

OBSERVATIONS ON APPLIED CS/D RESEARCH

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ABSTRACT

As a result of participating directly in the efforts of several firms that were developing customer satisfaction tracking systems and participating in three national benchmarking studies the author observed the following and more. What matters most from an overall management perspective is overcoming inertia and instituting a satisfaction measurement system rather than perfecting its measurement methods. Comparison standards and psychological process models of CS/D have little relevance for applied efforts to increase organizational customer satisfaction. Actually bringing about customer satisfaction improvement is much harder than it looks. Achieving increased satisfaction is difficult and slow because it cannot occur without a company-wide obsession for improvement. And, preventing problems is more important than fixing them well.

INTRODUCTION

The gaps in knowledge, method and perspective between academic and applied research in marketing have been variously examined (see, for example, Carroll and Green 1997; Myers, Massy and Greyser 1980; AMA Task Force on Development of Marketing Thought 1988; Garda 1988; Wind and Mahajan 1997). However, little has been written about the differences between academic and applied CS/D research, despite the fact that the subject of customer satisfaction continues to attract attention from academics, practitioners, and consultants (see Perkins 1991; 1993 for a recent bibliography). Intrigued by the possibility of substantive differences in what little we as academics seemed to know about the applied side of the mountain, I decided to investigate practitioner knowledge of and methods in applied customer satisfaction research.

First, I was fortunate to have the opportunity to participate directly in the efforts of several Fortune 500 firms that were developing customer satisfaction tracking systems, as well as another in a non-profit organization in the performing arts. To add perspective on the practices of these select

firms, I subsequently participated in three national benchmarking studies of U.S. firms with respect to best practices in customer satisfaction. This paper reports my preliminary observations and discusses some of the implications for academic customer satisfaction research.

PRESUMPTIONS

Before presenting my observations, it might be helpful if I first identified the major presumptions I held as an academic researcher relative to applied CS/D study, since my contact had been to that point quite limited. Perhaps my strongest presupposition was that applied satisfaction research suffered greatly owing to the prevalence of relatively weak customer satisfaction measurement practices. As academics, we make use of powerful psychometric methods to develop and refine measures of latent constructs. In industry customer satisfaction work, measures are often limited to single item ratings or arbitrary indices of items, and measure development seldom receives the explicit, thorough attention it does in academics.

Second, I assumed that a firm seeking to increase the satisfaction of its customers required knowledge of the causal model of its customers' satisfaction judgments. As academics we devote a great deal of attention to psychological process models of CS/D. In particular, we consider at length the comparison standards used by customers to judge their experiences with products and services. Much of this work in academics is indeed motivated by the presumption that applied students need such information.

Third, I assumed that the key to making improvements in firm-level CS/D was the provision of sound customer satisfaction data to the organization's key functional or business unit managers. Such data were necessary for identifying the particular functions and processes warranting improvement efforts. Given the right data, improvement processes would naturally be triggered.

Fourth, I assumed that applied satisfaction studies were generally not sufficiently comprehensive insofar as accounting for the

relevant sources of satisfaction/dissatisfaction or causal antecedents. The applied studies I had seen appeared limited in their assessment of potential satisfaction/dissatisfaction antecedents. Naturally I assumed that this shortcoming would result in misdirected efforts to improve satisfaction.

Related to the preceding points, my last presupposition was that firms necessarily had to prioritize their various satisfaction improvement efforts according to the observed "potency" of the sources of satisfaction/dissatisfaction, if they hoped to make the best use of their scarce resources. I also assumed that direct importance ratings were poor indicators of the actual weights of customer evaluations in producing overall satisfaction. As a result, I believed it was necessary to derive importance weights from regressing satisfaction on its sources (Westbrook, 1981).

KEY OBSERVATIONS

My key observations, which should be treated as no more than hypotheses derived from qualitative research, are summarized as follows:

1. What really matters from an overall management perspective is overcoming inertia and instituting a satisfaction measurement system, rather than perfecting its measurement methods.
2. Comparison standards and psychological process models of CS/D have little relevance for applied efforts to increase organizational customer satisfaction.
3. Actually bringing about customer satisfaction improvement is much harder than it looks.
4. We need better ways of gauging the causal importance of different product or experience attributes with respect to overall customer satisfaction.
5. Prioritizing customer experiences in terms of their impact on overall customer satisfaction is a double-edged sword.
6. Achieving increased satisfaction is difficult

and slow because it cannot occur without a company-wide obsession for improvement.

7. TARP got it wrong: preventing problems is more important than fixing them well.

Measurement Issues

One of my most important observations concerns the unexpected role of measurement in customer satisfaction management. My presumption, as noted above, was that better measurement methods were needed in applied research, and that absent some psychometric sophistication, the resulting data would be of dubious value. Hence I assumed a key priority for applied CS/D research would be the improvement of satisfaction measurement technology.

To my considerable surprise, applied CS/D measurement practices appeared to be sufficiently robust to produce meaningful information in most cases, even in spite of their lack of psychometric sophistication we deem so essential in academic research. It would seem that applied measurement practices may be adequate for their purposes, and that investment in further measurement refinements may face diminishing payoffs. While better measurement is clearly desirable for the gain it provides in the ability to detect relationships, such relationships are typically not the focus in applied CS/D work. From a management perspective, the biggest gains appear to come from *instituting* a measurement system, rather than from *perfecting* measurement methods. Or as I have become fond of saying, "It's not the measurement, stupid."

Because of the organizational setting, the act of measuring is itself highly significant, and in of itself may directly stimulate increased customer satisfaction, as employees take note of the newly instituted measurement program. Organizational psychologists term this the Hawthorne effect: workers under special observation of management tend to increase their productivity and output. Beginning to measure is also important in yet another way, because it reflects some degree of senior management commitment; after all, funds were allocated to begin satisfaction measurement.

Psychological Processes

Although the academic CS/D literature devotes a great deal of attention to investigating the psychological processes of CS/D judgment (Anderson & Sullivan, 1993; Oliver, 1980, 1997; Woodruff, Cadotte and Jenkins, 1983; Westbrook, 1980, 1987), these processes have surprisingly little to offer to business unit managers. This observation came as a large surprise to me, inasmuch as our academic papers often suggest the usefulness of our conclusions about process to managers.

In contrast to our emphasis (as well as that of the behavioral sciences) on models of satisfaction process, business managers need models of satisfaction content. In other words, they can do little to improve satisfaction without knowledge of which specific product aspects or customer experiences to improve. Clearly, this requires data on customer evaluations of specific product and service attributes. In contrast, our academic models of satisfaction typically focus on abstractions such as performance, disconfirmation, equity, and even emotional response. While we measure using specific attributes, our analyses invariably ignore the specific content of the attributes, such as in the Attribute Performance model proposed by Oliver (1995).

This observation suggests that we as academic researchers might find it helpful to pursue a different level of satisfaction modeling, one that theorizes not about the psychological process of satisfaction but rather about the content domain of customer evaluations and how these are linked to overall customer satisfaction. Although it took me fifteen years to realize it, I see now that one of my own earlier papers had actually started in this direction (Westbrook 1981), but that I abandoned the approach for the more traditional academic focus on process rather than specific content. An understanding of the content domain of satisfaction would be useful to both academic and applied CS/D researchers. One of our sister literatures, the job satisfaction literature, has devoted considerable attention to questions of the content of satisfaction or its antecedents, such as pay, promotion, supervision, work itself, co-workers, etc. The widespread agreement in the literature on the various elements or sources of job satisfaction

evaluations (e.g., Smith et al, 1994) is an excellent example for the academic CS/D literature.

A final observation with respect to psychological process is that even when great measurement sophistication is applied to assessing satisfaction and its various sources, the resulting data invariably suffer from halo effects. This problem is evidenced by the positive correlation between customer evaluations of all measured satisfaction sources. This indicates that some respondents simply rate all experiences with the focal firm or product more favorably than do other respondents. It is unclear why such intercorrelation occurs. Does it result from each of the antecedents contributing to overall satisfaction? Or does it result from overall satisfaction being reflected in each of the component evaluations? Further, it is unclear whether such halo effects are attributable to methodological artifact or genuine psychological process. This would appear to be fertile ground for academic CS/D research.

Achieving Satisfaction Improvement

As academic researchers, we have little opportunity to observe the great difficulty of actually increasing the average level of satisfaction across the customer base of an organization. What I found particularly surprising was the very slow rate of change of satisfaction in the face of (a) comprehensive research data showing the sources of satisfaction and dissatisfaction and (b) substantial management and employee efforts to improve customers' experiences. On the other hand, I witnessed numerous instances in which acute customer problems could very quickly drive the average satisfaction level down. Among the many interesting questions raised by these observations is that of the differential rate of improvement versus decline in satisfaction. Is the evaluation process simply more sensitive to negative information (reference), or is it that improvement requires mobilizing, focusing, and coordinating organizational actions, which simply requires concerted effort over time? At the very least, improving customer satisfaction is not simply a matter of providing the necessary information to key decision-makers -- an assumption which academic marketing researchers are apt to make.

A related observation concerns the organizational processes through which satisfaction improvement is made. Virtually nothing is known about this most critical of matters -- given the results of the satisfaction studies, how exactly is an organization to use the information to advantage? Who is to do what to whom by when? Deshpande and Zaltman (1984) investigated some of these issues with respect to marketing research more broadly, finding that research information which was... had greater impact on its audience than when it was not. The question posed here is really one of implementation as opposed to strategy. For example, finding that a company's customer service was evaluated poorly and that it was the leading driver of overall customer satisfaction, how would an organization best proceed? Notify the customer service manager that improvements in attitude, responsiveness, follow-up, etc. were required? Offer an incentive to employees to improve the evaluations they receive from customers? Re-training the employees and their supervisors in methods of customer sensitivity? Adding new computer or telephone equipment to assist in handling and routing customer requests to other departments? Understanding organizational processes for using customer satisfaction data is in my opinion a critically important issue for academic research. It will require more cross-functional work between CS/D and organizational behavior/management researchers.

Gauging Importance of Satisfaction Drivers

My observations suggest that we are in need of new measures of the importance of satisfaction drivers. Gauging the importance of alternative satisfaction drivers, where the latter refer to the content or specific source of satisfaction, is a major issue among applied CS/D researchers. While many pursue this goal by asking for direct ratings of importance from customers, the clinical judgment literature suggests that such self-reports are substantially in error. Hence, estimating the regression coefficients of the satisfaction drivers is preferred as the measure of importance in sophisticated academic research. However, situations frequently arise in which the drivers -- each of which has a positive relationship with overall customer satisfaction -- appears to have an

adjusted effect which is negative and not positive. While the mathematics of the downward adjustment in relationship strength is clear, its appropriateness is not. What is the most appropriate indicator of how important a given issue or facet or driver is to overall satisfaction? When we say "important" do we mean that all other variables' effects on satisfaction -- even if they happen to be the result of the drivers -- must be cancelled out? Or might there be better measures of importance for drivers when they are linked together themselves as a series of causes and effects.

Prioritizing Satisfaction Drivers

One of the more notable best practices in customer satisfaction management observed during my benchmarking studies is intensive internal communication of satisfaction findings. Companies with superior track records in increasing and sustaining high levels of satisfaction invariably engage in a considerable volume of organizational communication relative to satisfaction. Monthly tracking study findings are publicly posted for employees to see, customer comments circulated by e-mail, satisfaction action plans presented to multi-functional audiences, and numerous other practices are common. The issue here is whether to also circulate widely the findings on drivers of satisfaction. Since this information also pertains to customer satisfaction, the conventional wisdom is to disseminate it as well.

However, it is my observation that such practice is potentially damaging. While invaluable from a strategic point of view for allocation resources among alternative programs to enhance customer satisfaction, information as to the relative importance of drivers has the potential to reduce employee commitment to improved satisfaction outcomes throughout the organization. Results indicating that certain functional areas contribute little to overall satisfaction are potentially devastating to efforts to secure total organizational commitment. I believe it is the total organizational commitment to the goal of increased satisfaction which underlies all successful improvement efforts.

Prevention, Not Restitution

The TARP studies (citation) have enjoyed wide readership and citation in the CS/D literature. It is virtually common knowledge that fixing a customer's problem well is extremely important in restoring customer satisfaction, and that making exceptional repairs can even raise the level of the customer's satisfaction to a point higher than it was before the problem occurred. In theory, the customer forms a favorable opinion of the firm's responsiveness, empathy and commitment to customers, all of which add to the overall evaluation of the firm or product more than the specific customer problem has detracted from it.

However, it is my observation that the above is simply not true, or at least not true in all instances suggested by the TARP findings. My own applied research indicates that even when customers report their problems remedied fully, their overall customer satisfaction with the company or product is significantly less than for customers encountering no problems. Discussions with numerous other best practice and benchmarking firms indicate that problems hurt, and do not offer the potential for raising overall customer satisfaction. Prevention appears to dominate restitution in terms of customer impact. Why this would be the case is another interesting question for applied CS/D researchers.

CONCLUSIONS

In conclusion, I found my exploration of applied CS/D research especially useful in generating a variety of insights and potentially fruitful avenues for future academic CS/D research, some of which I am presently pursuing. Perhaps the larger conclusion is the notable value I found in contrasting our academic methods and theories to those explicit or implicit in the applied realm. They have led me to a more ecumenical perspective on defining a personal agenda for CS/D research, particularly with respect to the importance of management and organizational behavior issues in the delivery of customer satisfaction.

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LOOKING FOR GOOD BIRDS IN FAR AWAY AND NEAR BY PLACES: VARIETY-SEEKING, SATISFACTION AND ENJOYMENT OF BIRDING: AN ETHNOGRAPHY

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ABSTRACT

While variety seeking is recognized as a fundamental activity in consumer and consumption behavior, issues such as satisfaction from variety seeking and the actual behavior of variety seeking have not been explored. Using an ethnographic approach, the authors use birding to provide an exploratory account of the experiences that count as variety to birders. Implications for both theory and marketing practice are given.

INTRODUCTION

Seeking and experiencing variety is a fundamental source of satisfaction in many consumption activities:

While birding in Venezuela, after a late breakfast the birding plan is to take the trucks or walk to a grove of trees only a mile or so from camp. I decide to walk. Poking along, admiring the view of fields of birds, enjoying the continuous "por favor" call of a flycatcher, I am alone. On the fence, I see a new bird that looks like a fat kingfisher, one that so enjoys food. Oh! Great! A bird I haven't seen! I so want to identify it. I excitedly sketch the new bird in my notebook: brown cap, white at eye, two brown stripes on a lighter colored breast. Looking in the field guide, it is a Russet-throated Puffbird, a very distinctive bird. A couple of Tropical Mockingbirds are fussing at my puffbird. After a while it flies off and disappears into the foliage of a small tree. I am enormously pleased; my Puffbird is the only bird I have seen and identified by myself.

The theme of our article is that variety is sought, experienced and enjoyed in different ways and different motivations direct different variety seeking efforts. In the context of birding, we analyze **experiencing variety** by seeing a new bird

and/or seeing a number of familiar birds on the same outing. Different types of travel constitute **variety-seeking** in birding. New birds are much more likely to be seen when birding in areas far from home and a major motivation for such travel is to enjoy the variety of seeing new birds. Resources for distant travel are limited and birders turn to near by places and appreciate a second form of variety, seeing a number of familiar birds on the same outing. Finally, we will resolve what appears to be a paradox, creating variety from familiar experiences.

VARIETY SEEKING LITERATURE IN CONSUMER BEHAVIOR

Variety seeking is recognized as a fundamental activity and motivation in consumer and consumption behavior. Marketers have recognized this in the travel (Fesenmaier 1995, Link 1993, Forbes 1993) and meeting location (Island Guide: U.S. Virgin Islands 1992, Island Guide: Barbados Bermuda 1992) literature. Hospitals have recognized using a variety of programs/services to increase revenue (Kania 1993). Milon and Clemmons (1991) found that species variety is a normal good sought by hunters. Yet the extensive literature on variety-seeking behavior has neglected the following vital issues in variety as a consumer experience: 1. Empirical evidence of satisfaction and enjoyment from variety seeking; 2. The actual behavior of variety-seeking; 3. Sources of variety beyond brands; and 4. How consumers interpret their experience as constituting variety.

In theory, variety is sought in order to experience satisfaction. The recent literature on variety-seeking also posits that variety is rewarding or satisfying (Van Trijp, Hoyer and Inman 1996). However, the empirical link of variety to satisfaction remains unexplored (Van Trijp, Hoyer and Inman 1996).

A second major gap in the literature is the absence of studying consumer behavior in the pursuit of variety. That is, beyond variety arising

from brand choice, what do consumers do in order to experience variety?

A third topic that has been neglected is what are some of the important sources of variety in different consumption contexts? Almost the only source of variety that has been addressed in the literature is alternative brands. However, in many contexts, including services and leisure activities, brands are not likely to be an important source of variety. In this study we treat the natural environment as a source of variety and in so doing we hope to broaden variety seeking beyond brands (Feinberg, Kahn, and McAlister 1992, Kahn and Isan 1993) to suggest the more general point that variety can arise from a number of different sources depending on the consumption context.

A final phenomenon that the literature has not treated is how do consumers interpret their experience as constituting variety? A distinction found in the literature contrasts true variety seeking versus derived varied behavior depending on whether switching behavior is intrinsically or extrinsically motivated. True variety seeking is defined by Van Trijp et al (1996) as intrinsically motivated change in behavioral response due to the utility inherent in variation per se, apart from the instrumental value of the chosen alternative. Variety is sought for stimulation it brings, curiosity, and to escape boredom (Van Trijp et al 1996). Derived varied behavior is brand switching motivated by instrumental goals, such as buying at a lower price. While the distinction is important in studies of brand switching, it begs the question of how consumers interpret their experience as constituting intrinsically motivated variety. What is variety to the consumer? Our report provides an exploratory account of the experiences that count as variety to birders. We believe that our findings will provide some ideas that could be used to analyze the experience of variety in other settings.

Going to certain areas in hopes of seeing new or a variety of familiar birds is important in birding, but does not exhaust ways that variety is sought and appreciated by birders. Our focus was chosen to include a vital dimension of birding and to illuminate what we believe are some important issues in variety seeking and satisfaction that are neglected in the literature. This study is very much in the context of discovery and we hope to

offer several concepts and processes that may provide a foundation for research in other consumption activities beyond birding.

We first describe the fieldwork that provides data for this article. Second, we treat two ways that variety is experienced in birding. Third, an account is provided of distant or local travel as modes of variety seeking. Fourth, variety as a source of satisfaction is discussed. Finally, discussion and conclusions end the article.

METHOD

Our general interest was in learning how birders experience satisfaction/dissatisfaction, not to test hypotheses drawn from a well established literature stream. Very little is known about consumption experience and processes of variety seeking related to satisfaction. Thus an inductive, ethnographic method, primarily participant observation was used (Hudson and Ozanne 1988, Hunt 1991). Similar methods have been employed in recent studies of consumption experiences (Arnould and Price 1993; Price, Arnold and Tierney 1995; Sherry 1990; Celsi, Rose and Leigh 1993). After observing birding activities, it became clear that variety was a very important source of satisfaction and our attention shifted to that topic.

More specifically, one of the authors has been actively birding ("birdwatching" is a term used by the general public) for over 30 years and systematic field work was initiated about 18 months ago as he began to take field notes and keep newsletters/ announcements and other documentary material from birding organizations. The field notes were transcribed and entered in a word processing system. Most of the field notes were taken while on field trips. During field trips birders go individually or with others to an area in order to observe and identify birds. His field trips with others include a key informant, trips with the Metro Birding Association, the State Birding Society and a trip to Venezuela by a commercial tour operator.

On birding field trips it is common for a number of participants to make a list of the birds identified and on many occasions note taking attracted little attention. If anyone asked or seemed to notice that my note taking was more

extensive than usual, I explained or reminded people who knew me, that I am a college professor, people in my field study recreational activities and that I hoped to write articles on birding. No one objected or seemed uncomfortable. In fact some expressed interest or were otherwise supportive of my efforts. I did not observe differences in the other participants' behavior between occasions when I did or did not take notes. The only exceptions are that some times when I took notes during and/or at the end of the trip people would ask questions such as: how many birds have we seen? What birds did we see? While looking at a bird, sometimes I was asked: have we seen that bird before? Also on a trip to Venezuela, acting on the requests of the other participants I wrote a description of the trip. After a little over a year of field work, variety emerged as a topic and field notes and observations were focused on that topic. Most names are pseudonyms.

In addition, this article draws from a key informant, Frank Knight, who shared his birding experiences in discussions and written narratives of his experiences on various field trips. These narratives describe the locale and the discovery of each of the birds seen as well as the group's response to these sightings. These descriptions help to fix the experience in Frank's memory and also may be shared with other participants so that they, too, may re-live the events. These narratives include trips to Wakulla Springs State Park and the St. Vincent National Wildlife Refuge, both near Tallahassee, Florida; and more distant excursions to China and Trinidad and Tobago.

EXPERIENCING VARIETY IN BIRDING

"Life Birds": Seeing New Birds

For many birders, a most enjoyable way of experiencing variety is to see a species of bird that one has not been seen before, a "life bird". To birders, a life bird is any species, that is a taxonomic category or type of bird, such as a Wild Turkey, Little Turn and so on, that the birder can not recall having seen before. During a birding trip to Venezuela Charles Slater, one of the participants, experiences a life bird:

The bus is taking us to another location in the paramo, the slopes of the Venezuela Andes, close to 10,000 feet high, and we bird on the way. Birds are seen, the bus stops. Birders quickly exit the bus, line the edge of the road and begin looking down the steep slope with binoculars to see the birds. Bob Lewis, trip leader, calls in a loud voice: "Paramo Pipit". It is reddish buff above, recognizable as a pipit by its skinny Robin shape and thin bill. Bob to Charles Slater: "Is that a life bird?" Charles smiles broadly: "a lifer".

Experiencing a species as a life bird is contingent on an interpretative process that includes several elements. First, the birder or a birding companion identifies the bird's species. Bob Lewis said: "Paramo Pipit". Recall the opening vignette of this article: I compared my sketch of the new bird seen to birds illustrated in the *Birds of Venezuela* field guide (De Schauensee 1978) to identify it as a Russet-throated Puffbird. Second, the birder matches the bird just identified to a mental and/or written list to conclude either that the bird has (old bird) or has not been previously identified (new bird). I could not recall having seen a Puffbird. Third, the birder and new bird are both in the same place at the same time. My major motivation for going to Venezuela was to see new birds. Fourth, the bird's presence must be known to the birder. I saw the Puffbird.

