PROFILES OF CONSUMER EMOTIONS AND SATISFACTION IN OWNERSHIP AND USAGE

Richard L. Oliver, Vanderbilt University
Robert A. Westbrook, Rice University

ABSTRACT

We report a study of the relationship between emotional reactions and product satisfaction and show how the emotions relate to specific product outcome experiences. It was hypothesized that one's reaction to such experiences could be conceived as a complex pattern of fundamental emotions, as suggested in recent studies of affect in the satisfaction response. To test this notion, subjects reported on their emotional reactions to automobile consumption (usage) using a modified version of the Izard DES. Cluster analysis of the emotional response measures revealed patterns of affective experience which, although broadly consistent with recent work, also suggested two new dimensions, tentativeness and guilt/shame, which have not been previously considered as bases for the satisfaction response. Specific hypotheses were tested relating product consumption experiences to the emotional dimensions. Mixed but encouraging support is reported.

INTRODUCTION

There is emerging agreement among consumer researchers that the nature and meaning of consumption are central issues in consumer behavior theory (Holbrook and Hirschman 1982). The consumption experience, broadly defined, refers to the subjective consciousness of consumers as they interact with goods and services. As such, it includes not only consciously experienced cognitive phenomena such as thoughts, beliefs, inferences, and goals, but also the perception of sensory, emotive, imaginal, and aesthetic responses relative to the ownership and usage of products (Hirschman and Holbrook 1982).

Among the components of the consumption experience, emotional responses may occupy a unique position. While at first it might seem that emotion in consumption is limited to instances of "hedonic" consumer behavior (Hirschman and Holbrook 1982), there is ample reason to believe that emotional experience may, to varying degrees, permeate the full range of consumption activity. Analyses of the role of emotion in human experience more generally not only point to the ubiquity of affect across and within a number of experiential domains, but also to the mediation of both motivation and personal meaning (de Rivera 1977; Izard 1977).

Despite the potential significance of emotion in consumption experience, it has only recently begun to receive explicit attention. Typically, consumption-related affect has been considered indirectly, chiefly as reflected in consumers' judgments of satisfaction or dissatisfaction with product ownership and usage. However, the unidimensional nature of this conceptualization of satisfaction limits this representation of emotional experience to the positivity or negativity of response.

Lately, several direct inquiries into the emotional component of consumption experience have been reported in the literature (Havlena and Holbrook 1986; Holbrook et al. 1984; Mano and Oliver 1993; Oliver 1993; Westbrook 1987; Westbrook and Oliver 1991). These works indicate the feasibility of direct measurement of consumption-based emotional response, whether by retrospective consumer ratings of recent experiences or by content analysis of event descriptions supplied by consumers.

While the studies cited above have examined various aspects of the emotional experience in consumption, most notably with regard to the role of positive vs. negative affect (Mano and Oliver 1993; Oliver 1993; Westbrook 1987), the Westbrook and Oliver (1991) paper is the only source to date which has empirically verified emotional profiles thought to exist in consumption. In accord with theoretical prototypes suggested in Oliver (1989), namely "satisfaction-as-contentment," "satisfaction-as-pleasure," and "satisfaction-as-surprise," Westbrook and Oliver found segments of automobile owners who could be described as "happy/content," "angry/upset," "pleasantly surprised," and "unpleasantly surprised." Additionally, there existed an "unemotional" group which did not report levels of

emotion much beyond the sample norms.

While the Westbrook and Oliver (1991) work takes a step forward in establishing the existence of various satisfaction response modalities, it does not speculate as to what the sources of the various emotions are. Westbrook (1987) suggests that these must relate to specific characteristics of the product itself or to its operation in usage. To date, only Oliver (1993) has examined the relation of aggregate attribute satisfactions and dissatisfactions to overall positive and negative affect. This study falls short, however, of specifying the product or usage characteristics which give rise to *specific* emotional profiles.

Accordingly, this study seeks to identify and describe patterns of discrete emotional responses experienced by consumers during product ownership and consumption, and to link these to selected product characteristics and postpurchase cognitions. In addition, this work seeks to corroborate Westbrook and Oliver (1991) in that it attempts to replicate their emotion segments and to reaffirm the relationship between patterns of emotional response and consumer satisfaction processes.

THE DISCRETE EMOTIONS APPROACH

Although emotion has been studied from a dimensional perspective, in which emotional consciousness is decomposed into bipolar psychological properties (dimensions) such as pleasantness-unpleasantness, relaxation-action, or dominance-submissiveness, we adopt a discrete or differential emotions perspective for three reasons. First, the discrete approach permits the representation of unique affects which would otherwise be correlated (e.g., shame and guilt). Under the dimensional approach, correlated affects would be subsumed under a single summary dimension. Second, the discrete approach is gaining acceptance in the consumer satisfaction literature (e.g., Oliver 1992, 1993; Westbrook 1987; Westbrook and Oliver 1991), as it permits both segmentation and further dimensional analyses to be performed (e.g., Mano and Oliver 1993). Third, if consumption emotion is to be examined in relation to the postpurchase satisfaction response, which is typically assumed to be bipolar (dimensional), a discrete approach will allow one to analyze the relation between satisfaction and each of the affects separately as opposed to a single correlation with a dimensional representation (e.g., pleasure-displeasure). It may be that correlated affects which would ordinarily reside on a single dimension would have widely discrepant relations to satisfaction.

A number of taxonomic schemes for the categorization of discrete emotional experience have been proposed. Typologies from Tomkins (1980), Izard (1991), Plutchik (1980), and Watson and Tellegen (1985) have attracted attention in the consumer behavior literature. The Izard typology is, perhaps, more suitable for empirical study because of the availability of validated measurement items which have been successfully applied (Bartlett and Izard 1972; Boyle 1984; Kotsch, Gerbing, and Schwartz 1982). Additionally, it has received the most attention in the CS/D literature (Oliver 1992, 1993; Westbrook 1987; Westbrook and Oliver 1991), where additional encouraging validation work has been performed. One drawback of this scale, however, is that the full range of positive affects is not well represented (Mano and Oliver 1993).

