].

A contrasting perspective on the Ryan–Etzel data was provided by Fishbein [6], who focused on a complex interpretation of why importance scores fail to enhance the predictive power of the multiattribute model:

an attribute's importance might be reflected in the strength of a person's belief that the product has the attribute *and/or* in his evaluation of that attribute. Since *either* b_i *or* e_i (or both) may be at an extreme when the attribute is important, the *absolute value* of the $b_i e_i$ score should be higher when the attribute is important than when the attribute is unimportant (pp. 491–492, italics ours).

Fishbein's point that covariance between $|b_i e_i|$ and importance could reduce the predictive impact of adding importance to the model is well taken and is consistent with the previously cited empirical studies. It also suggests that, for managerial purposes, importance might be derived from beliefs and evaluations, doing away with the need to measure it directly.

Table 1 Elicited Outcomes and Frequency of Mentions

Outcomes	Crest	Ultra Brite	
	Frequency of Mentions	Outcomes	Frequency of Mentions
Decay prevention	73	Sex appeal	43
Flavor	41	White teeth	32
Color	17	Flavor	26
Leading brand	10	Fresh breath	12

Notice, however, that the Ryan–Etzal and Fishbein interpretations suggest contrasting implications for the relationship of $|b,e_i|$ to importance ratings and order-of-elicitation ranks. Fishbein's argument suggests generally that $|b,e_i|$ should be positively related to both importance and order of elicitation. By contrast, the Ryan–Etzal interpretation suggests a possible artifact operating to strengthen the association between $|b,e_i|$ and importance, and to weaken the association between $|b,e_i|$ and order of elicitation in the case of brands with socially sensitive criterial attributes. According to this logic, one might expect that the relationship between importance and $|b,e_i|$ should be stronger for Ultra Brite than for Crest; for Ultra Brite considered separately, the potentially artifactual relationship between $|b,e_i|$ and importance should be stronger than that between $|b,e_i|$ and an unobtrusive measure of order of elicitation.

In short, Fishbein's argument suggests a set of positive relationships, whereas, the Ryan–Etzal interpretation suggests differences in magnitude among the relationships. In an attempt to shed further light on these contrasting propositions, the relationships of $|b,e_i|$ to (a) order of elicitation and (b) importance were empirically investigated.

Method

The Alabama sample ($N = 97$) from the Ryan and Etzal study contained the necessary b_i , e_i , importance, and order-of-elicitation measures, and was therefore used in the present analysis. Though student subjects show a relatively normal degree of involvement with the product category (toothpaste), there is room for concern that their correlational patterns among attitude components may not be fully generalizable to the rest of the consumer population. Accordingly, a partial validity check was undertaken by correlating $\Sigma b_i e_i$ with attitude (A_b). These correlations

(Ultra Brite $r = 0.37$, $p < 0.01$, Crest $r = 0.63$, $p < 0.01$) were comparable with those obtained by other researchers although the Ultra Brite r is at the lower end of the range (perhaps because of an attempt to downplay beliefs and evaluations for sex appeal). This check provides some assurance against the possibility that the student sample might have caused a nongeneralizable result.

Order of elicitation was established for each individual by open-ended responses to a nondirective question. Importance ranks were determined idiosyncratically by asking each respondent to rank order the two sets of outcomes shown in Table 1. Following the appropriate scoring procedure [25], expectancies (b_i) were measured as Fishbeinian likelihood indices from -3 to $+3$ and evaluations (e_i) as comparable evaluative indices from -3 to $+3$. Attitude toward the behavior (A_b) was represented by a summative index composed of three evaluative semantic differential scales. Kendall's tau [27, Chap. 9] was used as an individual-level index of correlation between importance rank or order of elicitation and $|b_i e_i|$.

Results

The mean and median correlations of importance and order of elicitation with $|b_i e_i|$ are shown in Table 2. The distribution of individual-level importance correlations was negatively skewed for Ultra Brite and approximately normal for Crest, whereas, the opposite was true for order of elicitation. For Ultra Brite, the magnitude of the mean and median values suggests a positive relationship between importance and $|b_i e_i|$, but no relationship between order of elicitation and $|b_i e_i|$. Exactly the opposite result is obtained in the case of Crest.

Similar results were found using $|b_i|$ and $|e_i|$ instead of $|b_i e_i|$. These results, together with frequency distributions of the individual tau values, are available from the authors.

Discussion

The observed relationships appear to be more consistent with the argument of Ryan and Etzel than with Fishbein's reinterpretation. Contrary to Fishbein's hypothesis, there was no relationship between importance and $|b_i e_i|$ in the case of Crest. The fact that such a relationship appeared for Ultra Brite (but not for Crest) can be accounted for by the previously suggested response artifact. That is, both importance and $b_i e_i$ measures involve obtrusive comparisons among outcomes. If subjects wished to downplay Ultra Brite's "sex appeal,"

Table 2 Mean and Median Correlation of Importance and Order of Elicitation with $|b_i e_i|$

	Crest		Ultra Brite	
	Mean	Median	Mean	Median
Importance	0.06	0	0.46	0.55
Order of Elicitation	0.43	0.66	-0.02	-0.18

this artifact may have been present in *both* obtrusive measures, thereby causing the reported ranking correlations. This interpretation is further reinforced by the fact that order of elicitation, an unobtrusive indicator of salience, *did not* correlate with $|b_i e_i|$ in the case of Ultra Brite, where the spurious effect is thought to have been operating. These findings are also consistent with the previously reported correlational results between importance and order of elicitation and the validity-check correlations between A_b and $\Sigma b_i e_i$. In both cases the correlations were as expected for Crest, but not for Ultra Brite.

Perhaps the most general conclusion indicated by these findings is that, as originally suggested by Ryan and Etzel, social sensitivity (e.g., inhibitions concerning the sex appeal claim) may cause the results of structured importance measures and unobtrusive order of elicitation indices to diverge widely. Such a phenomenon would account for the pattern of results obtained by the present study. But, though such an interpretation is conceptually appealing, it should be regarded as tentative for three reasons. First, response bias due to social sensitivity was not explicitly measured or were there any attempts to control for it. Second, the role of importance in expectancy-value models is not a general phenomenon, but rather, like many other variable relationships, is specific to the situation [2] or, in this case, the brand under investigation. Third, there may be other unknown reasons for the different results for the two brands.

Conclusion

The present research suggests how importance may be manifested in expectancy-value models. Namely, elicitation order may, through the avoidance of response bias, indicate importance better than measures involving direct attribute comparisons. Continued investigation of this

issue should be the subject of future research since, as argued in this paper and recently demonstrated by Ryan and Bonfield [24], the identification of importance within a salient outcome set would improve the pragmatic utility of expectancy-value attitude models

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