Seeing A Number of Familiar Birds On The Same Field Trip

In addition to seeing "Life Birds", that is birds not identified previously, another way that variety is experienced in birding is to see a number of familiar birds during the same field trip. Experiencing variety by seeing a number of familiar birds on the same outing happen at Vincent National Wildlife Refuge, less than 100 miles from our home city. Vincent is a popular birding area as it has a variety of different habitats including wetlands, bottom land hardwoods, pine uplands, grass lands, agricultural fields, seasonal mud flats, ponds and a major river. The diversity of habitats attracts, on some occasions, a variety of birds. On a December day trip one of us goes to Vincent and in the morning happens to meet two

birders from the that area. The three of us enjoy quite a variety of about 30 different birds including three species each of woodpeckers and geese; two species each of larks and hawks; four species of ducks; a species of egret, heron, crow, wren, tohee, mockingbird, nuthatch, dove, jay and some others. All of the birds, except one species of geese are reasonably common to Vincent. That is, will probably be seen during the right season.

Experiencing a variety of familiar birds during a field trip involves a process of interpretation very similar to that of "getting a life bird". First, the birder or a birding companion identifies the bird's species. A Harrier was seen at Vincent. Here's how it was identified. The size, color and shape of the bird was immediately recognizable as hawk-like. I compared my observation of the new hawk to my recall of the major field marks for hawks. Field marks are distinctive features of a species. The white rump patch that I see is unique among hawks in the area as the Northern Harrier. The female is brown, the male grey, and I am looking at a brown bird. Thus, I identify the flying hawk as a female Northern Harrier. My birding companions confirm the identification.

Species identification is a critical foundation to experiencing variety in birding. By that time in the morning we have seen two hawks: A Red Tailed Hawk and the Harrier. A nonbirder may simply recognize both the Red Tailed Hawk and the Northern Harrier as "hawks" and not experience the variety of seeing two different hawk species. A second element in constructing variety occurs as the birder matches the bird just identified to a mental and/or written list to conclude either that the bird has (old bird for the field trip) or has not been previously identified during this outing (new bird). I, and one of the Vincent area residents, are keeping written lists. I clearly recalled that this was my first sighting of a Northern Harrier. Many birders seem to keep a running mental list of birds already seen as subsequent sightings of the same bird may be of much less interest than the first. Typically at the first sighting, who ever sees the bird first will name the species and tell others in the party where to look. Often on subsequent sightings the bird is ignored. Next, we present a typology of variety-seeking in birding in which we link two types of birding variety-seeking in birding in which we link

two types of birding variety experiences to variety seeking travel and field trip motivation.

VARIETY-SEEKING IN BIRDING: EXPERIENCING DIFFERENT TYPES OF VARIETY BY TRAVELING TO DIFFERENT TYPES OF AREAS

"Life Birding": Traveling To New, Distant Areas For Life Birds

One mode of variety seeking, and enjoying birding, is traveling to a foreign country or to a region in the United States in which one has not birded, in hopes of finding life birds. Our home area is Metro City of a Southeastern State. One of the authors has been on trips abroad to the Ecuadorean Andes, Amazon Basin Forest and Galapagos Islands; Baja California; Venezuela; some of the Western States; North East; and Canada. Travels of a key informant include Kenya, Australia, Costa Rica, Trinidad, China, Venezuela and Nepal.

New areas often hold the promise of life/new birds and a major motivation for such travel is to see birds one has never seen. An announcement promoting the June 1996 trip to Venezuela says: "There is much that should be seen during this tour, including as many as 400 species of birds". The announcement lists 31 "Top Birds of the Venezuela Tour" (voted by participants at the end of a previous tour). Of the 31, I only recognize one that I have seen, a second is rare in South Florida and the others all occur in Venezuela, but not the US. The promise of variety is fulfilled. One of the tour leaders keeps and compiles a list of all birds seen which numbers 296. Finding "Life Birds" was part of Frank Knights trip to Kenya.

Our leader, who is an experienced birder having visited Africa annually for twenty-five years, keeps a mental list of our daily sightings. Before leaving on the trip, each participant was sent a list of all the birds we might see, arranged according to taxonomic order. Every second evening, the group meets in our lodge or hotel to go through the list. The leader calls out the names of the birds and briefly describes the habitat in which the birds

were found. We check these on our lists, thus keeping a running total. By the end of the trip (24 days), the list includes more than 500 species, all of which are new to the participants. Adding these to my life list at home brings me up to just over 2,000 species.

A life list, of course, is simply a way of recording variety. Each new species added to the list makes it once more numerous and more varied. As there are more than 7,000 bird species world-wide, there is still plenty of variety for me to discover!

In summary, one category of variety experienced in birding is identifying a bird never before seen, a life bird. Once someone has accumulated some experience in birding, life birds are not often seen near home. Distant travel becomes a means of seeing life birds and a strong motive for such travel. Birders have terms for part of the experience, such as "life bird", "lifer", "good bird" but no term for distant travel seeking life birds. We term such variety-seeking behavior **life birding**.

"Diversity Birding": Traveling To Near By Areas For Variety During A Field Trip

Birding is quite a popular activity. The Metro City Birding Association has over 1,000 members in an area of about 900,000. The National Birding Association has about 600,000 members. Nation wide a large number of people do some birding. The key point we develop is that the wide participation in birding would not be likely if variety was only experienced by seeing new birds. The resources for extensive travel are not readily available to so many people. The genius of birding may well be rooted in the capacity of birders to create variety by seeing a number of old birds in different habitats close to home on outings of a few hours, half a day, a full day or a weekend. As noted above, during the same outing to Vincent Wildlife Refuge, pleasure and satisfaction were obtained from variety constructed by identifying a number of different species.

Often a major motive for selecting which near by area to bird is the potential for variety. A skilled birder, Ted O'Donnell, has written an

unpublished guide to the Vincent Wildlife Refuge area. He describes one "hot spot" (excellent birding area):

Undoubtedly one of the best shorebirding areas in (our state) ... Where else in the area can 10 shorebird species be considered a slow day? ... There is no telling what may turn-up here! Recent records include Lesser-Golden, Black-bellied, and Piping Plovers, Buff-breasted and Baird's Sandpipers, American Avocets, and Marbled Godwits!

In summary, a second category of variety experienced in birding occurs as a diversity of species is seen during the same field trip. Species diversity is often a motive for choosing which near by area to bird and we designate such variety-seeking behavior **diversity birding**.

VARIETY IN THE PRODUCTION OF SATISFACTION

On field trips, in addition to the authors' personal feelings of satisfaction linked to variety, the remarks and talk we hear from other birders clearly indicate that variety contributes to enjoyment of and satisfaction with birding field trips. Recall that as he saw the Paramo Pipit, a life bird, Charles Slater smiles broadly, a clear indication of enjoyment/satisfaction. During a local field trip the first sighting of a familiar bird is often accompanied by remarks that strongly suggest satisfaction, that is positive affect. At Vincent Refuge:

A telescope is set on a Pintale Duck, the first sighting of the day for that species. I hear: "That's nice", "Handsome duck", "Great light, see how it brings out the color", "You need to see this".

Often near the end of a field trip, an evaluation of the trip is voiced by the participants. We briefly reported above on experiencing a nice variety of 30 species one morning at Vincent. About noon we have returned to the place where we started the morning birding walk. As they depart, the other two birders mention some of the enjoyable highlights of the morning: "A lot of good birds" (variety), "beautiful bright day", "hope to see you again". They are pleased and

satisfied. Having presented an account of variety seeking as a source of satisfaction in birding, we turn to a discussion of our results.

DISCUSSION AND IMPLICATIONS

Types of Variety Experiences: A Typology

We identify two types of variety-seeking in birding (Table 1). The first type is diversity birding, in which a nearby birding area with a variety of habitats is chosen in hopes of seeing a number of different species of birds. As the number of species seen increases, satisfaction with the field trip increases. The second type is life birding, travel to more distant areas to see birds one has not seen before. Seeing a life bird is enjoyable and a source of satisfaction to birders.

The analytical categories of life and diversity birding are not mutually exclusive. Travel to distant areas can be motivated by both opportunities to see life birds and to experience a variety in terms of a number of different birds both life and familiar birds. Also, travel to a nearby area can be motivated by an opportunity to see a life bird. Sometimes a bird that is quite rare for the area is reported to members of the birding community. Larry Gibson announces to his week night birding class that an Iceland Gull has been seen on a lake in our South Eastern state and asks if we wish to try and drive up on Saturday to see it. The Gull is 700 or 800 miles out of its' usual range. While the categories of life and diversity birding are not mutually exclusive, they are useful in calling attention to the important theoretical idea that variety is sought and experienced in different ways.

Table 1
Types of Variety Experiences, Variety-Seeking and Field Trip Motivation

Variety Experience	Variety Seeking	Field Trip Motivation
Life Birding	Travel to new, distant areas	See Life Bird(s)
Diversity Birding	Travel to nearby areas with diverse habitats	See a variety of familiar birds

Experiencing Variety: An Interpretive Process

Experiencing variety is more than a simple matter of variety-seeking. Variety emerges from a process that is similar in both diversity and life birding as birders interpret what they see. Experiencing variety in both types of birding starts with seeing a bird and observing its' field marks (Figure 1). The field marks are compared to different species until the species is identified (in some instances a bird can not be identified). The species is compared to the birder's "life List" and if a life bird is recognized, a high level of variety is experienced. If the species is not a life bird, often the birder will compare it to the trip list and if it is a new bird for the trip, add it to the trip list. At the end of the trip, birders often review the written or mental trip list, as the number of birds seen increases, the feeling of experiencing more variety increases and satisfaction increases.

Figure 1
Variety Recognition Process Experiencing Variety

-
1. Bird is seen ---->
 2. Field Marks Observed ---->
 3. Field Marks Compared to Those of Different Species ---->
 4. Species Identified ---->
 5. Species Matched To:
 - A. Life List ----> IF: new bird - experience high variety
IF: old bird - compare to:
 - B. Trip List ----> If new bird for trip - add to trip list ----> End of Trip:
 - IF: large number of different birds seen - high variety
 - IF: few birds seen - Low variety
-

Our findings have implications for the current literature cited earlier on variety seeking behavior by consumers and we suggest that symbolic interaction, a social-psychological theory is applicable our study of recreational/leisure activities.

Symbolic interaction, an approach to understanding human group life, was developed by George Herbert Mead (1934) and extended by Herbert Blumer (1969). It provides a useful theoretical framework for understanding variety in

birding. An important premise of symbolic interaction is that humans live in a world of objects, things to which people may refer, that do not have inherent meanings (Dietz, Prus, and Shaffir, 1994; Prus 1996). The meanings of objects arise from the interpretations that people make of the objects that they encounter. People make sense of their world by using symbols which convey the meaning of objects, and people act toward objects in terms of those meanings. The shared meanings of things arise from the interactions between people as objects acquire qualities by the ways that the actor and others define and act toward them.

The process of recognizing and experiencing variety noted above (Figure 1) is given theoretical import by relating it to symbolic interaction. As the interactionists argue, the meaning of a bird arises out of a number of shared meanings held by people in the birding community. Some critical meanings that "produce" variety in birding include: species, field marks as a way to identify species, and life bird. Symbolic interactionists also call attention to the importance of practices in human behavior. Variety in birding emerges from a number of practices including the practice of listing birds on a field trip, keeping a life list, the interest other birders show when one sees a life bird, and the talk about the variety seen during a field trip.

Implications For Future Research

In a general context, our study suggests that conceptualization and study of consumer variety seeking and satisfaction may be enriched by employing our analytical approach in other settings. Specifically, we found that meanings and practices produce variety in birding. The analysis of other settings may also find that the meanings people assign to things and practices that consumers engage in create variety.

Several additional tasks for future research are suggested. Consumer satisfaction is clearly a product of variety in birding. Oliver's (1997) recent comprehensive model of satisfaction is essentially the familiar disconfirmation approach of individual psychology. We believe that Oliver's work can be extended and offer some suggestions for doing so. Our ideas are not meant as a

critique of Oliver's model as his purpose was to present a very general, context free, psychological model.

In addition to disconfirmation, we suggest that, in some contexts, variety may be a source of satisfaction. Variety itself may well incorporate the "pleasant surprise" dimension of positive disconfirmation treated by Oliver (1997). However, as a very abstract model, Oliver (1997) does not treat the production of surprise, that is variety.

Another extension of Oliver (1997) is to move beyond individual psychology. Variety in birding and possibly in other settings is both a psychological and social process (Holt 1995). What counts as variety to participants is social in that identification is a social process in the sense that the birding community makes identification possible and values variety. Identification, even if done alone by an individual, is social as the "tools" of identification are social including the concept of species, guide books to identify species, information on where to bird and so on.

Finally and most importantly for consumer satisfaction is that current theory has not addressed what we feel is a fundamental issue in satisfaction: how time is spent, especially leisure time. The issue is the dichotomy of excitement, enjoyment, and satisfaction on the one hand compared to boredom, dullness, and dissatisfaction on the other hand. By the analysis of variety we have begun to investigate the excitement, enjoyment, satisfaction half of the dichotomy. Others may wish to consider boredom.

Managerial Implications

The challenge for marketing practitioners is to create a setting whereby customers can create and experience variety. For example, in the travel industry, the promise of seeing new birds, many birds, and unusual birds is used to promote tours, destinations, etc. The creation of variety may give the marketer a differential advantage over the competition.

SUMMARY

Employing an ethnography of birding, we have demonstrated that variety seeking as a process and

the resulting variety obtained leads to satisfaction. Variety is created by finding a number of familiar birds on the same outing and by seeing "life birds" that one has not identified before. Distant travel is a rich source for life birds. The paradox of creating variety by seeing familiar birds is resolved by learning that birders consider the set of different birders identified on the same trip as a source of variety. Satisfaction and variety also results from the first sighting of a familiar bird. Future research will determine the generalizability of our approach to the study of variety and satisfaction in other settings.

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THE EFFECT OF PRODUCT-LEVEL STANDARDS OF COMPARISON ON CONSUMER SATISFACTION

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ABSTRACT

Consumer satisfaction with a product is usually modeled relative to other brands. Yet a large body of research shows that product evaluation often includes both brand- and product-level comparisons. Furthermore, theory in consumer behavior and psychology suggests that product-level comparisons might occur in forming satisfaction judgments. An empirical study demonstrates that including product-level standards of comparison in a model of satisfaction significantly increased the amount of explained variance. Additional exploratory evidence suggests that product-level standards of comparison may be more important for non-necessity items such as home improvements and furnishings, sports equipment, kitchen gadgets, musical instruments, and hobby equipment.

INTRODUCTION

Researchers and managers have expended considerable effort to measure, predict, and monitor consumer satisfaction (Yi 1990); however, consumer satisfaction modeling and measurement continue to suffer from a number of unresolved complexities (Peterson and Wilson 1992; Yi 1990). One of the more significant challenges has been the selection of an appropriate standard of comparison for determining satisfaction (Cadotte, Woodruff, and Jenkins 1987; Tse and Wilton 1988).

When modeling consumer satisfaction, product performance is a key component and yet performance must be compared to some specific standard (Day 1977; Oliver 1977, 1980; Yi 1990), even if the standard is implicit. Previous consumer-level research has generated many possible standards of comparison for judging performance including prior expectations (Oliver 1980), experience-based norms (Cadotte, Woodruff, and Jenkins 1987), values (Westbrook and Reilly 1983), desires (Spreng and Olshavsky 1993; Spreng, MacKenzie, and Olshavsky 1996),

current expectations (Cote, Foxman, and Cutler 1989), degree of equity (Fisk and Young 1985), and prior experience with similar products (LaTour and Peat 1979). All these discussions, however, have limited consumers' standards of comparison to the brand level.

Even research that expands the comparison standard beyond the focal brand conceptualizes and operationalizes the comparison standard at the brand level. For example, Cadotte, Woodruff, and Jenkins (1987) have denoted three types of "experience-based" norms: 1) the product type norm consists of consumers' beliefs about the average attributes possessed by all *brands in the product category*; 2) the best brand norm includes consumers' beliefs about those same *brand attributes possessed by the best product in the category*; and 3) the focal brand expectations captures consumers' beliefs about the *brand attributes of the actual brand chosen*. These three norms are all based on brand-level experiences within a single product category, not across different product categories. Furthermore, most recent research supports an expanded model of satisfaction including desires as a significant comparison standard. Although this research does not focus on brand comparisons, desires are defined at the most concrete level of attributes and benefits; e.g., easy to use (Spreng, MacKenzie, and Olshavsky 1996).

In addition to a brand-level focus in defining the standard of comparison for performance, there has been a brand-level focus in measuring satisfaction with performance. This can be seen in the attributes listed in surveys measuring satisfaction, namely, ease of operation and sound clarity for electronic record players (Tse and Wilson 1988) or fuel economy and handling for automobiles (Oliver 1992). These attributes are all specific to products within a single product category rather than alternative product categories from which the consumer may have chosen to spend their money.

An expanded conceptualization of the satisfaction model would consider product-level

(cross-category) standards in the satisfaction model. To distinguish between product-level standards and brand-level standards, we draw from Lancaster's (1971) work on an economic theory of the consumer (also see Ratchford 1975) to define the term "brand-level" as the same product form filling the same needs. For example, comparisons between three brands of treadmills (e.g., True, Precor, and Trotter) would be at the brand level. Following Day, Shocker and Srivastava (1979), we use the term "product-level" to refer to different product forms, filling either a similar or unrelated need that is important to the consumer. For example, Trotter treadmills might be compared to other exercise equipment (shoes, videotapes, various types of equipment, club memberships), other health maintenance products like monitoring devices or food preparation equipment (scales, blood pressure kits, doctor's visits, kitchen appliances, gadgets, cookbooks, etc.), or any other option the consumer may have considered (category, generic, and budget respectively; Lehmann and Winer 1994).

The purpose of this research is to examine the usefulness of including product-level standards into consumer satisfaction models. More specifically, this study is the first study to simultaneously consider brand-level and product-level standards' effect on explaining consumer satisfaction.

CONCEPTUAL BACKGROUND

Numerous topic areas in marketing recognize the importance of both brand- and product-level evaluations. We outline several streams of research which discuss how both brand- and product-level comparisons affect product evaluation and choice. The purpose of this discussion is simply to highlight the importance of product-level comparisons. We then use norm and regret theory to justify including product-level comparisons in satisfaction models.

Choice and Consumption

Within information processing, evidence exists for the idea of a phased decision strategy when making choices (Park and Smith 1989). This strategy is referred to as a "goal-driven, top-down" approach where decision making is based on

hierarchical sets of alternatives. At early stages, consumers' evaluations often include product-level comparisons in order to identify "goal-satisfying alternatives salient or accessible on a particular occasion" (p. 183, Shocker et al. 1991, Johnson 1989). In phased decision making, people move from one level of comparison to another. As such, even if the final decision is a brand versus brand comparison, it may well be that earlier stages included product versus product comparisons.

Likewise, product consumption (not just product choice) is often viewed as being goal-oriented rather than brand (attribute)-oriented (Bagozzi and Warshaw 1990; Gardial et al. 1994; Westbrook and Reilly 1983). Bagozzi and Warshaw (1990) develop a broad model that explicitly recognizes goals can be achieved through different methods including alternative product categories. For example, purchases aimed at enhancing one's career could range from a new suit to an educational program. Viewing products as goal-oriented changes our perspective on product choice and evaluation such that we do not limit our analyses to attributes within a product category but to attributes of the goal.

As noted by Johnson (1984; 1988), evaluations of product category alternatives (i.e., at least two alternatives from multiple product categories) or noncomparables (i.e., only one alternative from each of multiple product categories) is quite different than traditional brand evaluations. In the choice process, different types of attributes may be considered and in different orders, depending on the alternatives considered. Consumers evoke more concrete attributes for comparable brand alternatives and more abstract attributes for noncomparable alternatives (Bettman and Sujan 1987; Johnson 1984). Furthermore, as choice processing continues, the evaluative attributes change, becoming more abstract with noncomparables and more concrete with product category alternatives as consumers hierarchically eliminate categories to focus on within-category brand evaluations (Johnson 1989). These empirical differences demonstrate the importance of brand- and product-level Considerations.

Levels of Competition

Not only is the prevalence of product-level

considerations evident within the individual consumer as seen in the choice literature, it is also evident in corporate thinking as indicated by the strategy literature. Managers are encouraged to avoid marketing myopia by thinking about their markets and competition at several levels (Kotler 1991; Lehmann and Winer 1994), in terms of their degrees of similarity (Weitz 1985), or as hierarchies (Day, Shocker, and Srivastava 1979). Broad definitions of competition are viewed as essential to making strategic marketing decisions (Day, Shocker, and Srivastava 1979; Lehmann and Winer 1994). An example is given by Cadbury (1975), of Cadbury Chocolates, who stated, "...we talk of the boxed chocolate assortment market, when boxes of chocolate are also competing in the consumer's mind with flowers, records, books, and other semi-casual gifts" (p. 105). Firms such as General Motors have used this approach to determine relevant competition and to design marketing strategies to improve the position of an automobile relative to the competing uses of money, including school tuition, a vacation, and home improvements (Hauser and Urban 1986). Marketing managers recognize that product evaluations and choice are made across brand and product levels of competition. Thus, we see the importance of product-level considerations in individual decision making and in corporate decision making.

Theoretical Support for Product-Level Considerations

Despite demonstrating the importance of product-level considerations in choice and in analyzing competition, no research to date has explicitly included product-level and brand-level evaluations in predicting satisfaction. Two theories from psychology suggest that such considerations will impact satisfaction with the product purchased. According to norm theory, when people are disappointed, they construct alternative realities about what could have happened (Kahneman and Miller 1986). These alternative realities include any foregone options including those not considered at the time of choice. The consumer satisfaction literature provides support for this view. Satisfaction with a brand is influenced by both postpurchase

evaluations of that brand and of other brands considered prior to purchase but foregone (Droge and Mackoy 1995). The notion of nonchoice has been incorporated into satisfaction research by recognizing that foregone brands serve as standards of comparison (e.g., best brand suggested by Cadotte, Woodruff, and Jenkins 1987). Indeed, Droge, Halstead, and Mackoy (1997) found that satisfaction with the nonchoice alternative influenced overall satisfaction. The emphasis on nonchoices in the satisfaction literature focuses only on other brands in the evoked set.

Given that items from other product categories are sometimes considered in prepurchase evaluations (Johnson 1984; Park and Smith 1989), norm theory and current research in satisfaction suggest that these product-level considerations will impact postpurchase evaluations of satisfaction with the chosen item. Norm theory suggests the focus may go beyond the evoked set since consumers may construct a set of all unchosen alternatives including other uses for the money spent. Fully extending norm theory to consumer satisfaction would suggest that if consumers are dissatisfied, they would reevaluate both foregone alternatives and constructed realities including options not previously considered. Since product-level options are likely to be part of these constructed realities, norm theory suggests that product-level comparisons should be included in models of satisfaction.