Izard's (1977) taxonomy of the fundamental categories of emotional experience distinguishes ten discrete emotions which we will discuss with reference to the product category - automobiles - used here. These basic classes of emotion may be experienced individually or in concert as a function of a wide range of eliciting stimuli, both internal and external to the individual. Izard notes that complex patterns of emotion are frequent, where two or more discrete emotions may be jointly elicited.

THE EMOTIONAL CONTENT OF AUTOMOBILE CONSUMPTION

Evidence for an "automobile psychology" comes from a variety of methodological approaches. For example, depth interviewing has repeatedly indicated the intensity of functional, social, and personal meanings of the car (Dichter 1964; Newman 1957). Recent semantic analyses of ownership indicate that the car is the most common exemplar of things owned (Rudmin and Berry 1987). Studies of enduring consumer involvement with products (Bloch 1981) further

indicate the high level of attachment that many consumers have to their automobiles, often described as "America's love affair with the car" (Marsh and Collett 1987). The apparent meaningfulness of automobiles to consumers indicates that they may have substantial potential to evoke various types and intensities of emotional response.

In general, it is possible to distinguish five alternative automobile contexts in which discrete emotions may be elicited: (1) the purchase process, where the excitement of buying may be offset by the distress and anger of "cutting a deal" with the salesperson (see Oliver and Swan 1989a, 1989b); (2) the vehicle itself or class thereof (e.g., interest in the car); (3) ownership of the vehicle (e.g., pride); (4) driving or using the vehicle (e.g., pleasure from driving fast, worry or apprehension over the possibility of an accident); and (5) caring for and maintaining the vehicle (e.g., anger from repeated car repairs, affection displayed in washing and cleaning, guilt in relation to neglect). Together, these varying contexts for emotional experience provide opportunities for the elicitation of each of the fundamental discrete emotions identified in the Izard (1977) taxonomy, either individually or in concert, yielding higher-order patterns of emotion. These ten discrete emotions are now described with reference to car ownership.

Interest-Excitement

Various authors have noted the ability of automobiles to excite or thrill through rapid acceleration or fast and dangerous driving (Marsh and Collett 1987). Even the very act of acquiring a new or different vehicle can provide excitement (Dichter 1964). Milder forms of interest-excitement such as fascination are implicit in the notion of enduring product-class involvement (Bloch 1981). Finally, admiration of the vehicle and its various qualities has the potential to evoke feelings of interest (Dichter 1964; Csikszentmihalyi and Rochberg-Halton 1981).

Enjoyment-Joy

Use of one's car for transportation and recreation has been linked to the experience of freedom and mastery, and to "getting away from it all" (Flink 1975). Both of these subjective states are intimately related to the phenomenology of joy (Izard 1977). Other significant sources of joy relative to automobiles are those which facilitate social integration and differentiation (Csikszentmihalyi and Rochberg-Halton 1981). To the extent that the car owner perceives much meaning in his/her vehicle, the implied social acceptance may produce pleasant feelings of enjoyment. Related sources of joy are those which accompany the achievement of upward social mobility, as when new car owners feel the pride of "trading up," and those sources which indicate a sense of attachment to one's car, resulting in feelings of protectiveness (Marsh and Collett 1987).

Shame

If the ownership and usage of one's vehicle have the potential to signify achieved or aspired status, then these situations may also have the reciprocal potential to symbolize membership in dissociative social groups. Hence, ownership of an older, deteriorated car, or one which is inconsistent with the implied norms of a desired social group may elicit feelings of shame. Izard (1977) notes that the phenomenological causes of shame are personal actions which result in an actual or threatened loss of social acceptance and approval.

Guilt

The subjective experience of guilt relative to automobiles has been identified in two differing contexts. In one, consumers may sustain guilt feelings when they have violated a personal goal or social norm. For example, a buyer may have spent more on the car than intended or more than one "should have" (Dichter 1964). A related basis for guilt is the belief that one is somehow not fully "deserving" of the purchased vehicle, perhaps because it signifies a level of social status above that occupied by the consumer. A second context in which guilt might be expected to emerge is that of vehicle use and maintenance. Lack of attention to servicing or repairing the vehicle may elicit guilt feelings. These forms of guilt occur as a

result of deliberate personal actions which violate a social or internal norm.

Fear

Fear may be experienced in mild forms principally in relation to the usage and care for automobiles. Marsh and Collett (1987) propose that accelerating rapidly and driving too fast, which as noted above may yield pleasurable feelings of joy, may also elicit anxiety related to danger. Dichter (1964) notes that cars may provide a means of vicariously satisfying the "death instinct." Others may experience fear in relation to accidental injury to oneself, one's passengers, or the vehicle itself. Fear may also be felt when driving the car under conditions which are believed to be personally threatening (e.g., a deserted road at night or during a thunderstorm). Finally, anxiety may be experienced if the automobile requires repair when the financial consequences are unknown.

Distress/Sadness

Sadness is a likely emotional response whenever one has suffered some form of loss which is attributed to uncontrollable factors (Smith and Ellsworth 1985; Izard 1977). This emotion could occur if the car is accidentally damaged, for example. Distress, in particular, could occur if the loss produces worry over whether the loss will be redressed. Distress has also been noted as a result of inequity which, for example, might occur if one felt cheated in a purchase/trade-in deal, or if the purchase price was high relative to that of a friend or neighbor (Oliver and Swan 1989a; Walster, Walster, and Berscheid 1978).

Surprise

The emotional experience of surprise occurs when an event violates expectancies, norms, or scripts (Cadotte, Woodruff, and Jenkins 1987; Charlesworth 1969). Disconfirmation of expectations is implicit in surprise. Because of this, surprise can occur with positive events, as well as negative (cf. Oliver 1980, 1981, 1989). Thus, the surprise response can be invoked in all five automobile experience contexts noted above including the surprise of "sticker shock" in purchasing, the surprise of "discovering" the car and what it means to own it, the surprises inherent in operating the vehicle (e.g., its acceleration or lack thereof), and the surprises of maintenance and repair (e.g., incidence of breakdowns and the associated costs).

