

ARE SATISFACTION AND DISSONANCE THE SAME CONSTRUCT? A PRELIMINARY ANALYSIS

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ABSTRACT

This paper discusses the possible relationship between cognitive dissonance and satisfaction following the purchase and use of a durable good. Cognitive dissonance and satisfaction were proposed to be inversely related when satisfaction is low and unrelated otherwise. The research supported this proposition. The problems associated with measuring dissonance are discussed and future research directions are suggested.

INTRODUCTION

Cognitive dissonance was one of the psychological constructs that early consumer researchers turned to in attempts to explain the "psychological consequences of buying decisions" [Engel 1963, p.55], leading to a review in the mid-1970's in which 23 relevant studies were cited [Cummings and Venkatesan 1976, p.303]. Despite this considerable research effort, few researchers have included cognitive dissonance in their research in recent years, although most consumer behavior text books continue to discuss the role that cognitive dissonance plays in the post purchase phase [e.g., Engel, Blackwell and Miniard, 1990].

Perhaps one of the reasons why dissonance is not commonly used is because other constructs, such as customers' satisfaction and/or dissatisfaction, provide the same information. In other words, dissonance, at least as presently measured, may not have discriminant validity when compared to other post purchase constructs. The present study makes use of a recently collected survey data set that included information on recent purchasers' views of the electrical appliances they had purchased to examine this issue, as both dissonance and satisfaction were measured within the survey. These two constructs and their place in the consumer decision model are outlined in the next section, while the research approach used, the results obtained and implications are discussed in subsequent sections.

THE TWO CONSTRUCTS

Cognitive dissonance in decision making can be defined as the psychologically uncomfortable state following the act of choosing between a set of alternatives, each of which has some desirable attributes (Festinger, 1957). Dissonance occurs if, after a decision, a person is faced with doubt that s/he made the correct choice. For example, a purchaser of a new refrigerator may be concerned that other models or brands might be superior in ways that are important to the purchaser. Recognizing this situation may place the consumer in a state of cognitive dissonance.

Satisfaction can be defined as an evaluation that "the (product) experience was at least as good as it was supposed to be" (Hunt, 1977, p. 459). Satisfaction is a response to the perceived discrepancy between prior expectations and the actual performance of the product after consumption (Oliver, 1981; Tse and Wilton, 1988). Satisfaction is often described as a confirmation of expectations (Cadotte, Woodruff and Jenkins, 1987), although perceived performance itself seems to contribute directly to consumers' satisfaction with durable products (Churchill and Surprenant, 1982; Tse and Wilton, 1988). There has been some discussion as to whether satisfaction and dissatisfaction are opposite poles on the same dimension (Churchill and Surprenant, 1982). Most researchers, however, seem to have accepted that dissatisfaction and satisfaction do reflect the same continuum (e.g., Woodruff, Cadotte and Jenkins, 1983; Westbrook and Oliver, 1991).

Since dissonance occurs when consumers have doubts after the purchase decision, it could be argued that dissonance occurs when consumers are dissatisfied but not when consumers are satisfied. Hence, dissonance is likely to occur when satisfaction is low or when consumers are dissatisfied but it is unlikely to occur when satisfaction is high. Both the issue of differences, or lack of differences, between satisfaction and dissonance and the specific relationship suggested

above were investigated in a study of consumers who were recent purchasers and users of electrical appliances. The study, the data analysis used and the results are outlined in the succeeding sections of this paper.

THE PRESENT STUDY

In 1993, data were collected from a large sample of over one thousand consumers who were actively shopping for electrical appliances in two major cities in Western Australia. A shopping intercept approach was used; shoppers being approached as they left the store. The data collected were used to determine which of a number of variables were predictors of people's willingness to purchase. As part of the survey, respondents were asked the price and brand of a specific model that had been considered and whether they had actually purchased the product for which they had been shopping. Of the 1,748 questionnaires distributed, 1,068 were returned, resulting in a response rate of 61%. Of these respondents, 464 had purchased the product for themselves. In early 1994, six months after the initial survey, a mail survey was used to collect further information from this reduced data base. A total of 272 useable responses were obtained from the 464 purchasing respondents [a response rate of 59%]. The data obtained in this second wave collection provided the basis for the present study.