In addition to norm theory, regret theory also supports including product-level considerations as a comparison standard. Regret theory posits that nonchoices (e.g., items not chosen whether or not they were in the evoked set) can affect evaluations of the choice's utility (Loomes and Sugden 1982). Regret is derived from a comparison "between the assets actually received and the highest level of assets produced by other alternatives" (Bell 1982, p. 963). As such, regret theory would suggest satisfaction with the choice depends on the postpurchase analysis of the consumer's degree of preference of other alternatives. The choice set would include all products, not just alternative brands, considered (Shocker et al. 1991). Therefore, since consumers make prepurchase comparisons at the product level (Bagozzi and Warshaw 1990; Kotler 1991; Park and Smith

1989), postpurchase nonchoice comparisons must also include different types of products. Furthermore, these nonchoices need not have been considered prior to purchase.

HYPOTHESIS

Both norm theory and regret theory suggest that any reasonable option can become a standard for comparison in evaluating product performance for determining satisfaction. It is irrelevant if the option was considered prior to purchase or consumption. As long as an option represents a potential alternative for purchase, it can be a basis for evaluating postpurchase reactions. The product choice and levels of competition literatures repeatedly demonstrate that other product categories represent potential alternatives. As such, we conclude that product-level comparisons will play a significant role in determining satisfaction.

While product-level comparisons are likely to influence satisfaction, this does not preclude the effects of brand-level evaluations. Different standards of comparison may not operate independently (Cadotte, Woodruff, and Jenkins 1987). By using multiple standards of comparison, a greater amount of variation in satisfaction can be explained (Yi 1990). For example, Spreng and Olshavsky (1993) significantly improved model fit by including both consumer's desires and prior expectations as standards of comparison. Similarly, Oliver and DeSarbo (1988) found that including both prior expectations and equity variables as standards of comparison resulted in the best model fit. We hypothesize that both brand- and product-level standards of comparison will jointly influence satisfaction. Therefore, the following hypothesis is proposed:

H1: Product-level and brand-level standards will significantly increase explained variance in satisfaction over that explained by brand-level standards only.

METHOD

In order to examine the importance of product-level standards, we conducted focus groups to identify a product category where

satisfaction was affected by either brand- or product-level attributes. In addition, the product category had to be one where alternative uses of the money might be considered. Exercise equipment was identified as a commonly owned product that met these criteria.

Sample

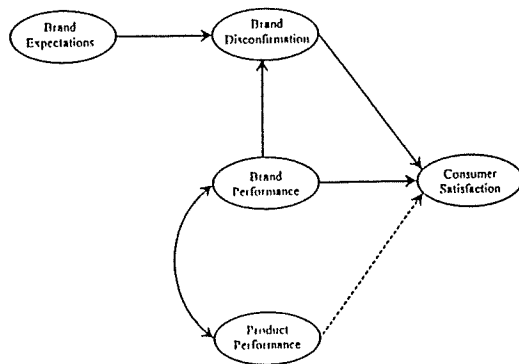
The sample consisted of 106 nontraditional (e.g., older, working) undergraduate and graduate college students. The average student age was just over 31 years and the average income exceeded \$35,000. Respondents were prescreened for ownership of a piece of exercise equipment and completed a questionnaire on their equipment (subject answered the following question: "Please name a piece of exercise equipment that you have bought. Be sure it is something you have bought and not something that was given to you. Briefly identify the piece of equipment"). Those with a large number of missing responses were deleted from the data set. In cases where only one or two responses were missing, the respective means were substituted. After screening, the sample consisted of 96 respondents.

Model

Research has indicated that there are many different models used to determine consumer satisfaction (e.g., Folkes, Koletsky and Graham 1987; Mano and Oliver 1993; Oliver 1980; 1993; Oliver and Swan 1989; Westbrook 1987). To test the explanatory ability of product-level comparisons, we used a modified disconfirmation model which included a direct effect for performance (Bearden and Teel 1983; Bolton and Drew 1991; Cadotte, Woodruff, and Jenkins 1987; Churchill and Surprenant 1982; Oliver and DeSarbo 1988; Tse and Wilton 1988). This model provided the most parsimonious test of our hypothesis (Sternthal, Tybout, and Calder 1987).

As depicted in Figure 1, product performance was allowed to correlate with brand performance. In the base model, product performance has no direct effect on satisfaction (included only to allow for a nested models test). For the hypothesized model, product performance was allowed to directly affect satisfaction. The difference in

Figure 1
Hypothesized Model of Consumer Satisfaction
 (——— Base and Hypothesized Model;
 ----- Hypothesized Model only)



model fit and amount of satisfaction explained indicates the unique contribution of adding product-level performance as a predictor of satisfaction. Since theory suggests that foregone alternatives may not have been considered prior to purchase or consumption, it was deemed inappropriate to include either product-level prepurchase expectations or disconfirmation in either model.

Measures

Satisfaction. The satisfaction measures consisted of four single-item measures used extensively in the consumer satisfaction literature. Subjects were asked to, "indicate how you feel about having bought this item:" and responded on the following four scales: "satisfied-dissatisfied," "pleased-displeased," "good-bad," and "delighted-terrible."

Defining Brand versus Product Evaluations. After measuring satisfaction, respondents were given **detailed** instructions explaining the difference between brand- and product-level evaluations. Popular conceptualizations of the various levels of competition typically include either three or four types, such as product form, product category, generic, and budget (Lehmann

and Winer 1994). Unfortunately, distinguishing between these levels for a given product can sometimes be difficult or idiosyncratic to the respondent. Thus, operationalizations have focused on two levels: brand versus brand (brand level) and brand versus product category (product level) (e.g., Johnson 1984; Park and Smith 1989). Therefore, the following instructions were provided:

There are two levels at which people can be satisfied or pleased with a purchase:

1. Satisfaction with the item you bought relative to other brands, models or styles of the item that you did not buy. For example, you might compare your satisfaction with having bought a Hitachi bread machine relative to a Cuisinart bread machine.
2. In this survey, we will refer to this level as **brand level** satisfaction/dissatisfaction.
3. Satisfaction with the item relative to other things you could have done with your money. For example, you might compare your satisfaction with having bought a bread machine relative to buying a VCR, a plane ticket to visit friends, or saving your money.

In this survey, we will refer to this level as **product-category level** satisfaction/dissatisfaction. This means that you could be:

- * Glad you bought the product category (bread machine) but wished you would have bought a different brand (Cuisinart instead of Hitachi). In this case, you are **DISSATISFIED AT THE BRAND LEVEL** but **SATISFIED AT THE PRODUCT-CATEGORY LEVEL**.
- * Pleased with the brand (Hitachi) you bought but wished you would have spent your money differently (a VCR instead of a bread machine). In this case, you are **SATISFIED AT THE BRAND LEVEL** but **DISSATISFIED AT THE PRODUCT-CATEGORY LEVEL**.
- * **SATISFIED AT BOTH LEVELS** (glad you bought a Hitachi and glad you bought a bread machine).
- * **DISSATISFIED AT BOTH LEVELS**

(displeased with the Hitachi brand and unhappy that you purchased a bread machine at all)

We are now going to ask you some questions about your brand level and product-category level satisfaction/dissatisfaction with the item you regret having purchased which you mentioned on page 1.

Brand and Product Performance. Consistent with Johnson's (1986) and Corfman's (1991) findings, higher order attributes were used to describe both brand and product performance. Brand performance was assessed by asking subjects to evaluate, "the performance of the particular item you bought relative to other brands, models, or styles of the same type of product." They responded on three semantic differential scales anchored by the terms: "performs well-performs poorly", "high quality-low quality", and "good-bad." Product performance comparisons were assessed relative to the other things you could have done with your money using goal-oriented behaviors as descriptors (Bagozzi and Warshaw 1990; Park and Smith 1989). Subjects were asked to evaluate, "the performance of the type of product you bought, in general, relative to other things you could have done with your money." Responses were indicated on three scales anchored by: "rewarding-not rewarding," "enjoyable-not enjoyable," and "beneficial-not beneficial."

Expectations and Disconfirmation. Expectations and disconfirmation were measured only at the brand level. Standard question formats from the literature were used. Expectations were assessed by asking: "Compared to other brands, models, or styles of this type of product, I expected the particular item I bought to perform well-perform poorly, to be high quality-low quality, and to be good-bad." Disconfirmation was assessed by asking: "My expectations about this item's _____ was: Too High (It was worse than I expected), Accurate (It was just as I expected), Too Low (It was better than I expected)." Subjects indicated their responses for three descriptors: performance, quality, and effectiveness.

Table 1
Structural Equation Model Standardized
Estimates
(All Models fit with EQS version 4.0)

	Brand Only	Brand and Product Model
Factor Loadings		
Satisfaction 1	0.982	0.981
Satisfaction 2	0.989	0.990
Satisfaction 3	0.930	0.934
Satisfaction 4	0.929	0.932
Brand Performance 1	0.880	0.880
Brand Performance 2	0.862	0.864
Brand Performance 3	0.976	0.980
Product Performance 1	0.955	0.950
Product Performance 2	0.875	0.863
Product Performance 3	0.943	0.953
Expectations 1	0.952	0.953
Expectations 2	0.843	0.843
Expectations 3	0.912	0.912
Disconfirmation 1	0.849	0.845
Disconfirmation 2	0.852	0.855
Disconfirmation 3	0.761	0.759
Predictors of Satisfaction		
Brand Performance	0.756	0.068
Product Performance	na	0.704
Disconfirmation	-0.015	-0.224
Total Variance Explained	47.2%	57.0%
Predictors of Disconfirmation		
Brand Performance	-0.843	-0.844
Expectations	0.147	0.154
Correlation Between Brand and Product Performance		
	0.713	0.697
Summary Statistics		
	$\chi^2=246.4$	$\chi^2=67.116$
	df=99	df=1
	CFI=0.921	CFI=0.036

RESULTS

The brand-only model fit the data reasonably well ($\chi^2=246.4$, $df=99$, $CFI=0.921$). All the loadings were statistically significant and large (See Table 1).

Consistent with previous research (Churchill and Surprenant 1982; Tse and Wilton 1988), satisfaction was explained solely by performance ($t=4.67$). Nevertheless, there is an implicit standard of comparison in the performance measure since respondents made performance comparisons relative to other brands, models, or

styles. Disconfirmation was affected by both performance and expectations ($t > 2$), but did not explain any variance in satisfaction ($t = .09$). The brand- and product-level model showed significant improvement over the brand-only model. Adding the direct effect for product performance raised the amount of satisfaction explained by the model from 47% to 57% ($\Delta\chi^2 = 67.116$, $df = 1$, $\Delta CFI = 0.036$). As such, the results support our hypothesis; adding product-level standards increased the amount of explained variance in satisfaction.

DISCUSSION

This study is the first attempt to simultaneously incorporate brand- and product-level standards in consumer satisfaction research. In this study both brand-level (feelings about an item relative to other brands) and product-level comparisons (feelings about an item relative to the other things you could have done with your money) are shown to be significantly related to satisfaction. These results suggest that managers may be drawing erroneous conclusions about satisfaction, especially when consumers are dissatisfied.

The ubiquitous questionnaires measuring satisfaction focus on brand-specific, attribute evaluations (e.g., how satisfied are you with power, service, picture clarity, durability, food quality, etc.). Using only brand-level attributes ignores what we know about the nature of competition and consumer choice. Current approaches do not tap consumers' satisfaction relative to other possible uses of their money. The results of our study provide support for the notion that product-level standards affect satisfaction evaluations. Thus, managers should be sensitive to this expanded view to accurately understand their consumers' satisfaction or dissatisfaction.

Our empirical support for product-level comparisons is based on a single product category. In order to understand the conditions under which product-level comparisons would be important, we conducted a brief exploratory survey using the same nontraditional student population. The survey began with an explanation of the two levels of satisfaction, similar to that given in the original study. Subjects were then asked to write about two purchases for which they were dissatisfied at

the brand level and two purchases for which they were dissatisfied at the product level. In particular, at the brand level, they were asked twice to name a product for which they wished they had bought a different brand and then to explain why they were dissatisfied with the brand they bought. Similarly, at the product level, they were asked twice to name a product for which they wished they had used their money some other way, and then to explain why they were dissatisfied with having bought the product.

A total of 51 respondents listed 98 examples of brand-level dissatisfaction and 93 examples of product-level dissatisfaction. The reasons for dissatisfaction were simultaneously examined by two judges and were placed in several categories. We dropped from the analyses any examples that did not unambiguously fit the appropriate level (e.g., for product-level dissatisfaction they compared a different form of a product in the same product category, such as a regular phone with a cordless phone/answering machine combo). After dropping these cases, we had 95 brand examples and 64 product examples. The reasons for dissatisfaction at the brand and product levels as well as the product categories and their frequencies are shown in Table 2.

The reasons for brand versus product dissatisfaction are both different and quite instructive. Brand-level reasons focus almost entirely on performance of a specific attribute (this included respondents displeased because an item lacked a feature). In addition, poor quality or reliability, inferior brands, and poor overall performance were common reasons for brand dissatisfaction. These findings support the previous satisfaction work which has focused on attribute performance as a means of explaining brand-level satisfaction (e.g., Cadotte, Woodruff and Jenkins 1987).

At the product level, the majority of reasons focused on lack of use; not finding enough friends to use the product with, having the fun/excitement/novelty/interest wear off, or they should not have bought the product in the first place. Other reasons for product-level dissatisfaction included that the respondent felt the item was difficult to use, they didn't like the item, or that they should have waited longer to make the purchase.

Table 2

Reasons for Dissatisfaction (exploratory study)	
Brand-Level Reasons	# of Responses
Reliability or poor quality	33
Inferior brand/another brand better	27
Attribute specific comments	59
Didn't perform well	16
Too expensive/not worth money	6
After sales service problems	8
Product-Level Reasons	
Difficult to use	10
Don't use at all or enough	27
Should have bought something different	14
Doesn't fulfill needs, just don't like, didn't work	15
Others won't do	2
Spent too much/not worth money	4
Got tired of it	2
Shouldn't have bought product at all/don't need/ save money	23
Should have waited longer before buying	5
Can't get things need to use	1
Dissatisfaction by Product Category (exploratory study)	
Dissatisfaction with Brands	
Food and Beverage	16
Consumer Electronics	15
Autos & Parts ^a	14
Personal Care Products	11
House Cleaning (durable and nondurable)	9
Misc. durables ^b	9
Clothing and Accessories	7
Misc. nondurables	6
Sports Equipment	4
Furniture	3
Service or Store	1
Dissatisfaction with Products	
Sports Equipment	15
Games, Hobbies, and Musical Instruments	9
Consumer Electronics	8
Autos & Accessories	6
Kitchen Gadgets	5
Lotteries / Money Schemes	4
Misc. Durables	4
Furniture	3
Decorative	3
Jewelry	2
Clothes	2
House Cleaning	1
Food	1
Personal Care Products	1

^a For brands, autos were usually cars or pickup trucks versus motorhomes and motorcycles for product.

^b For brand dissatisfaction, examples include washers, dryers, bandsaw, riding mower, heat pump, microwave, sewing machine, and boat cover. For product dissatisfaction, examples include a fence, riding mower, and paint sprayer.

In general, these reasons for dissatisfaction given by respondents fit with emerging research on product nonuse. Bower and Sprott (1995) argue that one of the reasons for product nonuse is that people are poor predictors of future preferences (Kahneman and Snell 1990; Hoch and Loewenstein 1991; Simonsen 1990). Greenleaf and Lehmann (1994) found that one of the reasons for delaying a purchase is that consumers were unsure they "would use the product enough to justify buying it" and that they "wanted to avoid any regrets over having made the wrong decision."

In addition to gaining a better understanding of the reasons for dissatisfaction at the brand and product levels, we were also able to look for product class differences (see Table 1). As might be expected, dissatisfaction with the brand purchased could occur for any product class, as long as there are other brands available for comparison; however, product-level dissatisfaction would be unlikely when the product class is viewed as a necessity and no other uses of one's money would satisfy the need. This is supported by the subject-generated list of products. Namely, foods were only listed in examples of brand-level dissatisfaction. Similarly, cars were listed more frequently at the brand level than at the product level. Non-necessity items dominated the list of product-class items, including such items as home improvements and furnishings, sports equipment, kitchen gadgets, musical instruments, hobby equipment and even motorcycles.

Overall, the 51 subjects provided 64 examples of product-level dissatisfaction, across a wide range of products. This suggests that consumers commonly experience product-level dissatisfaction. As such, the value of adding product-level comparisons to satisfaction models is not limited to the case of exercise equipment. Instead, product-level comparisons appear to occur for a broad range of frequently purchased items.

IMPLICATIONS

The importance of product-level comparisons in measuring and predicting satisfaction carries implications for marketing practice. Managers frequently use complaint behavior as an indicator of satisfaction and repurchase intent (Gilly and Gelb 1982; Singh 1988). In fact, it has even been

suggested that complaint behavior be incorporated in satisfaction models (Oliver and Swan 1989). Unfortunately, if product-level comparisons create dissatisfaction, customers may be unlikely to complain because their dissatisfaction cannot be remedied by the manager. This would cause managers to wrongly conclude that their customers are in fact satisfied. For example, Bolton and Bronkhorst (1995) found that 37.6 percent of customers discontinuing cellular phone service were somewhat (20.7%) or very (16.9%) satisfied with their provider. In addition, only two-thirds of those discontinuing service went to a competitor, implying that one-third (12.5% of original customers) were satisfied at the brand level but chose not to continue consuming, most likely because overall they were dissatisfied at the product level. By focusing solely on brand-related attributes, the exact causes of satisfaction with cellular phones and exit from the market may be overlooked.

Managers also need to examine the possibility of dissatisfaction caused by product-level comparisons and develop strategies to enhance overall consumer satisfaction. Ram and Jung (1990) suggest combating product nonuse (a major product-level cause of dissatisfaction) by providing user-friendly aids such as manuals or information displays encouraging product usage. Understanding the role of product-level postpurchase comparisons could also facilitate decisions about cross-product advertising (see, for example, Doyle and Saunders 1990), especially when the promotional message is intended to reduce postpurchase dissonance. These strategic implications suggest the managerial importance of product-level postpurchase evaluations.

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PROMISES, PROMISES: INDUSTRIAL BUYER SATISFACTION WITH DELIVERY DELAYS

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ABSTRACT

The satisfaction responses of professional buyers resulting from different waiting situations are studied. These situations include times when delivery is made on time when promised for various lengths of time, and times when the buyer is advised that the original delivery date could not be met and an additional waiting period would be necessary. Drawing from various areas of literature, propositions are made and tested in a role play experiment.

INTRODUCTION

Waiting for the delivery of a product or service is an experience most people have had. Rarely, if ever, does one think of a pleasant wait for delivery. Industrial buyers are also sensitive about delivery delays. Chao (1991) found that delays ranked fifth in importance out of twenty-one items in a survey of industrial buyer concerns.

The waiting experience has drawn academic interest from a variety of areas such as operations management (Chase and Aquilano 1985, Ch. 4 and Hodgkin and Starkie 1978) and sociology (Schwartz 1975). In the field of marketing, a number of studies have contributed to the understanding of waiting and its associated affective responses. For example, Andrus (1986) and Bitner (1990) studied the effect of office atmospherics on waiting dental patients and airline travellers, respectively. Maister (1985) considered the effect of waiting in lines for service, and in particular, the way the waiting time is spent, psychological states during the wait, attribution of cause, and perceptions of justice.

This paper considers the industrial buyer and examines satisfaction resulting from the wait for delivery of a product. It looks at buyer responses to a simple waiting-for-delivery experience as well as situations where unanticipated changes in a delivery promise, both earlier and later, occur.

Satisfaction and Waiting

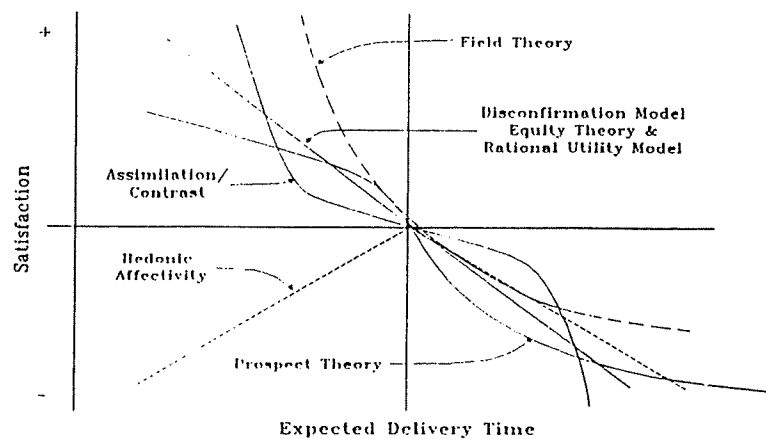
Taylor (1994) studied airline customers with the aim of understanding the negative effects of waiting. Her work emphasized the number of psychological factors that bear on the buyer's satisfaction. Specifically tested were several hypotheses related to perceptions of duration, aversiveness, and service evaluation in response to waits for airline service. Taylor's work suggested that longer waits are related to aversiveness or unpleasantness and result in decreases in perception of service quality. With this relationship and a relationship between perceptions of quality and satisfaction observed by Parasuraman et al. (1986), a relationship between satisfaction and delays seems likely.

Osuna (1985) proposed a model of psychological cost or stress in waiting situations. In the model, stress was proposed to be a nondecreasing function of waiting time in situations of uncertain delivery time. Furthermore, stress levels would stop increasing when the person waiting was informed of certain delivery time. On delivery of the product, stress would drop to a lower, but still higher than original, level. It is this final, post-transaction level of stress that is of interest in this project.

Taylor (1994) and Osuna (1985) have generally considered the satisfaction response function resulting from waiting situations to be downward sloping. However, several variations of satisfaction response curves are suggested in related literature. These are discussed below under the various types of response functions expected.

Linear Relationship. Oliver and Desarbo (1988) described the expectancy-disconfirmation process of satisfaction as stemming from social psychology, where a comparison is made between a perceived level of an attribute and a previously formed expectation. Similarly, Tse and Wilton, (1988) defined satisfaction as "the customer's response to the evaluation of the perceived discrepancy between prior expectations ... and the

Figure 1
Proposed Satisfaction Response Curves for the Delivery Promise Relationship



actual performance of the product." LaTour and Peat (1979) viewed satisfaction as the sum of the discrepancies between expected and perceived attributes. The relationship between that discrepancy and satisfaction would be continuous and monotonic.

The traditional disconfirmation view, assuming accurate perception, is that the relationship is linear. Another rationale for linearity comes from equity theory. According to Swan and Oliver (1984), "equity theory posits that a buyer will compare his inputs .. to outcomes from the marketer and form a perception of his net gain". In the case of delayed delivery, the waiting customer may view time as a valued resource. Applicability of equity theory to waiting can be seen when time is valued in monetary terms as suggested by the economic approaches such as that of Becker (1965). Time spent waiting could be considered as an investment by the buyer. The waiting customer may also view time as having utility to the seller. Forcing a customer to wait allows the supplier to gain benefits such as flexibility in scheduling, less expensive manufacturing, smoother demand and the ability to serve important customers first.