Anger

Psychological studies of consumers' automobile responses are silent on the issue of anger, although anecdotal evidence of angry car owners is available (e.g., Averill 1982). Indeed, studies of anger suggest that the anger response is elicited by factors that are common in connection with automobile usage. Specifically, the typical instigation to anger is a perceived misdeed, an "unjustified" act under the voluntary control of another entity. Since many automobile owners depend very substantially on their vehicles for transportation, breakdowns or performance failures which prevent normal usage may elicit anger, particularly if they recur and are seemingly the result of faulty design, manufacture, or repair. Not all such anger need be directed at the vehicle manufacturer, dealer, or repairman, however; some may also be directed at the vehicle itself as a more tangible source of frustration.

Disgust and Contempt

Though discussed as separate affects by Izard (1977), disgust and contempt are often experienced jointly along with anger, and are directed at the target of one's anger (Izard 1977; Westbrook 1987) perhaps as a form of punishment or aggression toward the offending entity (Averill 1982). Disgust signifies physical rejection of the entity while contempt implies social repudiation (Izard 1977; de Rivera 1977). Hence automobile breakdowns and instances of serious performance failure should likewise evoke both classes of discrete emotional response.

SOME DETERMINANTS OF EMOTIONAL RESPONSE PATTERNS

While one purpose of this paper is to identify the emotional response patterns which arise during

ownership/usage, further understanding of emotion within consumption can be achieved by considering specific determinants which are thought to cause these patterns to occur. Many contemporary accounts of the emotion activation process assign a major role to the influence of cognition (Izard 1977; Lazarus, Kanner, and Folkman 1978; Weiner 1980, 1986). Thus, beliefs emanating from external stimuli or from information processing tasks are thought capable of evoking affective responses through a variety of mechanisms (Hoffman 1986). In relation to consumption contexts, it is reasonable to presume that consumer beliefs and evaluative judgments about the product and/or its usage outcomes contribute to particular types and intensities of affect. A number of specific belief-affect linkages may be hypothesized in accord with the ten emotional responses discussed above.

First, the positive affects of joy and interest should occur with beliefs about product attribute and usage experience outcomes which are desired or expected by the consumer. Pleasure is generally assumed to result from the accomplishment of one's goals, aims and needs. Two broad classes of desired product attributes and usage experiences are those relating to functional and aesthetic characteristics (Batra and Ahtola 1990; Mano and Oliver 1993). Within the functional classification, beliefs about the extent to which the automobile provides either (H_1) reliable, trouble-free service, or (H_2) ample power, rapid acceleration, high speed, and good road handling (ride, cornering), may be expected to elicit feelings of interest and joy. For example, Marsh and Collett (1987) cite the relationship between high speed driving and excitement (an intense form of interest). With respect to desired aesthetic attributes, beliefs about the attractiveness of vehicle styling, color, and appearance features should correspondingly elicit feelings of interest and joy (H_3).

When the appearance of the vehicle becomes unattractive, either because of an outdated style or damage, feelings of shame may be elicited (H_4). Shame is a socially-based affect whose instigation appears to depend on violation of a group norm (Izard 1977), in this instance the use of an unattractive vehicle not conforming to one's desired social status. Its role in the replacement demand for new automobiles has long been suspected (Dichter 1964).

Since the automobile is ostensibly intended to provide a necessary transportation function, feelings of annoyance and hostility may result when its operation is plagued with mechanical problems. Previous work supports the relationship between product/service failure and anger responses (Folkes 1984). Hence a linkage is expected between beliefs about vehicle unreliability, poor design/construction, and anger/disgust (H_5).

These mechanical problems or failures may also be expected to elicit the affective response of fear in the form of anxiety over future breakdowns. Fear is believed to reflect a cognitive analysis of the powerlessness or helplessness of the individual in the face of imminent danger (Izard 1977), in this instance personal threat or injury. A milder variant of the fear response, apprehension, may result from the prospect of substantial repair expenditures. Hence beliefs about past vehicle unreliability should directly relate to the experience of fear in product usage (H_6).

Fear may also be elicited by the thought of accidental injury to self and others due to collision. Since larger vehicle size is generally believed to afford greater personal protection in the event of a collision, beliefs about the small size of one's automobile may relate directly to fearful feelings (H_7).

Finally, in accord with Oliver (1993), it is hypothesized that the greater the number of favorable product attribute/usage beliefs, the greater the level of the positive emotions expressed by respondents (H_8). Conversely, the greater the number of unfavorable beliefs, the greater the level of the negative emotions (H_9). These hypotheses reflect the widely held view that affect in consumption (e.g., satisfaction/ dissatisfaction) is based, in part, on beliefs about favorable and unfavorable attribute performance; see Oliver (1993) for further elaboration.

METHODOLOGY

Study Design

The study was based on a judgmental area

sample of 177 automobile owners. Research assistants visited 200 homes in the metropolitan area of a medium-sized U.S. city, administered a brief personal interview to establish rapport and explain the study, and left the survey questionnaire for self-administration by subjects. Completed questionnaires were personally retrieved by research assistants within five days, resulting in an overall completion rate of 89%. High variability was displayed by the characteristics of the respondents' cars; this was thought to be necessary for a broad range of emotional response. Specifically, 57% of the vehicles had been purchased new; the average retail price was $5,331; 37% were imported cars; and the mean vehicle age was 4.96 years.

Measures

Discrete emotions. The discrete emotional character of individuals' ownership and usage experiences with automobiles was assessed using a shortened version of Izard's (1972) original Differential Emotions Scale (DES). Abbreviation of this instrument was preferred to later versions because of the substantial item pool, from which selections could be made to avoid adjectives not appropriate to the context of the study. For example, items such as "lonely," "repentant," and "bashful" were not used. However, coverage of each of the ten fundamental emotions was maintained in the 29 items chosen for the modified DES. The general criterion for item selection among the adjectives within an emotion category was the size of its factor loading in Izard's (1972) results. Instructions for the task were identical to those of the original instrument, except for wording changes to focus respondents' attention on their automobile ownership and usage experiences. The scale response format consisted of five-point ratings of the strength (intensity) with which each of the emotional descriptors had been experienced.