Within the second wave questionnaire, respondents were asked whether they had used the product since it had been purchased, as well as about their satisfaction with the product, using Westbrook and Oliver's (1991) 12-item satisfaction scale. One item was dropped due to its inappropriateness to electrical appliances, making an 11-item satisfaction scale. Respondents were also asked to reply to an additional four questions designed to measure cognitive dissonance. There is no generally accepted measure of dissonance and, in many cases, the published research papers provide little information about how dissonance was measured. However, the four items chosen were derived from the relevant literature and they are shown in table 1, together with their sources.

Table 1
Dissonance Items Used

I should have spent more time in shopping around for this product (Hunt, 1970)
I feel I got a poor deal buying this product (Bell, 1967)
It was difficult to decide which brand to buy (Menasco and Hawkins, 1978)
It was difficult to decide which store to buy in (Menasco and Hawkins, 1978)

Initially the reliability of the two scales was assessed using Cronbach's (1951) alpha. An exploratory factor analysis was used to examine the relationship between satisfaction and dissonance and to assess whether the two constructs could be used separately. It was hypothesized that Westbrook and Oliver's (1991) satisfaction items would load onto, and only onto, a single latent satisfaction construct while the four dissonance items from table 1 would load onto, and only onto, a single dissonance scale.

THE RESULTS OBTAINED

To assess the reliability of the two scales Cronbach's (1951) alpha was calculated. Reliabilities were 0.98 for the satisfaction scale and 0.83 for the dissonance scale. The reliability for the satisfaction scale can be described as high while the reliability for the dissonance scale can be described as adequate (Nunnally, 1978). In neither case could the reliability of the scales be improved by deleting an item.

An exploratory factor analysis, using Principal Axis Factoring with an oblique rotation, suggested that the constructs were, to some extent, distinct. All the satisfaction items had a high loading on a "satisfaction" construct and a low loading (less than 0.10) on the dissonance construct (table 2). Dissonance items had higher loadings on the dissonance construct than the satisfaction construct, with the exception of the item "I feel I got a poor deal buying this product", which appeared to have a stronger relationship with satisfaction than dissonance. This item possibly reflected evaluation of the product *post use* and was therefore similar

Table 2
Exploratory Factor Analysis of Satisfaction
and Dissonance Scales to Evaluate
Discriminant Validity

	<u>Factor 1</u> Satisfaction	<u>Factor 2</u> Dissonance
<u>SATISFACTION</u>		
This product is exactly what I need	0.83	
This product has worked out better than I thought it would	0.83	
I am satisfied with my decision to buy this product	0.98	
If I could do it over again, I'd buy the same brand/model	0.82	
I have truly enjoyed this product	0.89	
I feel good about my decision to buy this product	0.97	
I am happy that I bought this product	0.98	
Owning this product has been a good experience	0.85	
I'm sure it was the right thing to buy this product	0.97	
This is one of the best (PRODUCT TYPE) I could have bought	0.76	
Buying this product was a wise decision	0.96	
<u>DISSONANCE</u>		
I should have spent more time in shopping around for this product	-0.38	-0.45
I feel I got a poor deal buying this product	-0.68	-0.22
It was hard to decide which brand to buy		-0.86
It was hard to decide which store to buy in		-0.72

NB Loadings of less than 0.10 are suppressed for clarity

in nature (in a negative sense) to some satisfaction items (e.g., "Buying this product was a wise decision"). All other dissonance items used in this study, however, appeared to reflect the *lack of confidence in the purchase decision* (e.g., "It was hard to decide which brand to buy"). The

dissonance item "I should have spent more time in shopping around for this product" loaded more heavily on the dissonance factor although this item was clearly related to satisfaction also.

Overall it seems that, while there are similarities between the two constructs, there are, importantly, some distinctions. Consequently, it would seem that satisfaction and dissonance, at least as measured in the present study, are not the same constructs. Hence, the relationship between the two constructs needs to be examined.