With such a view of the transaction the buyer may enter into a transaction with the notion that each party will have made an investment in the deal. Since having to wait for the product places

the buyer at a disadvantage relative to the seller, the buyer's dissatisfaction will be proportional to the length of the wait. Consideration of disconfirmation, equity and the notion of rational utility of time (RU) lead to the expectation of a linear relationship, as follows:

Proposition 1A: Satisfaction decreases with increasing duration of wait at a constant rate.

This linear relationship is illustrated, along with other proposed relationships, in Figure 1.

A number of deviations from the linear relationship can also be envisioned. These are discussed in the following sections.

Convex Relationship. According to Lewin's field theory (Kassarjian 1973), future and past events are viewed as less real than present events, and thus have less impact. That rationale has been used to explain waiting consumers' perceptions of service quality; "the closer an individual is to a goal, the more pressing the forces are toward the goal" (Dube-Rioux, Schmitt and Leclerc 1989). Field theory may be applicable to the buyer waiting for delivery. It suggests that the buyer evaluates an incremental increase in the wait for delivery as less dissatisfying, the further in the future the increase occurs. Field theory implies a relationship that is still monotonically downward

sloping, but is nonlinear and convex in terms of the wait for delivery.

Proposition 1B: Satisfaction decreases with increasing duration of wait at a decreasing rate.

S-shaped Relationship. Another possible reason for nonlinearity in the response to waiting is that buyers may exhibit a "zone of indifference" (Woodruff et al. 1983), which would appear as a flat portion of the downward-sloping curve in the vicinity of the expected delivery. That can be explained by assimilation, whereby buyers tend to cling to prior judgements and assimilate small observed discrepancies. Non-linearity may also result from the opposite effect called contrast, whereby large discrepancies appear to be greater than they are (Anderson 1973, Woodruff et al 1983). Combining the effects of both assimilation and contrast results in an S-shaped downward-sloping curve. Its curvature is shallow to flat in the vicinity of the expected delivery, but increasingly steep for large discrepancies from the expected delivery.

Proposition 1C: Satisfaction decreases with increasing duration of wait, and the rate of decrease is flattest at the expected delivery.

Reverse S-shaped Relationship. Buyers may respond in the opposite sense to that predicted by the contrast effect. Assume that a discrepancy exists between the actual delivery and the buyer's expected delivery. Prospect theory (Kahneman and Tversky 1979) suggests that any incremental change in delivery would be evaluated in relation to the existing discrepancy. If the discrepancy is large, the incremental change would seem small, and would cause only a small change in satisfaction. Small incremental changes in satisfaction are therefore associated with large delivery discrepancies, and the converse. The resulting satisfaction curve is downward sloping, with its greatest rate of change in satisfaction at the expected delivery. It is also asymmetrical about the expected delivery time. Gains or early delivery would show a flatter slope than losses or late delivery.

Proposition 1D: Satisfaction decreases with increasing duration of wait, and the rate of decrease is steepest at the expected delivery.

Non-monotonic, Concave Relationship. The preceding relationships were all based on the assumption that early delivery provides more satisfaction than late delivery. For some products, however, disconfirmation can be dissatisfying for either positive or negative discrepancies. The phenomenon has been termed generalized or hedonic affectivity (Anderson 1973, Oliver 1976). If that effect applies to buyers waiting for delivery, dissatisfaction would result from early delivery as well as late delivery. The satisfaction curve would be upward-sloping before the expected delivery and downward-sloping after. Oliver (1976) approximated it by two linear segments, although there is no apparent reason why the curve could not be an inverted U-shape.

Proposition 1E: Satisfaction is at a maximum at the buyer's expected delivery, and decreases with either positive or negative disconfirmation.

THE ADDITIONAL-DELAY SITUATION

In the event that the originally promised delivery could not be met, the seller would be forced to advise the buyer of the delivery delay giving rise to what Taylor (1994) referred to as a post schedule waiting experience. This introduces another set of potential antecedents to satisfaction which are related to this additional delay. They include the length of the delay as well as the time at which the buyer is informed of the additional delay. All three of the independent variables could thus have an effect on the satisfaction level experienced by the buyer.

Main Effects

a. Response to Length of Additional Delay (W2). Response functions, similar to those discussed above with regard to initial delays can be envisioned for the waiting period after an additional delay. These may be variously shaped but will likely be downward sloping. This project will study only the first such additional wait

because, although subsequent delays are likely to be increasingly serious, they will also be decreasingly probable. Thus from disconfirmation, equity theory as well as the RU model, a main effect of length of additional wait will be seen.

P2: The satisfaction levels will be lower with longer additional delays.

b. Response to Notification Timing (NT).

Prospect Theory. Assuming that delays can be treated as costs, prospect theory might have implications for promise schedules. According to prospect theory, because equivalent losses are generally perceived to be larger than gains, pessimistic estimates of deliveries should be used. Also, the trend of decreasing marginal values suggests that, if repeated promises must be made, they should be made before the reference point has had a chance to move back up the curve. In other words, later changes in the delivery promise, once the original information is assimilated, are more damaging than earlier promises as Thaler (1985) suggested.

Prospect theory was extended by Thaler (1985) in a model of consumer behavior which draws from both cognitive psychology and microeconomics. Like Kahneman and Tversky, Thaler was concerned with gains and losses but he considered the particular case of multiple gains and losses and the form of delivery of them. Drawing on Prospect Theory, it was shown that multiple gains should be segregated to maximize their perceived value, while multiple losses should be integrated to minimize theirs. Mixed gains demand integration. Mixed losses require segregation. If the gain is relatively small, yielding a silver lining effect, segregation is prescribed. If it is large, in a case of cancellation, integration is recommended. This framing effect was shown to apply to expected conditions as well.

If Thaler's work can be applied to delays, it would suggest that for a given length of delay, the minimum perceived value of the delay, and hence maximum satisfaction, will be attached to a delay by making one promise rather than multiple promises.

While the dynamics of the changing reference

point were not considered by Kahneman and Tversky (1979), Thaler appeared to imply that the frame or reference point returns to the origin very quickly between multiple transactions. This explains why segregated losses are valued as greater than integrated losses. Curiously, while many of Thaler's examples dealt with instantaneous present time scenarios, some did not. In these cases, the reference point was still assumed to have moved to the origin for subsequent stages of the train of events. This seems to indicate that the reference point changes rapidly. This would suggest that rather than risk the additive effect of several highly unpleasant delivery promises, a single more pessimistic estimate might be preferred as it would, presumably, generate less dissatisfaction.

Kahneman et al. (1986), however, in their study of perceptions of fairness demonstrated that reference points adjust more slowly, tending to lag actual conditions. This supports the notion that changing reference points can have an effect in the satisfaction judgement that varies over time.

The timing of when the customer is notified of the additional delay would thus appear to be important. Thaler's approach to prospect theory with its changing reference points, as well as equity theory, suggest that the earlier customers are notified of an additional delay the more satisfied they will be.

Field Theory. From field theory it appears that the timing of the notification of additional delay will be a significant factor. The closer one is to the promised delivery time the more dissatisfying will be the effect of additional delay.

Equity Theory. Equity theory would also suggest that the timing of the notification of delay may have an effect on satisfaction with the additional delay. Again, time before notification could be perceived by the buyer to have value to both buyer and seller. To the buyer, this time could be used to "get used to" the new delivery schedule even if no actual plans are made. This time could be perceived by the buyer as valuable to the seller in that it reduces constraints on scheduling.

Prospect theory, Field theory and Equity theory thus suggest that a main effect of

notification timing will be seen:

P3A: The later the time of notification of additional delay, the lower will be the satisfaction with the transaction.

Alternatively, the RU model would suggest that timing of notification will have no effect on level of satisfaction.

P3B: Time of notification and satisfaction with a transaction will not be related.

c. Response to Initial Wait (Initial Delay - W1). A negative main effect of initial wait length could be predicted. The disconfirmation perspective as well as the RU model would suggest a reaction to W1 as it extends total waiting time. Equity theory would predict a similar response as the buyers weigh their investment in the transaction. Thus, from disconfirmation theory, equity theory and the RU model.

P4A: A main effect of initial wait length will be seen whereby longer W1 will result in lower satisfaction.

Compliance Studies. Foot-in-the-door (FITD) (Freedman and Frazer 1966) and Low-ball (Cialdini et al. 1978) methods of gaining compliance appear to have some relevance to the multiple delay situation. Delays may be thought of as requests for the buyer to wait, and voluntary compliance could be assumed to be related to satisfaction or, at least, lack of dissatisfaction. A feature common to both the compliance studies and the subject of waiting is the fact that they both occur over a period of time.

In the case of FITD, a small request is made first, followed by a larger request. This technique has been shown in several studies, including Freedman and Frazer (1966) and Tybout et al. (1983), to increase voluntary compliance with the second request.

An important difference between FITD and the multiple delay situation is the relative size of the requests. For multiple delays the first request will usually be larger than the second while the reverse is often the case in FITD. Fern et al. (1986) found that compliance with the second request

increased as the size of the first request increased. Thus the two phenomena may still be comparable. The study also found that the delay between requests is not significant, and that a change in the requester did not affect compliance. These findings support the notion that this effect may apply to the waiting situation.

Explanations for this effect have been varied. Originally, Freedman and Frazer (1966) attributed it to a feeling of involvement in the situation by the respondent. Since then, self-perception theory (Bem 1972) has been used to explain the phenomenon but, as Beaman et al. (1983) pointed out, the explanation may only be partial. More recently, information availability has been used (Tybout et al 1983). In it, favorableness of the last-in information has been shown to affect the rate of compliance of the second request.

Tybout et al. (1983) warned that the FITD effect may only apply to situations where the respondent is favorably disposed toward the request in the first place. This suggests that in the case of delays, strongest results would be found in friendly relationships.

The low-ball compliance technique, reportedly prevalent among car dealers, involves allowing a buyer to make an active decision to buy based on a very low price. After the decision is made, price advantages are removed for various reasons and presumably the buyer will remain with the original decision. Cialdini et al. (1978) studied this phenomenon and noted similarities to FITD. They make a distinction between the two processes however. They maintain that in the low-ball procedure, the initial request is the target behavior while, with FITD, it is not. If delivery promises are considered as a request to wait and if additional delays are regarded as different from initial waiting periods, FITD may still apply to the waiting situation. The principle difference between FITD effect and a successful low-ball process would appear to be in the nature of the buyer's response. In the former, an active response would be expected in the choice to comply with another request. This could be interpreted as higher satisfaction than with an alternative. In the result of a low-ball situation the response would be passive in the failure to withdraw from a transaction. This only implies a satisfaction level not lower than the alternative.

The FITD studies found that compliance increases with larger initial requests. This suggests the longer the initial promised waiting period (W1), the higher will be the final satisfaction level.

P4B: A main effect of initial wait length will be seen whereby longer W1 will result in higher satisfaction.

Interactions in the Additional Delay Situation

W1 X W2. From equity theory it seems likely that dissatisfaction associated with additional delays may also be a function of the length of the initial wait. For example, the losing parties, the customers who are faced with additional delays, may be less tolerant of increases in waiting time if they have already waited "long enough". This interaction is shown in Figure 2.4.

P5A: An interaction will be found between length of initial wait and length of additional delay. For a given length of additional delay, the slope of the dissatisfaction response curve will be steeper for a long initial wait than for a short one.

The compliance literature, on the other hand, suggests that in this case, the longer the initial wait (the larger the initial request), the more tolerant the buyer may be of further delays.

P5B: An interaction will be found between length of initial wait and the slope of the response function associated with additional delay. Length of initial wait will be related to smaller slopes in the additional delay response function.

Alternatively, the RU model would predict that satisfaction would be a function of total waiting time only, and would not be influenced by the length of the initial wait.

P5C: No interaction will be found, the response function will be the same whether caused by initial or additional delay.

Notification Timing X W2. Equity theory

suggests that the longer the initial wait, the less tolerant the buyer may be of further delays.

P6A: An interaction will be found between timing of notification and the slope of the response function associated with additional delay. Length of initial wait will be related to larger slopes in the additional delay response function.

Again, the RU model predicts no effect.

P6B: No relationship will be found between the timing of notification and additional wait response function.

ADVANCED-DELIVERY SITUATION

Main Effects

Main effects are predicted in the advanced delivery condition for the same reasons as in the additional delay condition.

P7: A main effect will be seen for initial wait where longer initial wait will result in lower satisfaction.

P8: The greater the improvement in delivery, the higher will be the satisfaction.

P9: Earlier notification of advancement will result in higher levels of satisfaction.

ADDITIONAL-DELAY VERSUS NO-ADDITIONAL-DELAY

To better understand the effect of additional delay, comparison must be made between satisfaction resulting from situations in which no additional delay has occurred and those where delivery has been delayed. In order to avoid confounding of the effect of number of delays, total waiting time should be constant across comparisons.

Aversion to Changes

The cognitive psychology literature indicates a preference for cognitive economy (Tversky and

Kahneman 1974). Cialdini (1988) notes a natural desire to avoid conscious thought. This suggests that there will be an increment of dissatisfaction associated with the simple existence of an additional delay and the cognitive effort expended in consideration of changed plans.

Equity Theory

In the situation of waiting for delivery, buyers may view waiting as an investment or expense in a transaction on both sides. Having this wait increased will upset the balance of the deal as it was made and, according to equity theory, decrease the level of satisfaction of the losing party.

An extension of the delivery time could be seen to take away value from the buyer in two ways. First, the opportunity cost of the waiting time will vary depending on how it is spent. Second, utility will be lost by not having the desired product.

The seller, on the other hand, could be perceived, by the buyer, to gain value from delivery delay in the form of increased flexibility in scheduling.

From the cognitive economy and equity theory perspectives then:

P10A. Late deliveries with multiple delays will result in lower levels of satisfaction than those with only one delay.

On the other hand, Maister (1985) described a "halo effect" with regard to the service encounter. The mood established in the early stages will presumably carry through the balance of the transaction. This would suggest that an optimistic (short) promise early in a waiting period will generate a positive mood and reduce the negative reaction to an additional delay later.

As well, the compliance literature might suggest a higher resulting satisfaction associated with a multiple delay situation as opposed to one characterized by a single delay, thus:

P10B. Late deliveries with multiple delays will result in higher levels of satisfaction than those with only one delay.

The Rational Utility Model

The RU model suggests that the buyer would be sensitive to total waiting time. In other words, barring unusual economic costs beyond simple utility of ownership, the buyer would not be sensitive to additional delays.

P10C. No difference will be seen in satisfaction levels whether additional delay occurs or not.

ADVANCED DELIVERY VERSUS NO ADVANCEMENT IN DELIVERY

The changing reference point literature, including the work of Thaler (1985) in prospect theory, suggests that the buyer's reference point will change or be reinforced with a long initial promise which will yield higher satisfaction when deliveries are improved.

P11A: For a given total waiting time, deliveries which are improved will yield higher levels of satisfaction than those which are not.

The rational model would predict no difference. As well, other mechanisms may come into play. For example acceptance of original delay time may result in little response to improvements.

Table 1
Summary of Propositions - Initial Waiting Period

P1A: Satisfaction will decrease in a linear fashion with initial wait length.

P1B: Satisfaction will decrease with increasing wait length but at a decreasing rate.

P1C: Satisfaction will decrease with increasing length of wait but the rate of decrease will be less near the buyer's expected time of receipt.

P1D: Satisfaction will decrease with increasing length of wait and the rate of decrease will be greatest near the buyer's expected time of receipt.

P1E: Satisfaction will be at a maximum when delivery occurs at the buyer's expected time of receipt.

Table 2
Summary of Propositions - Rescheduled Delivery

ADDITIONAL DELAYS**MAIN EFFECTS**

W2

P2: Longer W2 will yield lower satisfaction.

NT

P3A: Later NT will yield lower satisfaction.**P3B:** NT and satisfaction are not related.

W1

P4A: Longer W1 will yield lower satisfaction.**P4B:** Longer W1 will yield higher satisfaction.**INTERACTIONS**

W1 X W2

P5A: Longer W1 will yield a more negatively sloped response to increasing W2.**P5B:** Longer W1 will yield a less negatively sloped response.

NT X W2

P6A: Late NT will result in more negatively sloped response.**P6B:** No effect of NT will be seen on W2 response slope.**ADVANCED DELAY****MAIN EFFECTS**

W1

P7: Longer W1 will result in lower satisfaction.

W2

P8: Larger improvement in delivery will result in higher satisfaction.

NT

P9: Earlier NT will result in higher satisfaction.

Table 3

Summary of Propositions - Comparison of Multiple Delay to Single Delay Situations

P10A: Late deliveries with multiple delays will result in lower satisfaction.**P10B:** Late deliveries with multiple delays will result in higher satisfaction.**P10C:** No difference will be seen in satisfaction levels between single and multiple delay situations.**P11A:** For a given total waiting time, deliveries which are improved will yield higher levels of satisfaction.**P11B:** For a given total waiting time, improvements in delivery will not increase satisfaction.

P11B: For a given total waiting time, improvements in delivery will not increase satisfaction.

All hypotheses are summarized in Tables 1, 2, and 3.

THE STUDY

Respondents consisted of purchasing managers, drawn from the membership of the Purchasing Managers Association of Canada (PMAC). The managers were asked to assume the role of a buyer involved in the purchase of an office copier. Each received one of several hypothetical delivery scenarios (see Appendix 1 for example) that collectively represented a range of waiting variables.

Role play scenarios have been used in the study of buyer satisfaction (Oliver and DeSarbo 1988, Bitner 1990). Furthermore, the caveats suggested by Sawyer (1977) when using a role-play experiment were taken into account.

Manipulations

The combinations of the various manipulation resulted in a combination of two experiments, a 1 X 7 and a 2 X 2 X 2 design as shown in Appendix 2 whose objectives were to explore two delivery situations:

1. The 1x7 cell block in Appendix 2 represents the promised delivery situation when the delivery is on time. The duration of initial waiting period is manipulated in the scenarios with promised times ranging from 0 to 42 days.

2. The 2x2x2 block in Appendix 2 represents the situation when the delivery is not on time and an additional delay must be endured. Three variables are manipulated in this section of the design. Specifically, the manipulations were as follows.

a. two notifications:

1. prompt = "later that day" (the day the order is placed)
2. delayed = "the day before you (originally) expected to take

- delivery"
- b. revised deliveries:
 1. late = additions of either 7 days or 14 days
 2. early = reductions of either 7 days or 14 days
 - c. length of initial delivery
 1. 14 days (the buyer's expected delivery)
 2. 28 days

Measures

The dependent variable in the study was buyer satisfaction with the transaction after the transaction is completed. Day (1984 in Westbrook and Oliver 1991) points out the difference between satisfaction and attitude where satisfaction is a "postchoice evaluative judgement concerning a specific purchase selection". An affective component of satisfaction has also been identified with satisfaction and in fact Cadotte et al (1987) "conceptualized satisfaction as an emotional response to the judgmental disparity between product performance and a corresponding normative standard" (Westbrook and Oliver 1991). To measure buyer satisfaction with the delivery outcomes described in the scenarios, managers were asked to think specifically about the transaction described in the scenario. They then rated a set of nine scales on global satisfaction (Westbrook 1980), evaluative assessment, and affect (Cadotte, Woodruff and Jenkins 1987). The satisfaction measure consists of the arithmetic mean of the nine scaled items which attempt to measure different aspects of satisfaction.

A self-administered questionnaire was designed and pretested. It was then mailed to a sample of 1258 members of the Purchasing Managers Association of Canada, stratified by gender and SIC code.

RESULTS

With 631 respondents, the response rate was just over fifty per cent after a reminder mailing. Non-response bias was assessed by comparing successive waves (Armstrong and Overton, 1977). The results from the initial mailing were compared to those from the reminder mailing on several

variables. T-tests revealed no significant differences.

The test for reliability produced a coefficient alpha of 0.95. Convergent and nomological validity were supported by significant correlations with measures of attitude, service quality, service satisfaction, and behavioral intention.

On-Time Delivery

The experimental design manipulated the duration of the delivery promise over seven values ranging from "the next day" to 48 days. Replies to this part of the experiment were received from 238 purchasing managers, each of whom responded to one of the seven delivery scenarios. The cell sizes ranged from 28 to 43 with a mean of 34 respondents.

An analysis of variance was performed on the satisfaction- by-delivery measures and a significant main effect [$F(1,231)=4.51$, $p=.000$] was observed. The mean satisfaction scores were plotted, and a downward sloping curve is observed as shown in Figure 2.

Trend analysis using orthogonal polynomials was performed on the data (Keppel 1982 p134). Consistent with the ANOVA result above, a significant linear term [$F(1,231)=20.74$, $p=.000$] is observed, thus supporting Proposition 1A. The relationship between buyer satisfaction and the duration of the delivery appears to be linear.

The location of the response curve is not as expected however. Rather than having a neutral response at the expected delivery duration, the average responses for all treatment groups were in the positive satisfaction range.