Reliability estimates for the modified DES subscales are presented in Table 1. A pilot study for the field survey (n = 19) indicated that most of the ten modified DES measures of the strength of emotional experience demonstrated acceptable stability, as shown by the moderate to high three-week test-retest correlations. Within the main study, acceptable internal consistency reliability is also indicated for Joy, Interest/excitement, Anger, Distress, and Surprise. Although three of the multi-item subscales (Fear, Disgust, and Guilt) attained only marginal values of Cronbach's alpha, the Disgust and Guilt measures did nevertheless demonstrate suitable stability in the pilot results. The reliability evidence for the Fear and Contempt measures are marginal, indicating that findings relating to these variables should be interpreted with caution.

Table 1
Reliability Estimates for the Emotional Measures

		Reliability	
DES subscale	Number of items	Test-retest n_1 = 19	Alpha n_2 = 177
Interest/ excitement	2	.714	.639
Joy	4	.938	.866
Shame	1	.824	N/A
Guilt	3	.758	.453
Fear	3	.579	.509
Distress	4	.891	.890
Surprise	3	.889	.798
Anger	5	.948	.936
Disgust	3	.976	.592
Contempt	1	.543	N/A

Satisfaction. In accord with Westbrook and Oliver (1991), a number of different measures were employed. These included: (1) a multi-item satisfaction inventory in Likert format (Oliver 1980), (2) the graphic, single item "circles" scale consisting of nine "pies" with varying numbers of plus and minus (satisfying and dissatisfying) slices (Andrews and Withey 1976), (3) a simple bipolar, five-interval "very satisfied-very dissatisfied" rating scale commonly used in applied research, (4) a 10-point unipolar satisfaction rating scale, (5) a 10-point unipolar dissatisfaction rating scale, and (6) an 11-point (0 - 10) decision regret scale in which subjects indicated their subjective likelihood of repeating the act of acquiring the automobile. The two unidimensional satisfaction/dissatisfaction scales were intended to capture instances in which individuals entertain varying degrees of both satisfaction and dissatisfaction judgments, and to

allow for a discrete perspective to satisfaction measurement.

In addition, two disconfirmation belief measures were administered to allow more complete coverage of postpurchase cognitive states. Disconfirmation has consistently emerged as a primary antecedent of satisfaction evaluations (Bearden and Teel 1983; Oliver 1980, 1993; Oliver and Swan 1989a; Westbrook 1980, 1987). Both were 3-interval rating scales corresponding to the three regions of the disconfirmation continuum, namely better than expected, as expected, and worse than expected. The first measured disconfirmation with one's needs (e.g., exceeded, met, fell short of my needs —— see Westbrook and Reilly 1983), while the second used expectations as the referent.

Product Attribute/Usage Beliefs. Consumers' beliefs about the salient product attributes and/or usage outcomes were assessed via open-ended questions administered in-person during the initial respondent contact. Separate questions were directed at favorable and unfavorable attributes or outcomes. Responses were subjected to a content analysis and the following categories identified: fuel economy, styling/appearance, reliability/durability/ frequency of repairs, road handling, power/acceleration/ speed, and size. Acceptable intercoder reliability was achieved (.88).

Data Analysis

A taxonomic analysis of consumer emotions was accomplished by clustering subjects based on standardized scores for the ten DES measures. The entire sample was randomly split into two halves and each was analyzed using Ward's (1963) hierarchical clustering method with Euclidean distances. Two-cluster through ten-cluster solutions were examined. The six-cluster solution appeared to best meet the criteria of interpretability and minimum cluster size (10% of the sample) in each split half. In addition, the group centroids within each split half yielded identical substantive interpretation, indicating internal stability of the six-cluster solution. Finally, split-half analyses for five- and seven-cluster solutions failed to provide comparable cross-split agreement. Hence the six-cluster solution was adopted.

The averages of the group centroids from the two split-half hierarchical procedures were then used as seed points for k-means clustering for the entire sample. The purpose of this latter procedure was to optimize between-cluster differences. Although both the hierarchial and k-means clustering solutions produced comparable results, the latter were preferred inasmuch as they yielded more compact and distinct clusters. Inter-cluster differences were then examined via multiple group discriminant analysis using the original DES emotional measures as predictors. All five of the possible discriminant functions were significant, and varimax rotations were performed to improve the interpretability of these dimensions representing the emotional space of automobile consumption.

FINDINGS

Patterns of Emotional Experiences

As shown in Table 2, automobile ownership experiences appear to involve reports of moderately high levels of the positive affects of joy and interest, and considerably lower levels of the negative emotions of anger, disgust, contempt, guilt, distress, shame, and fear. The mean level of surprise falls between these extremes. Moreover, across the sample as a whole, the interest and joy affects often appear together ($r = .805, p < .01$), as do the negative emotions of anger and distress ($r = .840, p < .01$), anger and disgust ($r = .724$, $p < .01$), and distress and disgust ($r = .772, p < .01$). Contempt was also correlated with these negative affects as prior research indicates (Izard 1977). In fact, all of the negative emotions tend to appear together, although not as markedly as the anger-distress-disgust or "hostility" group.

Taxonomic Analysis

In order to facilitate interpretation of the six-cluster solution, cluster means on the ten DES measures are plotted in the Figure. Not only are differences in the level (or strength) of emotional response evident, but so are the differences in the relative predominance of the different types of emotion. The six groupings of automobile owners

Table 2
Means, Standard Deviations, and Intercorrelations of Emotional Measures

DES subscale	Mean[a]	S.D.	Simple correlations 1	2	3	4	5	6	7	8	9
1. Interest/excitement	3.38	1.11									
2. Joy	3.14	1.10	.805								
3. Shame	1.42	.84	-.170[b]	-.145[b]							
4. Guilt	1.30	.54	-.097[b]	-.097[b]	.443						
5. Fear	1.67	.73	.103[b]	-.032[b]	.318	.364					
6. Distress	1.65	.96	-.136[b]	-.250	.463	.477	.640				
7. Surprise	2.29	1.10	.379	.408	.124[b]	.060[b]	.361	.213			
8. Anger	1.53	.92	-.908	-.230	.465	.388	.585	.840	.234		
9. Disgust	1.38	.78	-.012[b]	-.116[b]	.433	.488	.521	.772	.202	.724	
10. Contempt	1.55	1.13	-.113[b]	-.207	.314	.447	.424	.642	.072[b]	.631	.572

[a]Rated on an intensity scale of 1 = not at all to 5 = very strongly.
[b]Correlation not significantly different from zero ($p > .05$).

were labelled as:

1. *Hostile/Upset owners*, comprising 11% of respondents, with highly elevated levels of the emotions in the hostility group (distress, disgust, anger) and contempt and fear, along with moderately elevated levels of guilt and shame. Low levels of joy are also apparent.