Such an examination should take into account the suggestion that dissatisfaction occurs when consumers are dissonant, but will not exist when consumers are satisfied. In order to investigate this suggestion, the sample was divided into three equally-sized groups that reported relatively low, medium or high satisfaction and the relationship between satisfaction and dissonance was explored for each group. Responses on the satisfaction continuum were skewed, as is typical in evaluative research (Headey and Wearing, 1988; Peterson and Wilson, 1992). Satisfaction levels were relatively high overall (a mean of 5.6 and variance of 1.5 on a 7 point scale where 1 represented dissatisfied and 7 represented satisfied). For the purposes of this study the item "I feel I got a poor deal buying this product" was deleted from the dissonance construct, due to its relatively high loading on the satisfaction construct and low loading on the dissonance construct and the amended three item scale, with a reliability of 0.79, was used to represent dissonance. The mean scores of all the items representing the two scales were used as the variables representing the constructs. A simple correlation coefficient was estimated for each group to assess the relationship between the constructs. If there is no difference in the relationship of dissonance and satisfaction across the three satisfaction groups, it could be expected that the correlation between the two constructs would not vary from group to group. An examination of the results, shown in Table 3, suggested that this was not the case and that for the low satisfaction group, there was a strong significant negative relationship between satisfaction and dissonance (correlation coefficient of -0.49). As satisfaction in this least satisfied group decreased, dissonance increased, as was expected. However, for the medium satisfied and

most satisfied groups the relationship between satisfaction and dissonance was weaker and the correlation between the two constructs insignificant. This lends support to the proposition that the relationship between dissonance and satisfaction is strong and negative when satisfaction is low but that there is no relationship between satisfaction and dissonance when satisfaction is high.

Further analysis indicated that a higher proportion (79%) of those in the least satisfied group were dissonant (had an above average dissonance score) than those in the medium satisfaction group (30.0%) or the low satisfaction group (17%) (Table 4). There was a significant association between level of satisfaction and dissonance ($\chi^2 = 79.37, p < 0.01$).

Correspondingly, there was a significant difference in the mean dissonance scores between those in the low satisfaction group compared with

those in the medium and high satisfaction groups, those who were less satisfied reporting a significantly higher dissonance score than those who were medium/highly satisfied (t value 12.04, $p < 0.01$).

CONCLUSIONS

Cognitive dissonance was an early suggestion as a possible outcome of a purchase. However, its use has declined in recent years, although it is still included in many consumer behaviour text books. One suggestion was that satisfaction may have replaced dissonance as it measured the same type of post purchase reaction. However, the present study found that there were distinctions between the two constructs.

It was apparent from the present study that satisfaction and dissonance are negatively related, at least when satisfaction is low. The lower the

Table 3
Correlation Between Dissonance and Satisfaction for Low, Medium and High Satisfaction Groups

	LOW SATISFACTION	MEDIUM SATISFACTION	HIGH SATISFACTION
Correlation	-0.49	-0.10	-0.12
Significance of coefficient	0.00	0.18	0.14

Table 4
Above or Below Average Dissonance Score by Low, Medium and High Satisfaction Groups

	LOW SATISFACTION	MEDIUM SATISFACTION	HIGH SATISFACTION
Below or equal to average dissonance of sample	21.5%	69.7%	83.3%
Above average dissonance of sample	78.5%	30.3%	16.7%

product are likely to believe that they have made a poor purchase decision and to experience a psychologically uncomfortable state of dissonance about the purchase decision. In contrast, those who are satisfied experience no such feeling. Results showed that consumers who were medium or highly satisfied were significantly less dissonant than those who reported low satisfaction. While high dissonance was associated with low satisfaction, lowering dissonance did not necessarily increase satisfaction, both medium and high levels of satisfaction having a low proportion of dissonant consumers. This parallels the two factor theory of hygiene and motivation discussed by Herzberg, Mausner and Snyderman (1959).

It seems that past measures of dissonance have, in reality, measured a consumer's lack of confidence in his/her decision process. This confidence concept would ideally be evaluated after the decision to purchase but before use of the product. Satisfaction with the product, however, is a post use evaluation. Considering this temporal ordering, dissonance (or consumer's lack of confidence in his/her decision process) precedes satisfaction and it can be argued from the relationship established in this research that dissonance influences the level of satisfaction. While this research is cross sectional and, hence, the causal influence of dissonance on satisfaction cannot be established, future research should measure these constructs at appropriate points in time (dissonance after the purchase decision and satisfaction after use) and investigate the relationship. However, it seems that, as dissonance is defined as the psychologically uncomfortable state following the act of choosing between a set of desirable alternatives, that there may be several aspects or dimensions of dissonance, one of which is the lack of confidence in the purchase decision following purchase. Another may be, for example, the perceived social or symbolic value of a purchase, while another may concern the attractiveness of rejected alternatives. Future research is needed to investigate the psychometric issues involved in developing a more coherent measure of this important construct. An examination of the relationship of dissonance with other post-purchase constructs, such as future

behavioural intentions and complaining behaviour, as well as the satisfaction construct used in the present research, would also be a valuable research direction.

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