The analysis also reveals a quadratic term that is only marginally non-significant [$F(1,231)=3.85$, $p=.051$]. The plot of the means indicates that any non-linearity tends to be concave. That would be inconsistent with the convex shape predicted by Proposition 2. A concave tendency is consistent with the shape that is predicted by Proposition 5 however. The results might therefore be interpreted as providing weak evidence of the relationship implied by Proposition 5. The concave tendency is not strong enough to provide lower levels of satisfaction for deliveries that are shorter than the expected delivery. Perhaps if the scenario had employed a more time-sensitive

Figure 2
Satisfaction With Initial Wait - No Additional Delay

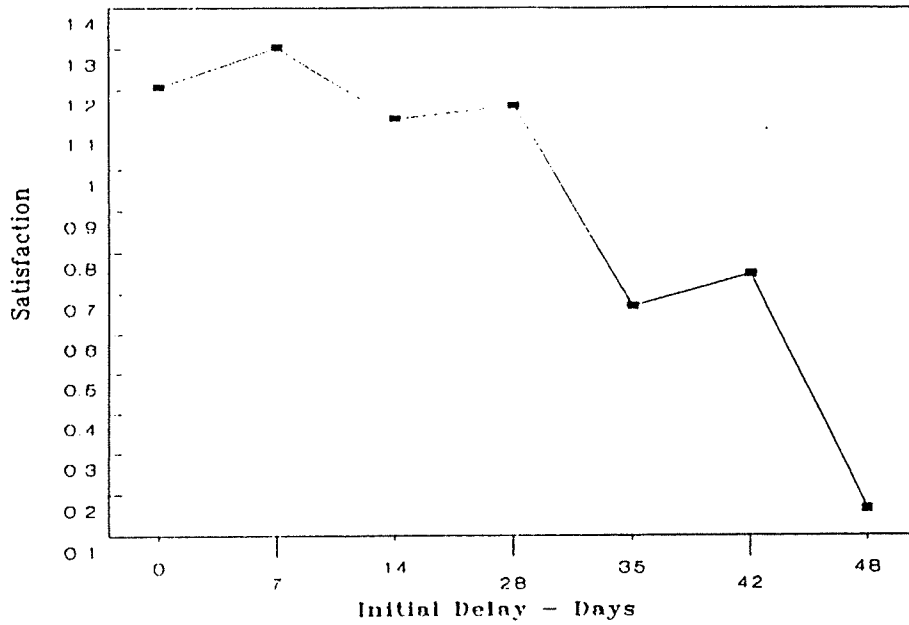
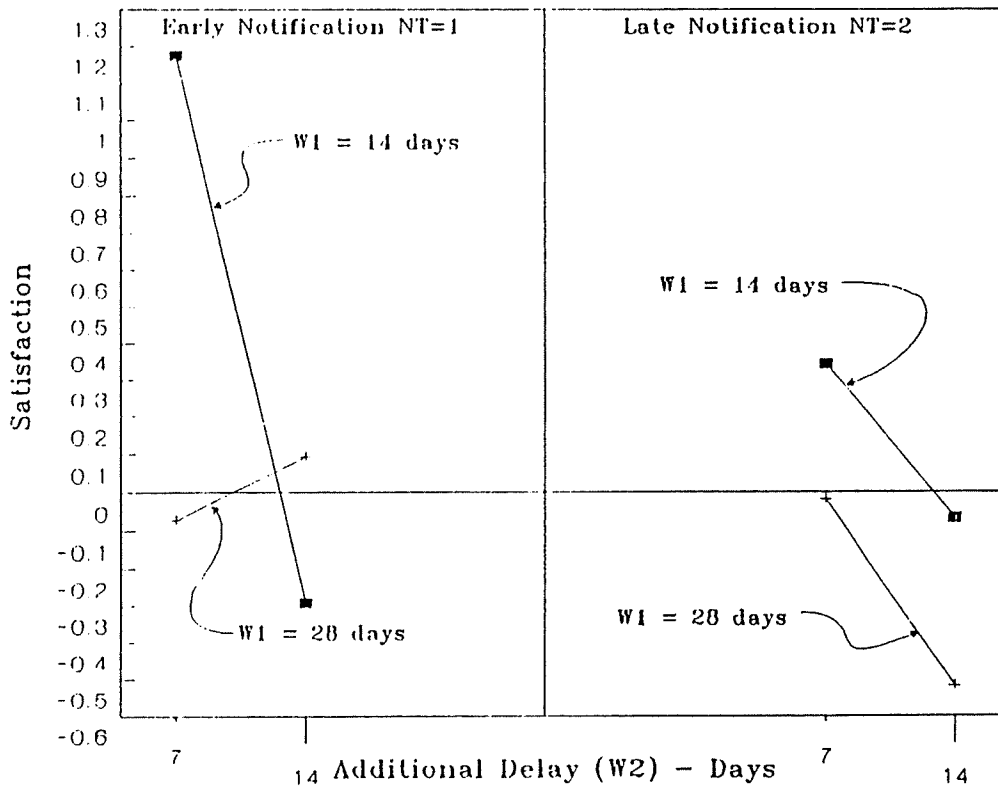


Figure 3
Three-Way Interaction - Additional-Delay Situation



product, such as flowers for a wedding or concrete for a construction project, the concave tendency would have been more pronounced.

Revised Delivery (Additional Delay)

The responses from the purchasing managers who received these scenarios resulted in an average cell size of 26.2 responses.

An analysis of variance of the purchasing managers' satisfaction measures was done for the late revised deliveries. The results reveal significant main effects for the duration of the delivery promise (W1)[$F(1,255)=9.25, p=.003$], the duration of the revised delivery (W2)[$F(1,255)=16.48, p=.000$], and the timing of the notification (NT)[$F(1,255)=4.72, p=.031$]. Satisfaction is low with a delivery promise that is long, a revised delivery that is late, and a notification that is delayed. Those findings are all consistent with prior expectations.

A significant two-way interaction is also seen between the duration of the revised delivery and the duration of that originally promised (W1xW2)[$F(1,255)=9.06, p=.003$]. In this interaction, satisfaction was relatively low for all except those with the short initial delay and the short additional delay. A revised delivery caused a greater decrease in satisfaction for buyers who were given a short delivery promise than for buyers who were given a long delivery promise.

A greater insight into the mechanism can be gained by looking at the unexpected three-way interaction [$F(1,255)=10.47, p=.000$] shown in Figure 3.

Here it can be seen that buyers who are notified promptly, and given short initial delays and short additional delays were the most satisfied of all the groups by a considerable margin. In fact, they were as satisfied as those given short initial delays and no additional delay at all.

Earlier Delivery

A similar analysis was done for the delivery revisions that made the delivery earlier than promised. However, the only significant finding was the same main effect for the duration of the initial delivery promise that was also found in the other analyses. There was no evidence of the

increase in satisfaction that had been expected because the revision shortened the wait. Nor did notification timing seem to have any effect on buyer satisfaction in that situation.

To investigate further, satisfaction levels for on-time versus revised deliveries were compared for scenarios having the same total waiting time. For late revisions, the reduction in satisfaction was significant for total waits of 35 days and 28 days, and it was only marginally non-significant for a total wait of 21 days. But waits shorter than these, representing early revisions, caused no significant changes in satisfaction. This suggests that late revisions reduce buyer satisfaction, but early revisions leave it unchanged.

Thus, the findings from the revised-delivery analysis imply that late delivery is dissatisfying for two reasons: because of the need to reschedule, and because of the need to wait longer than promised. Sellers should try to avoid having to make delivery revisions, but if they become necessary, the buyer should be notified as promptly as possible.

DISCUSSION

With these results, the propositions presented earlier can be tested as hypotheses.

No Additional Delay

From these results a number of effects are suggested about the no-additional-delay condition. Only a significant linear component was seen for buyer satisfaction. The level of reported satisfaction varied with the difference from expected delivery time as predicted by equity theory, disconfirmation theory as well as the rational utility model (H1A, see Table 1). But the rate of change of the decrease in satisfaction did not vary with this difference. In other words there was no evidence to support a prospect theory prediction (H1D) that deviations far from expected (reference point) would be regarded as having a smaller impact than those near. Assimilation/contrast theory (H1C) was not supported either; there was no flattening of the response curve in the region of the expected delivery time. Neither was the field theory proposition (H1B) supported. Increases in delivery later than expected were not

seen to be less serious than those earlier than expected, in fact there was some tendency in the opposite direction. This all points to the suggestion that buyers in this situation are able to make rational satisfaction judgements without distortions in perceptions of delays.

A slight downward curve can be seen in the data when plotted. The effect at first appears to be different from that proposed by Oliver (1976) as hedonic affectivity (H1E) in that the curve observed is monotonic. While the component was barely non-significant, it does suggest the possibility that two different mechanisms may be at work in the satisfaction judgement process; one dominating in the earlier-than-expected situation and another for later-than-expected delivery. With such an effect the buyer would be seen to be less delighted by early deliveries than disappointed with late ones.

When considered in terms of the explanation of two different mechanisms of satisfaction judgement, the hedonic affectivity response explanation should not be entirely discounted. The effect is marginal, and there are offsetting arguments for consideration of its significance. It is therefore offered only as a possibility.

Interestingly, satisfaction was reported to be significantly greater than zero when the product was promised and received at the expected time. This suggests the importance of other attributes and the expectation of their receipt in determining satisfaction level.

Additional Delay

A main effect for additional wait length (W2) supports hypothesis H2 (see Table 2). That hypothesis drew from equity theory, as well as the disconfirmation literature, to predict a downward sloping response to additional delay. This effect appears similar to the effect of W1 in the no-additional-delay condition.

The main effect of notification timing (NT) supports hypothesis H3A. That hypothesis drew from equity theory, as well as the changing reference point theories, and predicted lower satisfaction with later NT. There were no costs associated with late notification. The rational reaction of no main effect predicted by hypothesis H3B, however, was not seen.

The main effect of initial wait (W1) supports hypothesis H4A. That hypothesis drew from equity theory, which holds that people will look back on how they were served in the first portion of the transaction to determine how satisfied they are with the second portion. The hypothesis also drew from the RU model approach because the buyers have to wait longer for the product. The prediction by the Foot-in-the-Door literature is not supported.

One significant two-way interaction was observed between initial wait and additional wait. The rate of decrease of satisfaction in response to a longer additional delay is steeper for those who were told initially they would have to wait for a short period as compared to those who were told they would have to wait for a long period.

This appears to support hypothesis H5B which draws from the compliance literature but a clear case for a FITD effect is not made. The direction of the interaction effect is consistent with FITD whereby the decrease in satisfaction associated with the long initial wait time is smaller than that associated with the short initial wait time. But an effect should be seen in both short and long additional delay conditions, whereby a long initial wait length would produce higher satisfaction. This effect was not seen. Failure to recognize this represents a deficiency in Hypothesis H5B.

Interestingly, other two-way interaction effects were not seen. Where, in hypothesis H6A, equity theory was used to predict less tolerance for additional delay when notification was late, this effect was not observed. While there was a main effect of NT on satisfaction level, there was no effect of NT on the average rate of decrease of satisfaction with length of additional delay.

Some insight into the effect can be seen in the three-way interaction that reveals the significant two-way interaction to be primarily due to the high level of satisfaction reported in the W1=2, W2=1, NT=1 cell and low levels in all the other cells. Buyer satisfaction was reported to be highest when all three independent variables were favorable and is seen to drop rapidly when any one of them was unfavorable. Post hoc comparisons of cell means were made using Scheffe's and Tukey's method as recommended by Tabachnik and Fidell (1983). They show this particular cell to be significantly different from all the others.

The level of satisfaction seen in this one additional-delay cell, where all variables were favorable, was very close to that of the non-delayed situation. This suggests the possibility of successful use of the low-ball technique by a seller to make a sale and not jeopardize future business by reducing satisfaction.

Figure 3 shows the nature of this interaction. Buyers who were told they would have to wait a short time but were advised early of a delivery extension, were most sensitive to length of additional delays. Those who were told they had to wait a long time initially and then who were extended, were least sensitive to the length of delivery extension with almost no reaction at all. When notification was late, buyers in both categories of initial wait length were sensitive to additional delay approximately equally. Long initial delays did tend to result in less satisfied buyers although the effect was marginal.

The overall response pattern in the three-way interaction appears to point to an explanation of the response of the buyers to the entire transaction. The buyers may take an equity perspective of the whole transaction and judge whether they have been fairly treated. An unfavorable level of any one of the independent variables could result in a judgement of unfairness. Early NT, in particular could be regarded as a sign of concern and consideration on the part of the seller.

Advanced Delivery

A main effect was observed only for initial wait length. This supports H7 (see Table 3) which drew from disconfirmation theory, equity theory and the RU model. Longer W1 resulted in lower satisfaction. This suggests that the satisfaction level results from either total waiting time or a reaction to the initial promise. The latter supports the idea proposed by Maister (1985) that negative events experienced early in a transaction will have a "halo" effect and determine the way later events are perceived. Note that this has an opposite effect to FITD.

Hypotheses H8 and H9, proposing main effects for the other two independent variables were not supported. The lack of a main effect for W2 undermines the total waiting time argument presented for W1 above.

The differences between the results of the advanced delivery and additional delay conditions also suggest that there may be two very different mechanisms at work. In the advanced delivery situation, it seems that the buyer accepts and plans for a given delivery, and that delivery determines the final satisfaction level. Improving the delivery, whether notified about it early or late, does not improve satisfaction, possibly because the promised date has been accepted or assimilated.

Effect of Rescheduling

The existence of late delivery for a given waiting time does reduce the resulting satisfaction level. This supports hypothesis H10A which draws from equity theory and the notion of cognitive economy. The FITD effect, suggested by the compliance literature, does not appear to work in this situation.

An advancement in delivery schedule, holding total waiting time constant, did not improve satisfaction, as the changing reference point literature would predict.

Discussion Summary

Overall, the mechanisms for satisfaction judgement can be seen to be complex and involves simultaneous consideration of a number of factors. The hypotheses drawing from equity theory appear to be consistently supported however. It would appear that aspects of equity and fairness weigh heavily in the satisfaction judgement.

The notion of equity in the transaction also fits with the unexpected 3-way interaction observed but the interaction illustrates further how buyers make their satisfaction judgement. It appears that it only takes one deficiency on any dimension to create an unhappy customer.

The relatively high satisfaction levels of the respondents in the one additional delay group, compared to the no additional delay group remain unexplained and should be the focus of future research.

Implications For Management

From this analysis several implications for

management are apparent. Three caveats for those sellers whose objectives are to provide delivery promises that maintain a high level of buyer satisfaction are presented below.

Caveat 1: Don't promise an unrealistically short delivery just to get the order, in the expectation that the buyer will meekly accept a subsequent revision. The ultimate satisfaction will be lower than it would have been if a realistic delivery had been promised.

Caveat 2: Don't promise an unrealistically long delivery just to be safe, in the expectation that the buyer will be delighted by any subsequent delivery reduction. The initial dissatisfaction will be proportionate to the length of the promise, and any subsequent delivery reduction will not be of much help.

Caveat 3: Don't delay notifying the buyer that a revision will be necessary, in the expectation that the buyer will appreciate the greater certainty made possible by the delay. The only notification that is more dissatisfying than a late-delivery revision is one that is delayed.

On a more positive note, the findings provide a persuasive argument for making delivery promises that are neither unrealistically short nor long, and which therefore do not need to be revised. Getting it right the first time requires that the task of making delivery promises be executed with the same care as is given to the other marketing-mix decisions. If that requires more management time and other resources, so be it. The alternative is to squander buyer satisfaction, a resource that most sellers cannot afford to waste.

CONCLUSION

This study has examined the effect of delivery on buyer satisfaction in the context of the purchase of an office copier. Several characteristics of the purchase were manipulated including the duration of the delivery promise, the timing of a possible delivery revision, and the duration of the revision.

Mixed support was observed for several theories that predicted results but there seemed to be general support for equity theory across various purchase situations. The satisfaction judgement in the industrial purchase seems to depend heavily on the perception of equity and fairness in the transaction. The process by which these

perceptions figure in the satisfaction process, and the limits of the effects of them should be the focus of future research.

Appendix 1 Scenario with all Manipulations

A. You are the purchasing manager for a mid-sized manufacturing firm which produces component parts for the auto manufacturers.

B. You have to purchase a new photocopier to replace an aging but still serviceable, unit in your department. The existing copier is experiencing many small breakdowns. This is impairing office efficiency. Copy quality is deteriorating rapidly and you find that most of your staff go to other departments to copy anything that will be sent out of the department. While you have several buyers reporting to you, they are primarily concerned with on-going production as well as maintenance and repair purchasing. You prefer to have some involvement in larger single expenditures and in new vendor selection so you decide to handle this yourself.

C. You have not purchased a photocopier in some time but you have some familiarity with office equipment supply and market conditions in general. You know that a copier with the features the controller wants should take about 14 days to receive.

D. You familiarize yourself with the current supply situation. You narrow your choices down to three units which seem to offer good value for the price, ready availability, after sale service, a suitable warranty and the right combination of features which will improve office efficiency. They are all in a very narrow price range around \$10,000.

E. You finally select one of the three as being the best all round choice and place your order. According to the factory sales representative demand for this type of copier has recently been very high:

F. (Initial Delay)

- a. but they happen to have one in stock and will ship it tomorrow
- b. but it will be shipped in 7 days
- c. but it will be shipped in 14 days.
- d. therefore it will not be shipped for 21 days
- e. therefore it will not be shipped for 28 days
- f. therefore it will not be shipped for 35 days
- g. therefore it will not be shipped for 42 days

Appendix 1 (cont.)

G. (Timing of Notification - for no additional delay go to D)

- i. Later that day,
- ii. On the (n-1, 14th or 20th) day, the day before you expect to take delivery, you receive a telephone call.

H. (Length of Additional Delay)

The sales representative apologizes and explains that they made a mistake when they promised you the delivery date and that your copier is back-ordered. They expect, however, to be able to ship it:

1. 7 days later than previously promised
2. 14 days later than previously promised.

I. (Delivery)

During the wait for delivery, your purchasing agents, as well as the secretaries, complain about the problems the old copier is causing. Without further incident, on the: a. next, b. 7th, c. 14th, d. 21st, e. 28th, f. 35th g. 42nd day the photocopier arrives. It is installed in the office and you do not hear any serious complaints in the month following the delivery. You have occasion to use the machine yourself and it seems to do the job.

J. (Current Situation)

Just before a general staff meeting the marketing manager mentions to you that the sales department will be needing a new copier soon which prompts you to think about the last purchase.

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**Appendix 2
Experiment Design**

Figure 6.1 MAIN EXPERIMENT DESIGN Initial Delay (W1)								
Reschedule Condition	Addn'l Delay Length (W2)	0	7	14	21	28	35	42
Block 1 No Reschedule - Delivery when promised	N/A	X	X	X	X	X	X	X
Block 2 Early Notification "later that day" NT = 1, W2 > 0	7			X		X		
	14			X		X		
Late Notification "the day before you expected to take delivery" NT = 2, W2 > 0	7			X		X		
	14			X		X		
Early Notification NT = 1, W2 < 0	-14*			X		X		
	-7*			X		X		
Late Notification NT = 2, W2 < 0	-14*					X		
	-7*			X		X		
- * W2 < 0 indicates advanced delivery condition - X indicates cells in experiment - Notification Timing (NT) is categorized as early (1) and late (2) in the main experiment analysis								

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EVALUATING HEALTH CARE SERVICE QUALITY: THE MODERATING ROLE OF KNOWLEDGE

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ABSTRACT

This study focuses on the role of knowledge as a mediator variable in the relationship between expectations and customer perceived service. A distinction is made between latent and manifest expectations based on the assumption that consumers with a stronger knowledge-base have more pronounced and therefore more manifest expectations than consumers with a weaker knowledge-base. The results of an empirical study reveal that the stronger the knowledge-base of a consumer, the higher the level of perceived service quality.

INTRODUCTION

During the last decade a large number of studies in the services marketing area have focused on the conceptualization and measurement of service quality. Looking back and ahead, some authors argue that this research topic has finally reached a maturity stage in which further advances and nuances are being made (Grönroos 1993; Rust and Oliver 1994; Parasuraman *et al.* 1994). Recent research has been directed at deepening our understanding of the antecedents of service quality, expectations and performance (Bolton and Drew 1991; Boulding *et al.* 1993; Strandvik and Liljander 1994). Particularly with respect to the expectations construct, a number of determinants have been identified (Zeithaml *et al.* 1993). These include explicit and implicit service promises, word-of-mouth and past experience. The determinants lead to the formation of knowledge which in turn expectations are based upon (Wikström 1994). Thus, it seems that research on service quality will have to take knowledge into account as another antecedent construct. So far, this issue has not been raised explicitly in the literature. Therefore, our focus in this article is on the role of knowledge as an antecedent construct of perceived service quality and its interplay with expectations. The interaction between knowledge and perception is not addressed in this study.

The article is structured as follows. In the first

place, we will briefly introduce the concepts of perceived service quality and knowledge based on our review of both the product and the services marketing literature. Secondly, a number of hypotheses with regards to the role of knowledge as an antecedent of perceived service quality and its interaction with expectations will be developed. Finally, we will report on an empirical test of these hypotheses in the context of a specific health care service.

PERCEIVED SERVICE QUALITY

Perceived service quality is often defined as the comparison of service expectations with actual performances (Zeithaml *et al.* 1990). Conceptually, service quality has been defined as an attitude. On an operational level, research in service quality has been dominated by the SERVQUAL model, also known as the gap-model. The central idea in this model is that service quality is a function of the difference scores or gaps between expectations and performance (P - E). It has been proposed that service quality is a multi-dimensional concept (Parasuraman *et al.* 1985). Five key determinants of service quality have been identified (reliability, responsiveness, assurance, empathy and tangibles). These dimensions are related to both the service process and its outcome, but it is not always clear how.

While the SERVQUAL instrument has been well-established it has also been well-criticized. Especially the expectations component has generated considerable debate in the literature. Apart from the fact that some authors question the necessity of the expectations component (Babakus and Mangold 1992; Cronin and Taylor 1992; 1994), the debate is on issues such as the operationalization of expectations (Teas 1993) and the fact that the SERVQUAL approach departs from *static* expectations. With regards to the latter, consumers, for instance, may change their expectations following an increase in their knowledge about a particular service, as the result of a positive service experience or negative word-of-mouth communications. Taking these issues into

account, the role that knowledge plays in the evaluation of the quality of a service should be emphasized.

KNOWLEDGE

Knowledge is a multi-faceted concept (Polyani 1983). For the purpose of this study, the distinction between objective and subjective knowledge seems to be relevant. Objective knowledge is the knowledge a consumer has stored in memory; subjective knowledge is the knowledge consumers perceive they have (Rao and Monroe 1988). Especially in relation to the perceived quality of the service delivery process, the subjectivistic approach plays an important role since it includes not only the knowledge level of a consumer but also the confidence the consumer has in his/her knowledge. This perception of knowing about a provided service is more likely to determine perceived quality and post-purchase behavior than objective knowledge, especially in the case of complex services (Brucks 1985). Furthermore, the difference between two dimensions of knowledge in terms of 'familiarity' and 'expertise' is stressed in the literature (Alba and Hutchinson 1987). Familiarity can be defined as the number of product/service-related experiences accumulated by a consumer and expertise is the ability to perform product/service-related tasks successfully. This distinction will not be addressed explicitly here, since it has been argued that the two dimensions largely overlap in a service setting as service encounters tend to be varied, complex and not habit forming (Andaleeb and Basu 1994).

Thus far, the effect of knowledge on perceived service quality has remained "under-researched". This also holds true for the effect of knowledge on the quality antecedents of expectations (and perceived performance). While this relationship is implied by the integrative model of service expectations by Zeithaml *et al.* (1993), it has not been empirically verified. In the case of unfamiliar or new services of which consumers have little or no knowledge, the knowledge-base for expectations will be weak and ambiguous. In this case, evaluative judgements will be based on related services or a more general class of services or on the relative utilization for the provision of more

basic needs (Westbrook and Reilly 1983; Johnson and Fornell 1991). Expectations stemming from a weak knowledge-base can be termed *latent expectations*. Alternatively, as knowledge accumulates through information and experience the knowledge base for expectations becomes stronger, more stable and more in line with perceived performance. This results in *manifest expectations* (compare Bloemer 1993). Johnson and Fornell (1991) argue that eventually manifest expectations and perceived performance may run parallel in the case of an extremely strong knowledge-base.