2. *Guilty/Ashamed owners*, comprising 16% of respondents, with high levels of the internally-directed emotions of guilt and shame, and low levels of joy and interest.

3. *Delighted owners*, at 11% of the subjects surveyed, with elevated joy, interest, and surprise and low levels of the negative affects.

4. *Contented owners*, the largest group at 24% of the sample, characterized by moderate levels of joy and interest, low surprise, and also low levels of all other negative emotions.

5. *Tentative owners*, at 18% of the sample, with mildly elevated interest, and at the same time, fear.

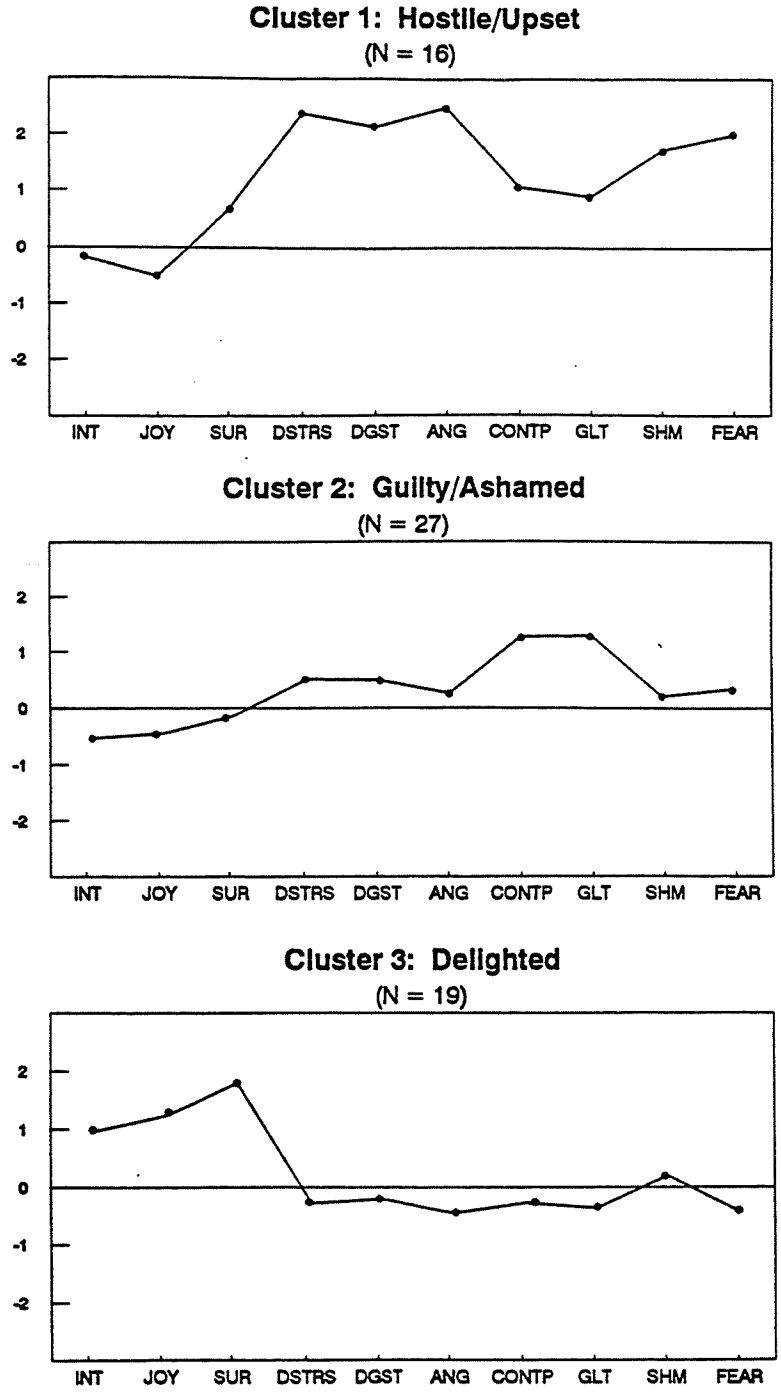
6. *Unemotional owners*, at 20% of the respondents, who fall below average on all measures of consumption emotion.

These six clusters were significantly differentiated, as established by MANOVA on the original DES clustering variables (Wilks' lambda $= .012, F = 21.87, p < .001$), with all univariate tests significant as well ($p < .001$). The groupings were able to explain a substantial proportion of the variation in the DES variables as shown by a range of eta^2 values from .45 to .75, with a mean of .58. Because clusters were formed by minimizing within-cluster variance based on the DES variables, significant differences are to be expected at this stage; hence this analysis simply provides an indication that further analyses with external variables may be useful.