In relation to products the role of knowledge has been more extensively studied, although a rather fragmented picture emerges from the literature. A number of studies have postulated that prior knowledge encourages information search by making it easier to process new information (Punj and Staelin 1983; Johnson and Russo 1984 and Brucks 1985). For example, knowledge of product attributes may allow the consumer to formulate more questions. Knowledge also helps the consumer evaluate responses to questions, thus reducing the cognitive cost of using information and increasing the benefit of obtaining it, leading to greater search with increased knowledge, and in the end to less satisfaction with the product. Concurrently, a number of other studies have found a negative relationship between the amount of product experience and amount of external search (Katona and Mueller 1954; Newman and Staelin 1971, 1972; Swan 1969). One explanation for this relationship claims that experienced consumers have prior knowledge about the attributes of various alternatives, and consequently do not need to acquire such information from external sources. However, a second explanation for these results holds that experienced consumers perform more efficient information searches because they know which attributes are more useful for discriminating between brands and can more quickly determine which alternatives are inferior. This implies a positive relation between knowledge and satisfaction with the product in the end. A consumer knows what to expect and does not look for any additional information that might disconfirm his or her expectations.

Furthermore, Rao and Monroe (1988) note that more knowledgeable consumers are better able

to comprehend and evaluate quality cues than low knowledgeable consumers. This indeed also suggests that knowledge moderates the expectation-quality relationship. In addition, it can be concluded that knowledgeable consumers assess overall quality more accurately. Unfortunately, it does not directly help in predicting the level of perceived service quality.

Finally, Alba and Hutchinson (1987) suggest, based on an extensive overview of the literature, that experts (consumers with a stronger knowledge-base) are better problem solvers than novices (consumers with a weaker knowledge-base). Expert might be expected to perceive higher service quality than novices because they are better equipped to more accurately predict the level of service quality they will receive. Experts will be more able than novices to match expectations and perceptions and therefore will perceive a higher level of perceived service quality (it is harder to disappoint a very knowledgeable consumer than to disappoint a novice). Therefore, in general, one might expect consumers with a great deal of knowledge to perceive a higher level of service quality than consumers with relatively less knowledge.

KNOWLEDGE AND PERCEIVED SERVICE QUALITY: DEVELOPING HYPOTHESES

Based on evidence from the product domain, one still could expect a positive as well as a negative effect of knowledge on perceived service quality. A strong base of prior subjective knowledge decreases the chance that expectations will be met or exceeded and therefore has a negative impact on perceived service quality. The consumer uses expectations as a comparison standard and it is hard for the service provider to deliver the service in accordance to the specifications of the consumer.

Alternatively, a strong subjective knowledge base could increase the chance that expectations are more in line with perceived performance and that this results in a positive effect on perceived service quality. The consumer knows what to expect from the service provider and has formulated its specifications of the service in line with the service the provider can offer. On the basis of Alba and Hutchinson (1987) we are

inclined to favor this line of thinking. Especially since experts are found to be better problem solvers and, therefore, are expected to perceive higher service quality in general. We formulate the following hypothesis:

Hypothesis 1: Knowledge will have a positive effect on perceived service quality.

In addition to this direct effect of knowledge on perceived service quality which has been discussed above, a moderating effect of knowledge can also be expected. This moderating effect of knowledge leads us to expect different types of expectations. Manifest expectations will have a more pronounced effect on perceived service quality than latent expectations (i.e., expectations that are less knowledge-based). On the basis of this we derived the following hypothesis.

Hypothesis 2: Manifest expectations will have a greater positive effect on perceived service quality than latent expectations.

In the next section we will report on an empirical study that was conducted to test the above hypotheses.

AN EMPIRICAL STUDY

Research setting

The research question was answered and the hypothesis was tested for the high-involvement health care service of chiropractic care in the Netherlands. Chiropractic treatment concerns itself primarily with balancing the relationship between the spine and the nervous system through manipulative treatment. While a number of (longitudinal) studies (Meade *et al.* 1990; Manga *et al.* 1993) have revealed the effectiveness of chiropractic treatment so that it can no longer be denounced as 'quackery', a focus on client evaluations of service quality and consumer knowledge of this health care service is judged as vitally important for a number of reasons. In the first place, chiropractic treatment is a service that still suffers from misinformation and misperception on the part of consumers as well as health policy makers and planners. This not only concerns the

treatment itself, but also issues like insurance coverage (Sanchez 1991). Secondly, in a health market characterized by intensified competition, this type of service relies heavily on personal referrals by former and current clients. While word-of-mouth communications form a significant source of knowledge, they remain difficult to influence and control by chiropractors. Finally, the market for treatment of back pain seems to be subject to the principle of 'revealed preference'; research has shown that clients clearly prefer chiropractic treatment to available alternatives (e.g., physician care) despite the fact that higher (out-of-pocket) costs have to be paid (Wardwell 1989). Positive evaluations of service quality are thus decisive in ensuring chiropractor's competitive edge over other providers of health care services. Again, the role of an extending knowledge base in the market place seems pivotal in this respect. In the Netherlands, chiropractic treatment is a relatively new health care practice that is largely unknown to the general public.

A chiropractic clinic in a mid-sized city in the Netherlands was selected for conducting our research. This clinic serves 7700 registered clients and performs approximately 1000 treatments on a monthly basis. Three chiropractors and four administrative assistants are employed in the clinic.

Questionnaire design

With regards to perceived service quality, SERVQUAL items for expectations and performance were 'translated' for the chiropractic setting, using a 7-point scale, ranging from disagree to agree. In accordance with Zeithaml *et al.* (1993) expectations were phrased in the predictive sense ('would'). The relative importance of the five SERVQUAL dimension was established on the basis of assigning 100 points among them. Furthermore, one question was added that directly measured the perceived service quality of the service delivery process on a 7-point scale, ranging from disagree to agree too. To measure knowledge regarding the service delivery process (i.e., procedural knowledge) we followed Brucks (1985) who measured subjective knowledge, ranging from 'poor' to 'excellent' as the ends of a 7-point scale to obtain patients' self-ratings of knowledge. We used subjective/procedural

knowledge because it seemed more relevant than objective knowledge in a subjectively perceived service quality context, i.e. the SERVQUAL instrument is primarily focused on a subjective evaluation of the service delivery process also. Furthermore, subjective knowledge includes the knowledge level as well as the confidence level of the consumer. One question about the willingness to recommend the service was included in our questionnaire. In addition, five descriptive variables (age, sex, reason for treatment, treatment duration and referral type) were included in the questionnaire.

Sampling and surveying

Five-hundred questionnaires were handed out to clients at the clinic. Clients were invited to participate in the research by filling in the questionnaire at home and to send it directly to the University in a self-addressed, stamped envelope. This resulted in a total of 297 usable questionnaires, or a response of 59.4%. All returned questionnaires could be used for analysis.

RESULTS

Descriptive Analysis

According to clinical records, our sample could be considered representative of the total population (i.e., all the clients that were registered at the clinic). Our results also compare well to previous research in this area of health care service (Meade *et al.* 1990; Manga *et al.* 1993). Fifty-three percent of the respondents were female and 47% of the respondents were males. Seventy percent of the respondents were younger than 50 years old. The most frequently cited reasons for treatment relate to back pain (66.6%) and neck pain (55.6%), either with or without radiation. Ninety-five percent of the clients cited more than one reason for treatment. Thirty-five percent of the respondents in our sample have undergone treatment for a period of one to six months. Finally, the large majority (57.9%) was referred to the clinic through positive word-of-mouth communications from friends, family and acquaintances.

Furthermore, and not surprisingly, we found

our respondents very willing to recommend the chiropractic service to friends, family and acquaintances; almost 81.6% are definitely willing to recommend the clinic to others. This is undoubtedly due to the high quality scores which were found. Ten percent of the respondents indicated that they had very little (subjective/procedural) knowledge of chiropractic treatment, while 67.5% indicates that they know a great deal about this service. The majority of respondents (68.8%) label their perceived service quality of the delivery process as 'very high'. Of all respondents no one indicated that they perceived a low service quality. As far as the SERVQUAL dimensions which are rendered in table 1 below are concerned, relatively negative quality (i.e., P - E) scores were found for two of the empathy-based items: personal attention (-0.23) and personal care (-0.15). The ranking of the SERVQUAL dimensions in terms of their relative importance yielded an order lead by empathy (23

Table 1
SERVQUAL Score Per Item

	Expectations	Perceptions	P - E
<i>Tangibles</i>			
equipment	6.29	6.32	0.03
practice room	6.54	6.80	0.26
clothing employees	6.43	6.84	0.41
<i>Reliability</i>			
keeping promises	6.69	6.65	-0.04
problem resolution	6.84	6.71	-0.13
accuracy of treatment	6.50	6.44	-0.06
registration of data	6.69	6.56	-0.13
<i>Responsiveness</i>			
making an appointment	6.63	6.80	0.17
helping quickly	6.27	6.37	0.10
willingness to help	6.40	6.53	0.13
never too busy	5.89	5.87	-0.02
<i>Assurance</i>			
inspiring confidence	6.62	6.66	0.04
insurance of client	6.59	6.55	-0.04
act gently and friendly	6.46	6.81	0.35
knowledge chiropractor	6.90	6.78	-0.12
knowledge assistants	5.77	6.11	0.34
<i>Empathy</i>			
acceptable 'office' hours	6.16	6.67	0.50
personal attention	6.79	6.56	-0.23
personal care	6.74	6.59	-0.15
understanding needs and wants	6.41	6.38	-0.03

out of 100) and closed by tangibles (15 out of 100).

Hypotheses testing

To test the first hypothesis, the correlation coefficients between (subjective/procedural) knowledge and (overall perceived service) quality are computed. The results are presented in table 2.

Table 2
Correlations Between the Variables in the Model

	expectations	perceptions	overall service quality
knowledge	.30**	.32**	.29**
expectations		.72**	.31**
perceptions			.56**

n = 248; **: p < .001

From this table it can be concluded that there is a positive relation between knowledge and perceived quality ($r_{x,y} = .29$; $p < .001$). This indicates that an increase in knowledge has a small positive effect on the perceived service quality. Therefore, we can accept hypothesis 1. Theoretically, this is in line with the argument that a strong subjective knowledge base increases the chance that expectations are in line with perceived performance and therefore will result in a positive effect on perceived service quality. However, in order to further nuance our findings we examined our data with regard to hypothesis 2.

The second hypothesis is tested with logistic regression because the distribution of both the independent and the dependent variables are rather skewed. Therefore, it can not validly be tested with hierarchical regression analysis (Baron and Kenny 1986). Two groups of clients are distinguished: those who perceive the service quality to be very high versus those respondents who chose other options.

The following two models were tested. In model 1 quality is a function of expectations and knowledge. In model 2 quality is a function of expectations, knowledge and the interaction between expectations and knowledge. The results are rendered in table 3.

The difference in the improvement of the Chi-square is an indication of the necessity to add the interaction term; it significantly attributes to the explanation of quality. From table 3 it can be concluded that there is a significant improvement when the interaction variable is added to the original model. Therefore, hypothesis 2 can be accepted. The interaction between knowledge and expectations (i.e., manifest expectations) has an additional positive effect on quality. The latter implies that knowledge moderates the effect of expectations on perceived service quality. In addition, knowledge has a direct positive effect on perceived service quality.

Table 3
Model Testing with Logistic Regression Analysis

	Chi-square	df	sign	correctly classified
Model 1	54.179	2	.000	68.48%
Model 2	71.838	3	.000	70.29%
Increase	17.659	1	.000	

Variables in the equation models:

	B	S.E.	Wald	df	Sig	R	Exp(B)
knowledge	.32	.112	7.99	1	.005	.13	1.37
expectations	-.11	.086	1.61	1	.205	.00	.90
interaction	.25	.061	16.67	1	.000	.201	.28

DISCUSSION

The purpose of our study was to know more about knowledge, how it relates to perceived service quality and the expectations construct. We made a distinction between latent and manifest expectations. This distinction was based on the assumption that consumers with a stronger knowledge-base have more pronounced and therefore more manifest expectations than consumers with a weaker knowledge-base. The type of expectations was operationalized in terms of the interaction between knowledge and expectation. Our results indicate that indeed a distinction should be made between the influence of manifest and latent expectations on perceived

service quality. The more manifest the expectations, the stronger the influence of these expectations on perceived service quality. Furthermore, we found a small direct positive effect of knowledge on perceived service quality. Hardly any direct effect of expectations as such on quality was encountered.

The fact that expectations have hardly any direct effect on service quality is in line with the findings of a number of recent studies in the services marketing field (Babakus and Mangold 1992; Cronin and Taylor 1992; 1994). Moreover, it has been demonstrated that in case of high involvement services (and products), the effect of the expectations component on quality is almost neglectable and perceived service quality can predominantly be predicted on the basis of perception (Oliver and Bearden 1983; Fornell 1992). This seems even more applicable to the relatively unknown service of chiropractic treatment in the Netherlands.

Our results with respect to the effect of knowledge on service quality appear to be rather straightforward. The stronger the knowledge-base of a consumer, the higher the level of perceived service quality. The consumer knows what to expect from the service provider and has formulated his/her specifications of the service in line with the service the provider offers (this consumer solves its problem well). Additionally, the evaluative judgement will be based increasingly on the perception of the service. This coincides with the arguments presented by Johnson and Fornell (1991) who pose that expectations and perceptions eventually run parallel in the case of extreme ability to evaluate the quality of a service.

The additional positive interaction effect between knowledge and expectations implies that it is necessary to distinguish between manifest and latent expectations. Although no significant effect of expectations was found, this moderating effect should not be overlooked. Thus, expectations do matter. Consumers with manifest expectations are more convinced of their expectations and therefore provide a more strict guideline of how the service should be provided. If such expectations are met, than consumers will perceive a high level of service quality. Alternatively, consumers with manifest expectations will be able to predict service specifications more accurately and will

therefore perceive a higher service quality level.

Further research is required to examine the impact of knowledge on expectations and perceived service quality. Nuances should be made concerning the conceptualization and operationalization of knowledge. Distinctions between objective and subjective knowledge should be taken into account, for it might well be that the effect of the various types of knowledge or different dimensions of knowledge, such as familiarity versus expertise, on expectations and quality differs. In addition, more research is needed to establish a conceptually valid distinction between knowledge and experience, familiarity and expertise.

Moreover, explicit attention should also be paid to the interaction between knowledge and perception in addition to the test of a model that incorporates all antecedents of service quality. A deeper understanding of the role of knowledge could be obtained by duplicating the research for both high and low involvement services. Also, since both expectations and knowledge develop over time they should also be measured from a dynamic perspective.

Another limitation of our research concerns the so-called up-ward bias, i.e., consumers who have visited a service provider previously, are probably more satisfied and believe that the service is of relatively high quality than novices to this service. Further research is needed to address this issue.

Finally, an important managerial implication that follows from our study is that service providers should provide consumers with relevant information so that they can strengthen their knowledge-base. This refutes the essence of the issue raised by Ölander (1977) with regards to satisfaction; the less they know, the less they expect, the more satisfied they are. On the contrary, it seems worthwhile to invest in consumer education. Another reason why it seems important for service providers to provide consumers with knowledge-building information is that knowledgeable consumers will use their knowledge for evaluating various service providers. In contrast, less knowledgeable consumers will be more susceptible to external influences that attempt to steer consumer decision-making (e.g., advertising, word-of-mouth

communications). Consumers with less knowledge will rely more on these external influences when they lack the expertise to evaluate the service quality of a provider.

It has been demonstrated that knowledgeable consumers tend to elaborate on the content of information rather than so-called nonclaim cues (e.g., pictures). Therefore, consumer information should be fine-tuned as to the knowledge level of different consumers.

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CONSUMER SATISFACTION WITH THE COMPLAINT RESOLUTION EFFORTS OF A U.S. FEDERAL AGENCY

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ABSTRACT

A sample of consumers who complained about bank services to the Federal Reserve System is supplemented with census-tract data to explore consumer satisfaction with third-party complaint handling in the financial services sector, where the third party is a federal agency. Response rates varied by: region, the financial product that was the focus of the complaint, and whether or not the complaint was resolved in the consumer's favor. Among respondents, two-fifths were satisfied with the final outcome of the complaint resolution, and another one-fifth were partially satisfied. Income and the time it takes to resolve the complaint are associated with consumer satisfaction levels; partial support exists in the findings that more objective complaints are more likely to be resolved to the consumer's satisfaction than complaints that are more judgmental in nature.

INTRODUCTION

Consumer complaints to third parties can serve not only to obtain redress but also to increase marketplace efficiency. One can argue that without the control offered by third party complaint handlers, sellers would have a monopoly on complaint handling and would be able to impose their own standards on resolving complaint cases (see Best & Andreasen, 1977).

Consumer complaining behaviors have been studied a great deal. Data is available on who complains, what they complain about, who they complain to, and, to some extent, how satisfied they are with the resolution of their complaints. In the area of third party complaint behaviors, however, the data is thinner--mainly because consumers are less likely to complain to third parties.

Even less is known about complaints to specific third parties; the Better Business Bureau (BBB) issues its annual inquiry and complaint summary, which tallies consumer contacts (Better Business Bureau, 1995). Many states' attorneys general issue "top ten" lists of the most numerous

complaints by consumers, but little is known about these complaints beyond the pure numbers. The same could be said for most other third party complaint handlers such as community agencies, trade associations, federal agencies, and not-for-profit consumer agencies. Furthermore, little is known about third party complaints within specific sectors, with the possible exception of the medical/health and automobile repair sectors. Most of the third party complaint data is so sparse that analysis by industry (e.g., automobile, financial services, or consumer durables) is impossible.

This paper attempts to address some of the shortfalls in the data and in our knowledge of complaint behaviors. Specifically, the purpose of this paper is to explore factors associated with consumer satisfaction with third-party complaint resolution efforts in the financial services sector, where the third party is a federal agency.

BACKGROUND

In addition to its function as the nation's central bank, the Federal Reserve System has a role in supervising the safety and soundness of financial institutions and their compliance with federal law. The Federal Reserve's duties fall into four general areas: conducting the nation's monetary policy; supervising and regulating banking institutions to ensure safety and soundness and to protect the credit rights of consumers; maintaining the stability of the financial system; and providing certain financial services to the U.S. government, to the public, to financial institutions, and to foreign official institutions (Board of Governors, 1994b, p. 1,5). The Federal Reserve's Consumer Complaint Program falls within this supervisory function. Since the late 1960's, the number of federal laws intended to protect consumers in credit and other financial transactions has grown and the Congress assigned the Federal Reserve System the duty of implementing many of these laws. In response to congressional direction, in the mid-1970s the Federal Reserve Board established a formal complaint program for

investigating and responding to consumer complaints about state-chartered banks that are members of the Federal Reserve System. Subsequently, the Board issued Regulation AA, Unfair or Deceptive Acts or Practices, which details procedures for receiving and investigating consumer complaints. Regulation AA requires: 1) that either an acknowledgment or a substantive response be sent to the complainant within 15 business days of the System's receipt of a complaint; and 2) that complaints received by the System about an institution other than a state-chartered, member bank are to be forwarded to the federal agency having jurisdiction over that institution.

The complaint program is administered at the Federal Reserve System's central office (the "Board") in Washington, D.C., and housed in the Board's Consumer and Community Affairs Division. The System's 12 Federal Reserve Banks located across the country are responsible for the actual investigations of consumer complaints. The Consumer and Community Affairs program also monitors state-chartered, member bank compliance with federal consumer laws and regulations through its bank examination program, and writes and interprets regulations to carry out the consumer protection laws in the financial services area (such as the Truth in Lending, Equal Credit Opportunity, Electronic Fund Transfer, Home Mortgage Disclosure Acts.)

The complaint program is designed to serve two purposes. First, it aims to provide consumers with prompt, thorough action on their complaints; second, it provides a mechanism for identifying unfair or deceptive banking practices that may require further investigation and possible regulatory action by the Board (Board of Governors, 1994a).

The Federal Reserve accepts complaints from consumers even if the complaints do not involve state-chartered, member banks. Such complaints are referred to the appropriate federal regulatory agency (e.g., the Federal Deposit Insurance Corporation, the Office of the Controller of the Currency, or the Federal Trade Commission) and the consumer is notified of the referral. Although these complaints are referred elsewhere for resolution, data--such as the dates of the complaints, the complainants' names and

addresses, and the subject matter of the complaints--are entered in the System's Consumer Complaint and Inquiry Tracking System (CCITS) database.

The Complaint Program's Policies and Procedures

The Federal Reserve System's policies and procedures for investigating complaints are detailed in its *Consumer Complaint Manual* (Board of Governors, 1995). When a complaint is received at the Board, a consumer affairs analyst reviews it and it is entered into the CCITS; it's at this point that a complaint is referred to another agency, if appropriate. If the complaint involves a state-chartered, member bank, it is referred to the Reserve Bank with oversight responsibility for that bank. Reserve Bank staff are responsible for investigating the complaint (contacting the bank for information and documentation, reviewing bank procedures, and going "on-site" at the bank to search records.) Once the complaint is fully analyzed, a written response detailing the findings and resolution is sent to the consumer. The complaint file is then returned to the Board and reviewed to ensure that Board procedures and policies were followed and that a thorough investigation of the complaint took place. Complainants are sent a satisfaction survey (a "Consumer Satisfaction Questionnaire") after the case is closed; responses received from the complainants are entered into the CCITS database.

The Federal Reserve System's Consumer Complaint Data

Complaints and inquiries are entered into the CCITS, a centralized on-line mainframe system that both Board and Reserve Bank staff can access. The Reserve Banks are responsible for entering much of the data that resides in the system, and can access the system on their own to obtain either "canned" or specialized reports. Data collected by the Federal Reserve System are regularly reviewed by consumer affairs analysts at the Board in order to monitor the number and types of complaints received, any trends that might be developing in the complaint data, and Reserve Bank performance in investigating and responding to complaints.

The Federal Reserve System received nearly 3000 consumer complaints and over 2600 inquiries in 1996. The great majority--almost 2400--were lodged in writing, and approximately 570 were received by telephone. A little over 1200 of the complaints were against state-chartered, member banks. Two-thirds of the total number of complaints involved unregulated practices. Over the past several years, credit cards have been the number one complaint category, representing about one-third of all complaints received.

The database includes: the consumer's name and address; the Reserve Bank that received the complaint; codes for identifying the banking product related to the complaint (for example, loan, credit card, deposit account, checking account); the nature of the complaint (for example, discrimination, billing error, overcharge); any applicable regulatory code (for example, if the consumer alleges a problem covered by an existing regulation, it would be coded as such); the final disposition of the complaint; and a text field for providing a more complete description of the complaint. The data base also provides date codes for tracking the complaint to determine if System time lines are being met.

Consumer Feedback: The Consumer Satisfaction Questionnaire

After the complaint file is closed, a one-page Consumer Satisfaction Questionnaire is sent to complainants for their feedback on how the System's complaint process performed. The questionnaire is subject to rules administered by the Office of Management and Budget (OMB). (This special OMB role is an outgrowth of the federal Paperwork Reduction Act, which is a legislative attempt to keep questionnaires, surveys and other types of information requests from being burdensome and to ensure that government's demands on the public are appropriate and justifiable. Agencies must submit survey instruments and sampling plans to OMB for review and authorization. OMB's authorization is obtained for a limited period of time, after which the document and sampling plan must be resubmitted for review and approval.) In general, the questionnaire is only sent to those who lodge complaints with the Board; consumers who

complain to Reserve Banks do not usually receive these questionnaires. A cover letter signed by the Consumer and Community Affairs' division director requests that complainants complete the questionnaire. Complainants are provided with self-addressed, postage-paid envelopes to return their questionnaires to the Board.

Another way the complaint process is monitored is through an annual review of Reserve Bank programs, including complaint investigation responsibilities. The Reserve Banks' complaint functions are also evaluated every four years through an on-site "operations review" program conducted by the Board as part of its supervision and regulation function. As part of this review, Consumer Satisfaction Questionnaires may be sent out to consumers who complain directly to the Reserve Banks.

PREVIOUS WORK IN THIRD PARTY COMPLAINTS

Profile of Complainers

Since the early 1970's, a great deal has been learned about consumer complaining behaviors, with much work focusing on exploring determinants of who complains and who does not (Mason & Hines, 1973; Warland et al, 1975; Best & Andreasen, 1977; Pfaff & Blivice, 1977; see also overviews in Andreasen, 1988 and Singh, 1990). Many of these studies have gone on to explore determinants of the types of action complaining consumers take, i.e. public action or private action (see, for example, Kolodinsky, 1995). Some classify public actions as complaints to sellers and to third parties (Best & Andreasen, 1977; Lee & Soberon-Ferrer, 1996; Tipper, 1997).

Studies indicate that consumers who complain to third parties tend to be younger, better educated, better informed, more politically active and have higher incomes (Best & Andreasen, 1977; Warland et al, 1975, Duhaime & Ash, 1979). The effect of gender is less consistent in the research literature (Duhaime & Ash, 1979; Strahle & Day, 1984).

Most studies show very low rates of complaining to third parties. Both Warland et al (1975) and Best & Andreasen (1977) report around seven percent of persons with complaints used

third parties. Kolodinsky (1993) reports less than eight percent of consumers with medical service complaints utilized a third party; and her 1995 report on auto repair and medical services indicates that less than five percent of respondents took a third party action (Kolodinsky, 1995). Lee & Soberon-Ferrer (1996) report rates ranging from three percent (complain to federal agency) to 24 percent (complain to BBB) for persons 65 and over.

Tipper's study focused exclusively on third party complainants and explored the factors associated with which particular third party outlet--BBB, consumer agency, state attorney general's office, federal agency, or legal system--a consumer used. Over one-third (37 percent) of his sample had complained to a third party, with rates ranging from less than three percent (complained to federal agency) to 27 percent (complained to BBB). He found that education, income, gender, knowledge of consumer rights, and attitudes toward business were determinants of using various third party outlets. The only significant determinant of complaining to a federal agency was having a negative attitude toward business (Tipper, 1997).

Satisfaction with Complaint Resolution Efforts

A few studies have included measures of satisfaction with complaint resolution. In Kolodinsky's 1993 study, 21 percent of the respondents reported that their complaints were resolved, but no information was provided on satisfaction with the resolutions. In Best & Andreasen's 1977 study, 44 percent of consumers with service complaints were satisfied with the disposition of their problems; in contrast, 66 percent of those with complaints about frequently purchased goods and 57 percent of those with complaints about infrequently purchased goods were satisfied with the resolution of their complaints. However, only 26 percent of those using a third party outlet reported a satisfactory result; 51 percent reported an unsatisfactory result (21 percent reported that their complaint was still pending).

A 1979 Technical Assistance Research Programs (TARP) report indicated that 43 percent of respondents were "largely satisfied" while 54

percent were "largely dissatisfied" with the resolution of their complaints. Work by Best & Andreasen (1977) and Gilly (1982) indicate that the legitimacy of the complaint and the type of problem are associated with consumers' obtaining a satisfactory response to their complaints. Problems that are more objective (breakage, mathematical errors) are more likely to be resolved to the consumer's satisfaction than are problems that are more subjective or judgmental in nature.

Summary

While many researchers have studied third party consumer complaining behavior, few have presented any evidence from the agency side of the equation. Furthermore, none look in depth at the financial services sector. This descriptive study will present data on: 1) consumer complaints to a federal agency about financial services; and 2) consumer satisfaction with the complaint resolution process.

METHODOLOGY

Questionnaire Description and Data Available

The Customer Satisfaction Questionnaire was designed to gather data considered relevant for monitoring the Federal Reserve's consumer complaint program, consistent with federal guidelines. The questionnaire is short and simple to minimize respondent burden and increase the probability of consumer response.

The questionnaire requests information on: where consumers heard about the complaint program; their satisfaction with the overall outcome; the amount of time it took to resolve their complaints and their satisfaction with the time line; their perceptions as to whether the complaints were handled thoroughly; whether they were treated courteously; whether the responses were clear; and whether or not they would contact the Federal Reserve again should they have another complaint.

Because the questionnaires can be tracked by a unique consumer complaint number, the questionnaires can be linked with information in the CCITS database. Gender usually can be identified using the consumer's name. Address

information in the database allows linking the consumer's record with census-tract data and incorporating tract level household income and education level into the data. Income was measured as median income for the census tract and education was measured as the percent of households in that tract with at least a bachelor's degree.

Sample Selection

As indicated above, the Federal Reserve System received over 1200 complaints about state-chartered, member banks in 1996. Ideally, a random sample would have been drawn from this universe to survey. However, the Federal Reserve's sampling plan provides that the questionnaire be sent to consumers who complain directly to the Federal Reserve Board in Washington and who file complaints at Reserve Banks scheduled for operations reviews. Reserve Banks in New York, Philadelphia and San Francisco were scheduled for review in 1997, so it was considered appropriate to survey not only consumers who complained directly to the Board but also those who complained to these Reserve Banks. This yielded a sample of 540 consumers.

The Federal Reserve's usual process is to send out a cover letter and questionnaire to consumers. For this project, in order to increase the response rate, a follow-up mailing was sent after three or four weeks to those who had not yet responded. Responses were received from 290 of the 540 consumers; another 17 were returned as undeliverable, yielding a response rate of 55 percent.

RESULTS

Description of Sample

One of the advantages of working with the CCITS database is that it allows a comparison between respondents, non-respondents, and the full sample (see Table 1). Respondents differed slightly from non-respondents: they were more likely to have complained to the Board rather than to one of the three Reserve Banks. For ease of reporting, regional variables were created: the Eastern U.S. (consumers who complained to the

New York and Philadelphia Reserve Banks); the Western U.S. (consumers who complained to the San Francisco Reserve Bank); and the general U.S. (consumers who complained to the Board in Washington). Respondents were more likely to come from census tracts with higher incomes; and they were more likely to have complained about credit cards, other (non-real estate) loans, securities, or checking accounts. They were also more likely to have had their complaints resolved in their favor. A higher proportion of men than

Table 1
Comparison of Sample, Non-Respondents,
and Respondents

	<u>Sample</u>	<u>Non- Respondents</u>	<u>Respondents</u>
Number	540	250	290
Region			
Eastern US	50.0%	51.6%	48.6%*
Western US	14.8	16.8	13.1
General US	35.2	31.6	38.3
Gender (% male)	59.8	56.7	62.4
Income (Census Tract)			
Mean	\$45,919	\$44,727	\$46,936†
Median	\$41,797	\$40,570	\$42,852
Education (% of households with Bachelor's degree in Census Tract)			
Mean	16.9%	16.5%	17.3%
Median	15.7	15.4	15.7
Complaint about			
Credit cards	32.6	31.0	34.0**
Real estate loans	7.4	7.4	7.4
Other loans	11.3	9.4	12.9
Stocks, bonds, securities	8.5	5.7	10.9
Checking account	24.5	23.7	25.3
Deposit/savings account	9.1	13.1	5.6
Other‡	6.6	9.8	3.8
Complaint resolved in consumer's favor‡‡	29.8	24.0	34.8**

† t-test significant at .05 or better

* Chi Square significant at .10 or better

** Chi Square significant at .05 or better

‡ Includes complaints about consumer leasing, general functions, international operations, safe deposit, Uniform Commercial Code issues

‡‡ Includes complaints where restitution is made to consumer or where institution was found in violation of regulations or laws, implying that restitution is made.

women were in the sample, and the men were more likely to respond, although the difference is not statistically significant.

These differences may introduce some bias into the data. However, it is also the case that the number of respondents and the nature of the data will not support rigorous multivariate analysis. Thus, because this study is primarily descriptive in nature, these biases are unlikely to influence any of the analytical results.

No differences exist between the respondents and non-respondents with respect to the educational level of the census tract in which they lived, although respondents seemed to live in areas with higher levels of education. Given that approximately 23 percent of the U.S. population have bachelor's degrees, the education levels represented in the data seem a bit low. In part, this may be a vestige of comparing individual level data to household level data.

Also it is important to note that this sample has a substantially higher mean and median income than the U.S. population. This is not unexpected given that the focus is on the financial sector of the marketplace and the fact that census-tract income is being used as a proxy for household income. Many of the products prompting the complaints (credit cards, real estate loans, other loans, stocks, bonds, securities) are associated with households with higher levels of disposable income.

Nearly two-fifths (37 percent) of the respondents were satisfied with the final outcomes of their complaints (see Table 2). This compares favorably with Best & Andreasen's finding that 27 percent were satisfied with the results of complaint handling by third parties. Another one-fifth (23 percent) indicated they were "not completely" satisfied. In part, this may reflect the complex nature of some complaints or the complex laws and regulations to which these complaints relate. Seven out of ten respondents' complaints in the study were about practices that are not regulated. These cases often involve "judgment calls" by the financial institutions, and we know from Best & Andreasen's work that these types of complaints are often not resolved to the consumer's satisfaction.

Table 2
Consumer Satisfaction with Aspects of the Complaint Process

	<u>Yes</u>	<u>Not Completely</u>	<u>No</u>
Satisfied with final outcome	36.9%	22.8%	40.3%
Satisfied with time to handle	55.0	21.6	23.4
Complaint handled thoroughly	45.7	22.1	32.1
Consumer treated courteously	89.0	1.1	10.0
Response was clear, understandable and adequate	54.1	19.1	26.9
Would contact again with another problem	73.5		26.1

Over half of respondents were satisfied with the time frame in which their complaints were resolved; about one third reported their complaints were resolved in less than four weeks and another third indicated their complaints were handled in four to eight weeks. One-sixth reported their complaints were resolved in eight to twelve weeks and another sixth indicated their complaints took longer than twelve weeks to handle. Nearly half (46 percent) indicated their complaints were dealt with thoroughly, and nearly nine out of ten (89 percent) felt they were treated courteously.

Over half (54 percent) indicated that the responses they received were clear, understandable, and adequate. This question may combine too many characteristics (clarity and understandability of the response may be perceived as different from the adequacy of the response) to give a valid measure of the consumers' understanding of the question. Nearly three-fourths (73 percent) of respondents would contact the Federal Reserve again if they experienced other problems.

Table 3
Satisfaction with Final Outcome of Complaint
by Demographic Characteristics, Type of
Complaint, and Time and Type of Resolution
(in percentages; rows sum to 100%)

	Satisfied with Final Outcome?		
	Yes	Not Completely	No
Region			
Eastern US	32.6%	21.9%	46.8%
Western US	44.7	21.1	34.2
General US	41.4	24.3	34.2
Gender			
Male	33.1	25.4	41.4
Female	44.1	19.6	36.3
Income (Census Tract)			
Lowest Quartile	45.3	15.1	39.6*
Second Quartile	25.5	20.0	54.6
Third Quartile	45.0	28.3	26.7
Highest Quartile	41.1	26.8	32.1
Mean	\$47,651	\$50,927	\$43,801
Median	\$44,773	\$45,746	\$39,415
Education (% of households with Bachelor's degree in Census Tract)			
Mean	18.5%	17.8%	15.7
Median	19.3	18.4	12.9
Complaint about			
Credit cards	48.5	18.6	33.0
Real estate loans	33.3	19.1	47.6
Other loans	29.7	37.8	32.4
Stocks, bonds, securities	29.0	22.6	48.4
Checking account	36.1	20.8	43.1
Deposit/savings account	25.0	18.7	56.3
Other	18.2	18.2	63.4
Time needed to resolve complaint			
Less than 4 weeks	58.1	20.4	21.5**
4 - 8 weeks	34.8	23.6	41.5
8 - 12 weeks	26.1	28.3	45.6
More than 12 weeks	20.0	22.0	58.0
Complaint resolved in consumer's favor	54.5	23.8	21.8**
Complaint not resolved in consumer's favor	27.5	22.2	50.3
Would contact again with another problem	49.8	24.6	25.6**

* Chi Square significant at .05

** Chi Square significant at .01 or better

Bi-variate Results

Satisfaction with the resolution of a complaint may be associated with a number of factors. As seen in Table 3, persons in the eastern U.S. seemed least likely to be satisfied with the final outcome of their complaints, although the regional differences were not statistically significant.

Women seemed more likely than men to be satisfied with the resolution of their complaints, although, again, these differences were not statistically significant. Given the higher response rate of men in the sample (see Table 1), we might expect these differences to become significant if the respondents were representative of the sample. Satisfaction levels were positively associated with income. In the sample, higher incomes were associated with higher levels of education (Pearson R of .73, significant at .01), and better educated consumers may be more able to articulate their complaints, thus leading to satisfactory outcomes. It is also probable that higher income consumers are more financially sophisticated and are unwilling to take "no" for an answer; consequently, they continue to work toward more satisfactory outcomes.

A higher proportion of persons who complained about credit cards were satisfied with the final outcome of their complaints, while persons with complaints about real estate loans, securities, and other areas were most likely to be dissatisfied with the final outcomes, although the association is not statistically significant ($p = .17$). It may very well be that simpler products, such as credit cards, present more objective complaints (e.g. billing errors) that can be more easily resolved, while complex financial products, such as securities, present more complex problems that are less easy to resolve in the consumer's favor. As expected, satisfaction was inversely associated with the time needed to resolve the complaint. Nearly three-fifths (58 percent) of consumers with complaints resolved in less than four weeks were satisfied compared to one-fifth (20 percent) of those with complaints that took more than twelve weeks to resolve. Complaints that are resolved quickly are probably simpler and more objective in nature, thus more likely to be resolved in the consumer's favor; complaints that take longer to resolve may involve factual disputes that are less

likely to be resolved to the consumer's satisfaction.

Not surprisingly, satisfaction was associated with having the complaint resolved in the consumer's favor. Over half (54 percent) of consumers whose complaints were resolved in their favor were satisfied with the outcome compared to one-fourth (27 percent) whose complaints were not resolved in their favor.

Nearly all (98 percent) of those who had satisfactory outcomes and 78 percent of those who had partially satisfactory outcomes indicated they would contact the Federal Reserve again with another problem. Over two-fifths (47 percent) of those who were dissatisfied with the final outcome of their complaints indicated that they would contact the Federal Reserve again. It is possible that a human capital effect is at work here; once a consumer has learned how the process functions, a willingness exists to use these skills again.

SUMMARY AND CONCLUSIONS

Complaints About Financial Services to Third Parties

Contrary to other studies (see, for example, Best & Andreasen, 1977), this study shows that about two-fifths of consumers who complained about financial services to a third party were satisfied with the final outcome of their complaint resolution, and another one-fifth were partially satisfied. The data indicate that income and the time it takes to resolve a complaint are associated with the level of consumer satisfaction with a complaint's resolution. Partial support also exists in this study's findings that more objective complaints are more likely to be resolved to the consumer's satisfaction than complaints that are more judgmental in nature.

The literature contains little about subsequent use of third party redress (i.e., does satisfaction with third party redress lead to additional use of third party mechanisms), although several studies look at re-purchase behaviors after a complaint (another way of studying subsequent use of a product/service). Nearly three-fourths of the respondents in this study indicated they would contact the Federal Reserve again if they should have another problem, ranging from nearly all of consumers who were satisfied to two-fifths of

those who were dissatisfied.

Limitations

While this study provides a valuable first glance into third party complaints related to financial services, substantial biases exist in these data. First, the data set needs to be expanded to all regions, which may give a very different perspective on the nature of complaints and consumer satisfaction. Second, the questionnaire, as presently written, may not capture what is really needed to be known about the Federal Reserve's complaint resolution process. Both of these factors are constrained somewhat by considerations of not overburdening survey respondents.

Third, while census-tract data are the best data available for this study, no real substitute exists for household level information. Some key effects of income and education may be missing because of this lack of household level data.

Finally, the results of this study apply only to the financial sector and cannot be generalized to the service sector. Perhaps even more narrowly, these results may be relevant only to the banking industry within the financial sector and only to federal level third party complaint processes.

Future Work

From an agency perspective, it would be helpful to know a multiplier that could indicate the number of consumers' problems that each complaint represents. As the data are used to identify trends and issues, the following question should be asked: how many complaints is significant? In this study, for example, 173 persons in our sample of 540 had complaints about credit cards; given the number of credit cards in circulation in the U.S., 173 does not seem significant--but is it?

The literature in the consumer dissatisfaction and complaining behavior field reveals a wide disparity in complaining rates. A 1986 study by TARP estimates that complaining rates range between two to 60 percent (Goodman et al, 1986). This wide range is a function of the type and severity of the problem as well as with whom the complaint is lodged; that is, if a problem is serious to the consumer or if the consumer can complain

at the point of purchase, the probability of complaining is higher.

Other studies (Warland et al, 1975; Best & Andreasen, 1977) consistently show that only about one-third of consumers bother to complain when they have a problem. Of those who complain about services, the vast majority (88 to 90 percent) complain to sellers or other "front line" contacts; only 10 to 12 percent complain about services to third parties (Better Business Bureau, government agency, television station or newspapers).

Thus, even though the volume of complaints received by the Federal Reserve System seems low, it is likely that many consumers who are dissatisfied are not complaining; and among those who do complain, it is likely that a substantial number of complaints are lodged with financial institutions. The research community could contribute greatly to the Federal Reserve's consumer protection efforts by helping to determine a fair and accurate complaint multiplier to estimate the "real" magnitude of the complaints received.

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THE STANDARDS ISSUE: AN ACCESSIBILITY-DIAGNOSTICITY PERSPECTIVE

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ABSTRACT

Consumer satisfaction (CS) is critical to business profitability. To implement any customer measurement program, businesses must understand how consumers evaluate their (dis)satisfaction. Researchers have proposed that our satisfaction evaluations involve a comparison process between product (service) performance and standards of comparison. However, little research has been devoted to the understanding of the circumstances under which consumers utilize one or more standards, construct ad hoc or retrieve prior standards, or when standard disconfirmation would have little impact on CS. Based on the accessibility-diagnostics model, we propose preliminary answers to these issues. A standard is utilized only when it is accessible and diagnostic for (or relevant to) the judgment task or goal. Multiple standards however may be utilized when they are moderately diagnostic. Applying the same model, we suggest that accessibility and diagnosticity or goal relevance determine whether or not a consumer will construct or retrieve one or more standards from memory. When product performance is more diagnostic than disconfirmation (and standards), it is more likely to affect customer satisfaction. Accessibility and diagnosticity are affected by individual, product and situational variables.

INTRODUCTION

The CS literature is dominated by the expectancy disconfirmation paradigm. This paradigm states that satisfaction results from the comparison of perceived product or service performance with prepurchase expectations. Satisfaction occurs when performance exceeds expectations and dissatisfaction occurs when performance falls short of expectations. However, despite the many empirical validations, some studies have shown that there exist many satisfaction situations which cannot be predicted by the current dominant model. Researchers have questioned the conceptualization of the expectations as the only standard of comparison

(Woodruff et al. 1983; Woodruff et al. 1991; Woodruff, 1993; Gardial et al. 1993; Miller, 1977; Cadotte et al. 1987; LaTour and Peat, 1979; Spreng and Dixon, 1992; Spreng and Olshavsky, 1993; Clemons and Woodruff, 1992; Westbrook and Reilly, 1983; Krishnan and Olshavsky, 1995). An empirical relationship between product performance and satisfaction has also been found (Churchill and Surprenant, 1982; Patterson, 1993; Anderson and Sullivan, 1993; Tse and Wilton, 1988; Swan, 1988; LaTour and Peat, 1979; Fornell, 1992). Other studies have questioned the cognitivist explanation of CS (Mano and Oliver, 1993; Oliver, 1993; Westbrook and Oliver, 1991; Westbrook, 1987) and CS measurement scales (Garpentine, 1994; Teas, 1994; 1993; Cronin and Taylor, 1994; 1992, Grönroos, 1993). More recently, Spreng and Olshavsky (1993; Spreng et al. 1996) have called for a development of a more general model that would explain more (dis)satisfaction situations and that would place current models in a more comprehensive framework.

In response to the need for a better framework, different alternative models have been proposed: the value-percept disparity model (Westbrook and Reilly, 1983), the experience-based norms model (Woodruff et al. 1983; Cadotte et al. 1987), the desires congruency model (Spreng and Olshavsky, 1993), the means-end disconfirmation model (Clemons and Woodruff, 1992), the combined cognitive and affect-augmented model (Oliver, 1993), and so forth. However, if researchers agree on the need for a better model of consumer satisfaction, they are still far from finding it. Current models agree that our subjective evaluation of our satisfaction involves a comparison process between product or service performance and a standard of comparison. Yet, no agreement has been reached upon which standard is used by consumers. Different standards have been suggested in the literature: Ideal performance (Miller, 1977; Tse and Wilton, 1988; Sirgy, 1984), Desired performance, Wants (Myers, 1991), Desires (Olshavsky and Spreng, 1989), Values (Westbrook and Reilly, 1983), comparative and normative expectations (Prakash,

1984), deserved or equitable performance (Tse and Wilton, 1988; Liechty and Churchill, 1979; Miller, 1977), minimum tolerable (Miller, 1977) or adequate performance (Zeithaml et al. 1993), product and brand norms (Cadotte et al. 1987), schema (Stayman et al. 1992), predictive performance (Prakash, 1984), expected performance (Miller, 1977), market supplied (Gardial et al. 1994), and so forth. What is missing, however, is a general framework that systematically organizes and distinguishes among these and other varieties of standards. Such a framework is necessary to appreciate the complex role of standards in the satisfaction formation process and the full extent of individual, product and situational differences in their use. Woodruff et al. (1991) have proposed that three dimensions are relevant to distinguish these standards: the nature of experience, level, and perceptual distinctiveness. Our typology is based on the theories that underlie comparison standards. This scheme proposes that each standard stresses a different aspect of a consumer's experience, life and has a different level (see table 1).