Cluster Satisfaction Profiles

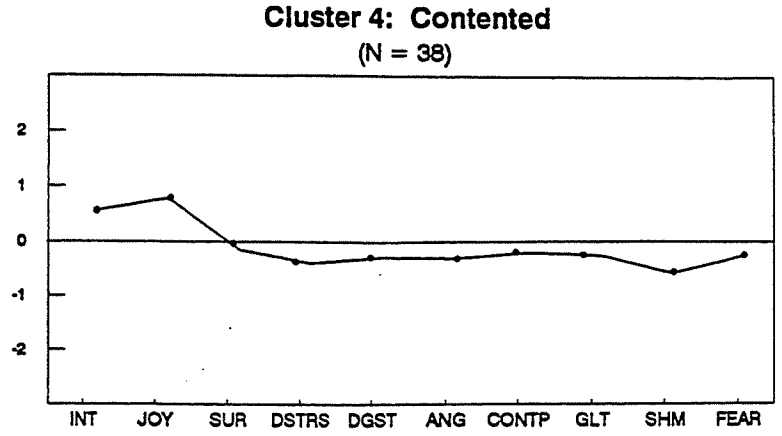
To examine the relationship between the emotional response patterns and the satisfaction/dissatisfaction and disconfirmation measures, mean levels of the scale scores are reported for each cluster in Table 3. Examination of the results for the multi-item Likert satisfaction inventory reveals that the most satisfied group is Cluster 3 (Delighted), characterized by high levels of the surprise, interest, and joy affects. In descending order of satisfaction are the "contented" (Cluster 4), "tentative" (Cluster 5), and "unemotional" (Cluster 6) clusters. All of these groups are close to or above the mean satisfaction level for the total sample. Lower in satisfaction is the "guilty/ashamed" group (Cluster 2). The "angry" group (Cluster 1) contained the lowest mean satisfaction level by a substantial margin. Results for the unipolar satisfaction and graphic "circles" scales are virtually identical to those for the multi-item satisfaction inventory with the exception that the "unemotional" group was higher than the "tentative" group on the latter scale.

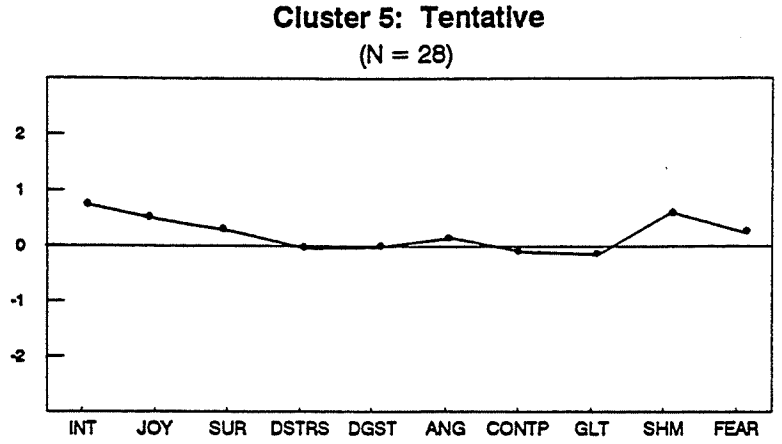
Figure 1



Cluster Means on the Ten Standaradized DES Measures

Figure 1 (Cont.)





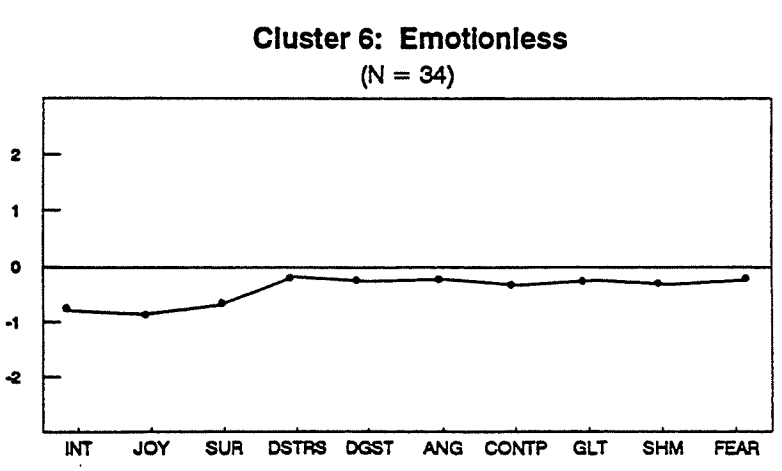


Table 3
Mean Satisfaction and Related Measure Scores for Emotional Experience Clusters

Measure	Cluster						
Total sample	1 (n=16)	2 (n=27)	3 (n=19)	4 (n=38)	5 (n=28)	6 (n=34)	*F*
Satisfaction scales							
Likert scale							
47.16	32.81	42.92	56.26	51.78	47.14	45.70	21.25[a]
Graphic "circles"							
5.85	3.63	4.81	7.32	6.66	5.71	5.85	16.99[a]
Bipolar satisfaction							
4.05	2.88	3.63	4.32	4.45	4.14	4.15	3.64[a]
Unipolar satisfaction							
8.00	5.56	6.76	9.28	8.97	8.11	8.07	18.01[a]
Unipolar dissatisfaction							
3.01	4.69	3.65	2.69	2.32	2.79	2.70	2.83[b]
Related measures							
Decision regret							
7.66	3.81	6.04	9.79	8.89	8.00	7.63	15.73[a]
Need disconfirmation							
8.10	6.44	7.04	9.53	9.00	7.86	7.76	8.16[a]
Expectancy disconfirmation							
2.18	1.43	2.22	2.84	2.29	2.04	2.06	9.27[a]

[a]One-way ANOVA, $p \leq .01$
[b]One-way ANOVA, $p \leq .05$

The unipolar dissatisfaction and bipolar satisfaction-dissatisfaction scales, in turn, yielded results similar to the previous satisfaction measures with one exception. These scales placed the "contented" cluster at the highest satisfaction (lowest dissatisfaction) level; the "delighted" group moved to the second satisfaction position. One-way analysis of variance with the Duncan Multiple Range test confirmed the statistical significance of the differences in satisfaction measures across the emotional experience clusters ($p < .01$; $p < .05$ for the unipolar dissatisfaction scale).

Analysis of the regret and expectancy disconfirmation constructs in Table 3 indicates that all varied significantly across the emotional experience clusters in a manner consistent with that observed for the satisfaction scales. For example, the largest negative disconfirmation beliefs (i.e., the lowest scores) were reported in the "angry" cluster, as would be expected. In similar fashion, the need-disconfirmation measure resulted in generally high scores (i.e., positive disconfirmation) across clusters, with the "delighted" cluster highest and the "angry" cluster lowest. On the decision regret measure, all clusters except the "angry" cluster showed mean subjective probabilities of repeat purchase in excess of 5 chances in 10. All three of these complementary indicators of satisfaction processes produce cluster rankings comparable to that of the multi-item satisfaction inventory with the exception of the location of the "guilty/ashamed" cluster in the disconfirmation ratings. For unknown reasons, this cluster was ranked third in the favorability of disconfirmation experiences.

Vehicle and Usage Characteristics

Table 4 presents selected vehicle and usage characteristics describing the six clusters. In Cluster 1, which contains hostile/upset owners, the vehicle is typically an older domestic car which is the sole means of transport for its owner. In Cluster 2, the guilty/ashamed owners, the vehicle is an even older domestic product acquired at a low purchase price and not the sole means of transport for its owner. Cluster 3, delighted owners, is comprised of older imported vehicles, while Cluster 4, contented owners, is represented by middle-aged domestic vehicles, high in purchase price and typically not the owner's sole means of transportation. The vehicles in Cluster 5, containing "tentative" owners, are of the most recent model years, imported, and frequently the owner's only vehicle. Finally, those cars in Cluster 6, whose owners were described as "unemotional" are relatively new domestic vehicles in multiple car families.

Dimensionality of Emotion Space

Results of the multiple discriminant analysis performed to identify the dimensions of the emotion space containing the six clusters of automobile consumption experiences are shown in Table 5. As would be expected from the prior partitioning of the data into clusters, all five discriminant functions were significant ($p < .001$). The interpretation of these functions provides the most parsimonious description of the differences between the consumption emotion groupings. Inspection of the correlations between varimax

rotated discriminant functions and the DES variables indicates five distinctive patterns of affect. The first is a unipolar dimension of distress, anger, disgust, and contempt, a pattern noted as one of "hostility" (Izard 1977). The second dimension clearly and uniquely reflects a unipolar continuum of guilt/shame. The third is a bipolar dimension consisting of joy and interest at the one extreme and distress at the other, corresponding to the distinction between "happy" and "sad" owners. The fourth dimension is a simple unipolar continuum of surprise, while the fifth appears to be a unipolar dimension of fear (or anxiety).

Table 4
Vehicle and Usage Characteristics by Cluster

	Cluster						
1	2	3	4	5	6	*F*	*p*
Product origin[a]							
.29	.39	.63	.32	.57	.12	4.15	.002
Acquisition condition[b]							
.66	.54	.41	.59	.59	.50	.59	.709
Vehicle age[c]							
6.19	7.11	6.05	4.56	3.49	3.72	1.91	.096
Purchase price ($)							
5284	3703	4895	6086	5531	5668	2.75	.021
Sole car[d]							
.71	.36	.50	.32	.55	.31	2.43	.038

[a]Coded 1 = imported, 0 = domestic
[b]Coded 1 = acquired new, 0 = acquired used
[c]In years
[d]Coded 1 = vehicle is one of several owned, 0 = sole vehicle owned

Tests of Hypothesized Emotional Response Patterns

Relationships between product attribute/ usage beliefs and the hypothesized emotional correlates are summarized in Table 6. Support was found for several hypotheses, notably between attractive appearance and feelings of interest-joy (H_3), the linkages between mechanical failures and hostility reactions (H_5), and between failures and fear responses (H_6). Interestingly, the mechanical integrity issue is not symmetric in its effects upon owners' emotional responses. Although beliefs about excessive breakdowns elicited hostility, the opposite beliefs about vehicle durability and quality were not associated with interest or joy (H_1). Nor were beliefs about vehicle power and speed linked significantly to feelings of excitement, an intense form of interest (H_2). Beliefs about the unattractive appearance of the car were not significantly associated with higher levels of owner shame or guilt (H_4). Finally, owners who believed their vehicles were small were only marginally ($p = .12$) higher in fear (H_7). The latter finding may reflect the marginal reliability of the fear measure noted previously.

Table 5
Correlations Between the Discriminant Functions and the DES Subscales

Emotion	Dim. 1	Dim. 2	Dim. 3	Dim. 4	Dim. 5
Interest	.223	.013	.831	-.030	.233
Joy	.196	.068	.884	.088	-.255
Shame	.015	.729	-.029	.036	-.108
Guilt	.095	.626	-.005	.026	-.103
Fear	.214	.106	-.025	.208	.696
Distress	.574	-.047	-.434	.152	-.067
Surprise	.041	-.024	-.029	.907	.100
Anger	.763	-.155	-.221	-.074	.033
Disgust	.480	-.026	-.227	.056	-.087
Contempt	.514	-.022	-.090	.076	.062
Eigenvalue	7.027	2.719	.943	.329	.204
Wilks' lambda	.011	.087	.322	.625	.830
p	<.000	<.000	<.000	<.000	<.000

The two final hypotheses were tested with the open-ended response data. First, the greater the number of favorable product attribute/usage beliefs about the car, the higher the level of interest-joy reported (H_8, $r = .296$, $p < .000$). Second, the greater the number of unfavorable beliefs of this type, the higher the level of hostility reported (H_9, $r = .177$, $p < .000$). Although support was found for some of the relationships between hypothesized product attribute/usage beliefs and emotional response patterns, most were relatively weak in terms of explained variance, as shown by the modest values of eta^2 in Table 6.

Table 6
Tests of Hypothesized Emotion Response Patterns

H_n Product attribute or usage belief	Emotional correlate	Discriminant function	$F_{(1,155)}$	Prob.	Eta^2	Evaluation
H_1: Well made, durable	Joy	3	.74	.39	.07	Not Supported
H_2: Powerful, fast	Excitement (Interest); Joy	3	.78	.38	.07	Not Supported
H_3: Attractive styling	Joy; Interest	3	3.75	.05	.15	Supported
H_4: Unattractive appearance	Shame; Guilt	2	1.68	.20	.10	Not Supported
H_5: Excessive breakdowns and repairs	Anger; Disgust; Contempt; Distress	1	29.84	.00	.40	Supported
H_6: Excessive breakdowns and repairs	Fear	5	13.28	.00	.28	Supported
H_7: Small size	Fear	5	2.46	.12	.13	Not Supported

DISCUSSION

The emotional reactions to product-related experiences observed in this study add additional perspective to both the conceptualization and empirical study of postpurchase appraisal. Based on a cluster analysis of ten discrete emotions, this study found six such states which, when arranged in their approximate descending order of satisfaction, are described as delight, contentment, tentativeness, unemotion, guilt/shame, and anger. Note that these results share a number of commonalities and some differences from those of Westbrook and Oliver (1991). Although we corroborate the delight (i.e., pleasant surprise), contentment, anger, and unemotion groups, we find two others, tentativeness and guilt/shame, that did not appear in the prior study. Note that we did not find an unpleasant surprise group, however, perhaps because it was embedded in our angry group as elaborated below.

Several observations about these findings are in order. First, the extremely low satisfaction scores registered by the angry group and the extremely high scores by the delighted group suggest the potent role of surprise in satisfaction appraisal. Because these groups had the highest mean surprise scores (see the Figure), it appears as if surprise functions as an "amplifier" of the underlying favorableness or unfavorableness of outcome experiences when these are translated into satisfaction evaluations. This interpretation is consistent with the theoretical role of surprise as a fundamental emotion (Charlesworth 1969; Izard 1977). Both groups presumably found their automobiles much different from what they expected —— delighted subjects finding it far better, angry subjects finding it far worse. The intensity with which these groups report their chief emotional experiences is indeed supportive of attempts to anchor satisfaction measurement with emotional descriptors (e.g., Andrews and Withey 1976).

The "contented" group, in which subjects reported experiencing moderate levels of joy and interest and low levels of surprise, is perhaps typical of many object relationships where the product was expected to perform well, or render desirable properties, and did in fact do so. The result appears to be less of a state of "rapture" and more of placid contentment with the product. In contrast, the group which we have labelled "tentative" most likely consists of persons whose major concern is the product's continued ability to provide the desired benefits, free of interruption. When coupled with interest and mild joy in the product, the resulting emotional state may be conceived as one of pleasure and positive evaluative appraisal, offset by the fear of unforeseen problems.

The "unemotional" group presents an enigma. Relative to the sample norm, these persons revealed no appreciable extremes of emotion of any sort in regard to their purchase, perhaps suggesting a lack of personal involvement. Yet, the mean evaluative scores for this group were in the "satisfied" region on every measure of reported satisfaction used in this study (see Table 3). Perhaps these satisfaction readings are somewhat misleading in that the scores simply may mean that

causes for dissatisfaction have yet to appear. Alternatively, these persons may evaluate automobiles in a non-emotional, largely cognitive-conative manner, in which feelings do not enter. Whether the "emotionless" individual responds to aversive outcome experiences (e.g., product failure) in a correspondingly unemotional manner is not known.

Finally, the group we have labelled "guilty/ashamed" apparently consists of persons whose feelings about the product and/or its performance create a sense of shame or embarrassment. While the negativity which accompanies these feelings clearly indicates that the purchase decision was unfortunate and that the individual has attributed personal responsibility for this outcome, the accompanying shame dimension suggests a correspondingly strong unwillingness to seek redress. This raises the possibility that some individuals' misgivings may reside in non-redressable attribute areas such as the appropriateness of the product choice. As such, guilt and shame may stem from a lack of congruence of the product image to the individual's self image, along with self-attributed responsibility for the incongruity.

It is interesting to observe that the vehicle and usage characteristics exhibited by the groups support the cluster interpretations. Specifically, the hostile/upset cluster member tends to have one car which, being an older model, probably does break down more often. The guilt/shame group tends to drive an even older, cheaper car, perhaps used to drive back and forth to work. The delighted group apparently owns imported subcompacts, judging by the price, where reliability has historically been high. Contented owners drive high-priced domestic cars while tentative owners have newer cars which probably have unproven reliability. Finally, the unemotional driver owns multiple cars suggesting a family-centered orientation. All of these vehicle profiles are conceivably consistent with the emotional pattern exhibited by the cluster descriptions.

Further evidence for the dimensionality of emotional space and its linkage to the satisfaction process is provided by the discriminant analysis. It appears that the emotions of anger, disgust, contempt, and distress coexist on a negative affect dimension while the guilt and shame negative affects exist on a separate dimension. The distinction between the two appears to be one of external versus internal attribution (Weiner 1980). The interest/joy dimension appears to represent the positive affective nature of consumption and, although somewhat bipolar with distress at the opposite anchor, appears unique in its ability to tap the positive emotions. The last two dimensions clearly represent surprise and fear respectively. Perhaps these emotions occupy specific roles in consumption response.

Finally, the role of attribute influences on the emotion and satisfaction responses was demonstrated in attribute-specific hypotheses tests. While the results were mixed in terms of support for the hypotheses, encouraging findings emerged with regard to certain of the positive and negative emotion dimensions. However, these findings, including those of the correlations between favorable/unfavorable beliefs and positive/negative emotions, were rather modest, suggesting that further work is needed, especially with respect to the assessment of specific product belief elements.

In conclusion, the findings suggest that efforts to assess postpurchase satisfaction might appropriately be augmented by additional assessments of emotional experiences. The findings are also suggestive of the view that emotional responses to purchase outcomes may be but part of a causal chain incorporating immediate outcomes (attribute performance levels, characteristics, or satisfactions), emotional responses to these outcomes, and satisfaction as shown in Oliver (1993; Mano and Oliver 1993). While this perspective goes beyond the present data, it does suggest that the role of emotions in the satisfaction response may be much more complex than has been generally acknowledged and that attribute-only (i.e., performance) analyses may not fully capture higher order influences on judgments of satisfaction without incorporating emotion mediation.

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ACKNOWLEDGEMENTS

The first author thanks the Center for Services Marketing and the Dean's Fund for Faculty Research of the Owen Graduate School of Management of Vanderbilt University for providing partial support for this project.

Send correspondence regarding this article to:
Richard L. Oliver
Owen Graduate School of Management
Vanderbilt University
401 21st Avenue South
Nashville, TN 37203