Some researchers suggest that multiple standards are likely to be used for a given consumption experience (Woodruff et al. 1983; 1991; Forbes et al. 1986; Tse and Wilton, 1988). Yet, there is little knowledge on what makes consumers use one or more standards. So far, only a few studies have investigated the determinants of standards use. Bolting and Woodruff (1988) showed that situational involvement may affect the type of standard applied to product performance evaluations. In low involvement situations consumers were more likely to use a favorite brand norm or focal brand expectations than a product norm in disconfirmation judgments. Gardial, et al. (1993) have found that subjects use different standards at different levels of the means-end hierarchy. Gardial, Flint and Woodruff (1996) have found that various types of trigger events, extraordinary stimuli relevant to product use and which bring about change in consumers' responses to the product/service in question, are associated with comparison standards. This implies that the use of a given standard may depend upon which event triggered product evaluation. So, if researchers admit that consumers may use multiple standards, then,

Q1: Under what circumstances do consumers use one or more standards?

On the other hand, researchers seem to admit that consumers always use prior standards in memory implying that they are stable over time (see Gardial et al. 1994 for an exception). Recent studies, however, recognize that standards may be built during or upon product consumption (Iacobucci et al. 1994; Woodruff et al. 1991). The following question then comes to mind:

Q2: When do consumers retrieve prior standards and when do they construct ad hoc or on-line standards?

Finally, researchers have found evidence which indicates that product performance has more significant influence on satisfaction than standard disconfirmation without very convincing theoretical arguments for the results (Patterson, 1993; Churchill and Surprenant, 1982). So, the following question is examined:

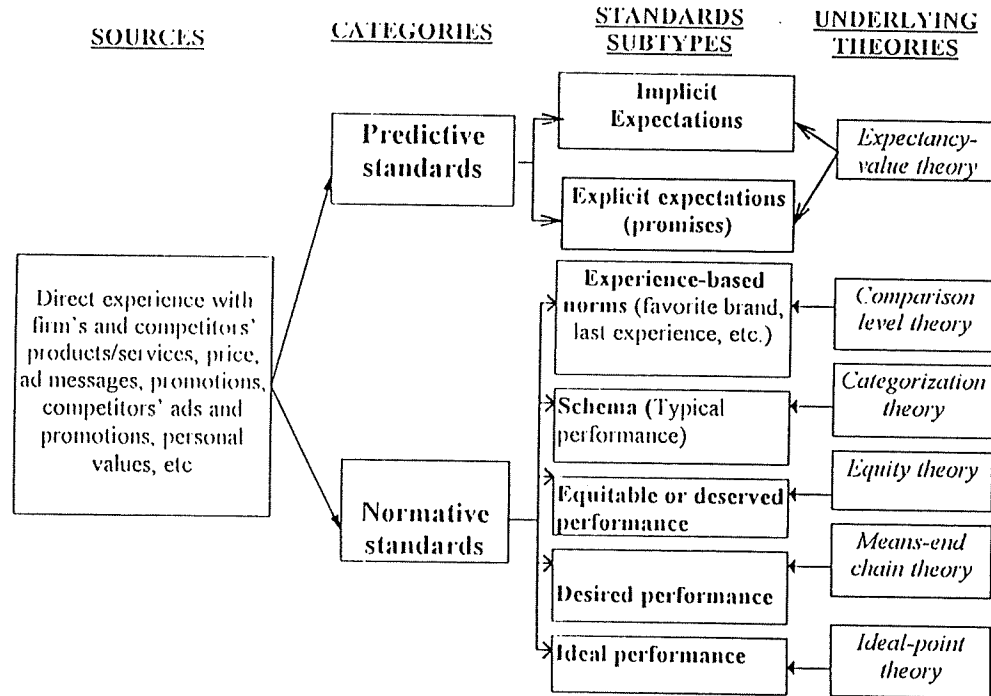
Q3: When does product performance outperform disconfirmation and standards in explaining consumer satisfaction?

This article aims at providing some conceptual answers to these questions. To do so, the approach consists in viewing consumer satisfaction as a memory-based activity as the comparison process takes place in the consumer's mind and only the outcomes (complaining behavior, WOM communications, repurchase) are manifest. As such, some progress can be made by using memory-related theories. Throughout the article, the accessibility-diagnostics model (Feldman and Lynch, 1988) will be used as an explaining framework. The rationale here is based on the following postulates: (1) consumers may approach a consumption experience with different standards (or frames of reference) in their mind; (2) consumers may use different standards simultaneously; (3) it is not necessary that prior standards be used as some standards can be constructed or selected on the spot during and/or upon product consumption. This assumption is based on recent work which states that beliefs, attitudes, intentions are not always ready waiting

Table 1

UNDERLYING THEORIES	Standards of comparison	Definition
<i>Expectancy-value theory</i>	EXPECTATIONS	
	Predictive expectations	Beliefs about product attributes or performance at some time in the future
	Promises or market supplied expectations	Explicit promises made by the seller on product performance
<i>Comparison level theory</i>	NORMS	
	Last received	The most recent experience the consumer had with the brand or product category
	Average performance	The performance the consumer believes the typical (or average) product or service of this type provides
	Favorite brand	The performance one gets from one's most preferred brand
	Best available	The performance one believes is the best performance that is available
	Best on attributes	The performance one believes one can receive on each attribute, even though no one brand is best on all the attributes at the same time
	Minimum tolerable	Minimum performance a consumer believes a product or brand must provide
	Product category	The performance one can receive from the product compared to a product in another category
	Product type	The performance one can receive from a type of product compared to another one in the same category
	Other brand	The performance one can get from a brand compared to another brand in the same product type
	What others have received	The performance that others have received and therefore the consumer believes s/he should receive
<i>Categorization theory</i>	SCHEMA	
	Schema	Performance a consumer believes should come from a brand or product categorized in a particular product category schema.
<i>Equity theory</i>	EQUITY-BASED NORMS	
	Equitable or deserved performance	The performance of a product the consumer thinks s/he should get , given what was put into the exchange
<i>Means-end theory</i>	DESIRES	
	Desires	The performance of a product or service that the consumer judges will lead to higher level values
<i>Ideal-point theory</i>	IDEAL	
	Ideal performance	The performance that is the best one can imagine, an abstract ideal

Figure 1
The Different Categories of Standards



to be used by the individual but may be constructed upon internal (self-generated) or external (e.g. market research survey questionnaire) request (Morwitz et al.1993); and (4) it is not necessary that standard disconfirmation prevails in any satisfaction judgment. This assumption is based on research that found a significant relationship between product performance and satisfaction (Patterson, 1993).

The article is organized into four sections. The first section makes an overview of the standards that may be used by consumers in comparison processes. The second section examines the case where consumers have a priori standards in mind; the third section examines the circumstances under which consumers retrieve a priori or construct ad hoc standards; and in the fourth section, a theoretical explanation is provided on the

relationship between product (or service) performance and satisfaction. Throughout the paper implications for future research are discussed.

STANDARDS OF PRODUCT EVALUATION: AN INTEGRATIVE REVIEW

We propose that there are two broad categories of comparison standards: predictive standards and normative standards. Predictive standards refer to customers' beliefs on what will happen in their next consumption experience. Normative standards refer to customers' beliefs about what should happen in their next consumption experience (see Figure 1). Our proposition is consistent with previous work in marketing and organizational behavior. In

marketing, we draw from Boulding and his colleagues (1993; see also Lawler, 1971 on pay satisfaction) who distinguish predictive from normative expectations.

However, our approach is different from Boulding et al's (1993) in that we consider predictive and normative standards as second-order constructs. From these two broad categories we still distinguish six more subtypes of standards based on their underlying theories. Six theories are at the basis of the standards of comparison as we know them today: (1) the expectancy-value theory, (2) comparison level theory, (3) ideal-point theory of choice and preferences, (4) equity theory, (5) categorization theory and (6) means-end theory. Each of these theories emphasizes a specific aspect of the consumer's experience. Our distinction of the six subtypes of standards is consistent with the work that found that this distinction is relevant (Tse and Wilton, 1988; Gupta and Stewart, 1996). In the organizational behavior field, the relative deprivation theory (see Crosby, 1976) proposes that six important judgments are preconditions to feelings of dissatisfaction about outcomes. Individuals will feel dissatisfied and resentful about the level of an outcome when (1) there is a discrepancy between the outcome they want and what they receive (e.g. desired performance), (2) they see that a comparison other has more than they do (this standard has been suggested by Spreng and Dixon, 1992), (3) past experience has led them to expect more than they now have (e.g. last consumed brand), (4) future expectancies for achieving better outcomes are low, (5) they really feel they deserve more (e.g. equitable or deserved performance), and (6) they absolve themselves of personal responsibility for the lack of better outcomes (i.e. attribution of causes). Empirical evidence has been found by Sweeney and his colleagues (1990). We draw on this theory to suggest that different discrepancy constructs might play important roles in predicting satisfaction with products and services.

The typology here is based on the nature of the standard. It also considers the level of the standard as each will have a different value given that "it is possible that even when people utilize the same standard subtype, there could be individual differences with respect to the specific content of the particular standard subtype that is

used" (Higgins, Strauman and Klein, 1986, p.23).

Expectancy-Value Theory: Does the Product Meet My Prepurchase Beliefs?

Expectancy-value theory defines attitudes in terms of beliefs and their importance. Fishbein and Ajzen (1975) suggest that attributes (or consequences) associated with an attitude object are evaluated on two dimensions. First, the individual considers the likelihood that an attitude or a consequence will be associated with the object, and then, considers the desirability of that attitude (or consequence). The early works in CS (Oliver, 1977, 1980; Olson and Dover, 1979) drew from that theory and proposed that before buying, consumers estimate the likelihood that product attributes (or the whole product) will provide a given performance upon consumption. This prepurchase evaluation (i.e. expectations) will then be used as a standard in the comparison process. Different concepts related to expectations have been suggested. Most of the authors who have used these concepts (Oliver, 1980; 1981; Churchill and Surprenant, 1982; Miller, 1977 [expected performance]; Swan and Trawick, 1980; Prakash, 1984 [predictive expectations]; Spreng and Dixon, 1992; Gardial et al. 1994 [market supplied standard]) all talk about product (or service) probability estimations in providing a given performance on its attributes or globally. More recently, some researchers (Spreng and Dixon, 1992; Woodruff et al. 1991) have proposed that seller's promises can be used as comparison standards.

The Comparison Level Theory: Is the Product Better than the Other Experiences?

Another set of standards can be considered as resulting from the comparison level theory. Thibault and Kelley's (1959) comparison level theory suggests that consumer satisfaction results from the discrepancy between the result and a standard of comparison called the comparison level. This comparison level is determined by the average salient results of the same interactions (e.g. the similar previous service encounters), the similar interactions experienced by other individuals (e.g. one's friends) and in a lesser

extent by specific expectations on the current interaction. LaTour and Peat (1979) modified this theory and proposed that there exists a comparison level for each attribute. This comparison level is a function of previous experiences with various levels of the attribute, the levels of attributes experienced by similar consumers that the individual is aware of and the expectations created by the seller. These authors have proposed two more standards: (1) average performance and (2) average performance obtained by others. The main characteristics of these standards are that they don't concern the focal brand but other experiences. In the same vein, Woodruff et al. (1983) proposed and validated (Cadotte et al. 1987) two types of standards called experience-based norms: (1) brand norms (most popular brand, last consumed brand, favorite brand) and (2) product norms which correspond to what LaTour and Peat (1979) called average performance. Other standards can be integrated into this category: (1) minimum tolerable performance: (Miller, 1977) which corresponds to what Zeithaml et al. (1993; Parasuraman et al. 1991) have called "adequate performance", (2) best brand available: (Spreng and Dixon, 1992), (3) best performance on attributes: (Spreng and Dixon, 1992), (4) product category, and (5) product type: (Gardial et al. 1994) (see Table 1).

The Ideal-Point Theory: Is the Product a Perfect One?

Ideal-point choice and preference models propose that consumers have an image of an ideal brand in memory and compare actual brands with that ideal. Each brand is supposed to have ideal points for each attribute which represent the ideal or optimal amount of an attribute (Garpentine, 1994; Kotler, 1991). When an attribute performance is greater or lower than the ideal point consumers perceive poor quality and are dissatisfied. Drawing on this theory, researchers have suggested that consumers use the ideal performance as a comparison standard. Most of these standards refer to product perfection. Ideal performance has been defined as the best performance a consumer can imagine (Spreng and Dixon, 1992), a wished-for performance (Miller, 1977), and the optimal product performance a

consumer can ideally expect (Tse and Wilton, 1988). This standard should be considered as a consumer's perfect quality for the product/service to avoid any confusion with expectations (see Iacobucci et al. 1994 for an excellent example on hotel registration).

Equity Theory: Does the Product Correspond to What I Spent?

Equity theory (Adams, 1963) states that consumers compare their inputs (i.e. resources) into the exchange with what they get in return. Adams expressed this as a ratio of results (product or service performance) with inputs (money, time, and energy). Equity is determined by comparing the consumer's ratio with the seller's ratio (distributive equity). This theory has been validated in CS/D studies (Oliver and Swan, 1989; Oliver and DeSarbo, 1988). This theory has lead researchers to recognize that equitable (Tse and Wilton, 1988) or deserved (Miller, 1977) performance or fairness (Spreng and Dixon, 1992) can be used as a comparison standard in satisfaction judgments. This standard corresponds to the performance level a consumer deserves given what s/he put into the exchange.

Categorization Theory: Does the Product Correspond to what I Know about This Category?

Rosch (1975) proposed that individuals are flooded with so much information from the environment that it is almost impossible for them to process all of it. As a result, they develop cognitive structures that help them organize and process information efficiently. Individuals have schemas about the environment - i.e. generic knowledge structure composed of relevant attributes of a stimulus as well as their interrelations (Folkes and Kiesler, 1991). The schema is an organized model of expectations associated with a stimulus. Once a product is categorized into a certain class, knowledge and expectations the consumer has developed over time (schema) on this kind of product will affect the kind of information the consumer will encode on the product as well as inferences made about that product (Bettman, 1979; Sujun and Dekleva,

1987). Stayman et al. (1992) used this theory and Mandler's (1982) notion of schema congruency (see also Meyers-Levy and Tybout, 1989) to suggest that product category schema can be an alternative standard in the comparison process. This standard is distinctive in that it assumes schema-level rather than attribute-level processing. Thus, consumer satisfaction may be affected not only when product performance falls short of expectations but also when product representations are incongruent (i.e. distant from) with the schema (Gupta and Stewart, 1996). This standard stresses a holistic processing based on a simultaneous consideration rather than an analytical processing based on sequential consideration of the attributes (Cohen and Basu, 1987). It is on this specific point that schema is different from average performance which, although it involves different products, proceeds by an analytical processing. Moreover, although this standard bears on brands other than the focal brand, it is not limited only to the brands purchased by the consumer in the past but considers generic and abstract attributes of a product category (e.g. what is related to PCs irrespective of the brands the consumer has already tried). Finally, schema is normative rather than probabilistic as it bears on what should be for a product category.

Means-End theory: Does the Product Correspond to what I Wanted to See?

Means-end theory (Gutman, 1982) states that the consumer buys a product to obtain some benefits or consequences which in turn will satisfy her or his higher level values. The objective of this theory is to understand what makes products personally relevant for consumers by modeling the relationships between a product (a set of attributes and benefits) and a consumer (a holder of values). Drawing from this theory, Olshavsky and Spreng (1989; 1992; Spreng and Olshavsky, 1993; Spreng et al. 1996) have proposed that consumers use their means-end chains as comparison standards. They have proposed the concept of " desires " to represent means-end based standards--"attributes, levels of attributes and benefits that the consumer believes lead or are linked to higher-level values" (Spreng and Olshavsky, 1993, p.171). Desires can

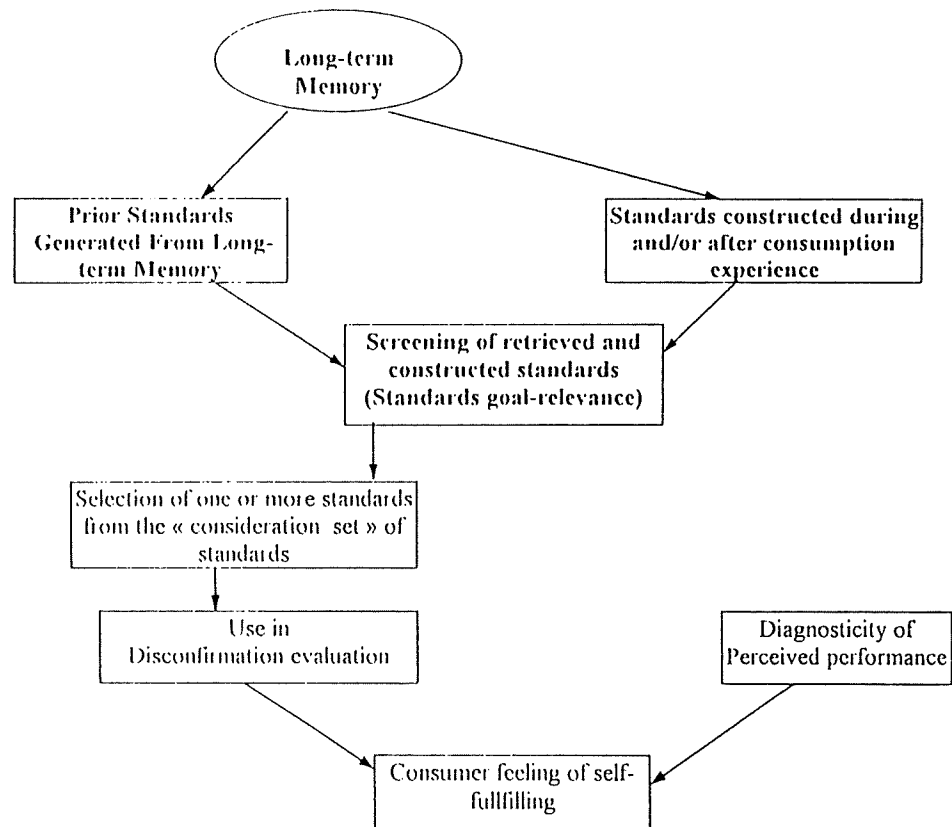
be conceptualized at various levels of the chain (Clemons and Woodruff, 1992; Gardial et al. 1993). At the values level, desires correspond to " values " suggested by Westbrook and Reilly (1983). Desires can also be defined at the benefit level. As a result, satisfaction becomes the capacity of product (or service) to meet or exceed a consumer's desires in terms of benefits. Other similar concepts have been suggested in the literature (Zeithaml et al., 1993; Sirgy, 1984; Swan and Trawick, 1980). The reader is invited to see Spreng and Olshavsky (1993) for more. Myers (1991) proposed that a consumer's " wants " are an alternative comparison. He found that wants predict satisfaction better than expectations. The common point among all these standards is that they emphasize what the consumer wants to see to be satisfied.

Given that standards can be structured according to their underlying theories or nature, what then determines the use of these standards in the comparison process? The answer to this question may be obtained from the accessibility-diagnostics framework (Feldman and Lynch, 1988).

FACTORS AFFECTING STANDARDS USE IN SATISFACTION EVALUATION: ACCESSIBILITY AND DIAGNOSTICITY OF STANDARDS

According to Feldman and Lynch's (1988) accessibility-diagnostics framework, the likelihood that a potential input in memory (e.g. an attribute, the memory of one's experiences, one's attitude, one's reaction to advertisement, another person's suggestion, etc.) would be used in memory-based judgments or decisions depends on its accessibility and diagnosticity. Accessible information can be actively disregarded if it is perceived to be nondiagnostic (Alba et al., 1991). If accessibility has been defined as the retrievability of an input from memory, diagnosticity has been defined differently by authors (Feldman and Lynch, 1988; Lynch et al. 1988; Dick et al. 1990; Herr et al. 1991; Pechman and Ratneshwar, 1992; Menon et al. 1995). Lynch et al. (1988) have stated that diagnosticity should be defined subjectively and not objectively. Here, we consider diagnosticity or goal-relevance as the

Figure 2
A Process Model of Standard Selection and Use in Satisfaction Evaluation



degree to which the use of each standard is perceived to be self-fulfilling. Figure 2 shows a representation of the subprocesses that consumers might go through in the use of comparison standards.

Figure 2 is an adaptation of the three-stage choice process model by Nedungadi, Mitchell and Berger (1993). The first stage involves a generation of alternative standards from long-term memory to short-term memory. This process involves the retrieval of previously encoded standards (e.g. favorite brand quality) from long-

term memory and the construction of ad hoc standards (e.g. based on an interaction with the product/service or due to a measurement instrument). It results in a set of alternative standards being brought to mind and considered in short-term memory. As suggested by Lynch, Marmorstein and Weigold (1988) this process of standard generation (retrieval and construction) involves a stopping-rule or threshold that determines when to stop generating alternative standards. The second stage involves the screening of standards for acceptability in which

inappropriate standards are eliminated. The consumer might generate last consumed brand as a comparison standard and find it inappropriate for the current consumption experience. This standard will be dropped both from working memory and further consideration. The third stage involves a selection of one or more standards from what might be called a "consideration set of comparison standards."

This is to say that the use of a standard in satisfaction judgment will be (1) a positive function of its accessibility and retrievability in memory, (2) a positive function of its diagnosticity or relevance for the consumption goal, (3) a negative function of the accessibility of the other standards in memory, and (4) a negative function of the diagnosticity of the other standards that will be accessible in memory. For example, "last visited restaurant" will be a comparison standard for current restaurant only when the consumer remembers that consumption experience. Moreover, even if it is recalled it has to be relevant for the current experience.

Thus, we define consumer satisfaction as an evaluation of the discrepancy between product/service performance and one or more accessible and diagnostic standards (retrieved and/or constructed).

The following propositions will say more about this statement.

Proposition 1: Prior Standards Must be Accessible to be Used in Satisfaction Evaluation

We argue that a standard is utilized when it is accessible and diagnostic for the consumption experience. This argument is similar to Higgins et al's (1986) proposition that "In general, two variables that influence the utilization of standards are their *accessibility* and their *goal-relevance*the accessibility and goal-relevance of standards can vary as a function of individuals' personality" (p.51). For instance, when expectations are inaccessible, consumers will retrieve the other standards that are accessible, even if their diagnosticity is low. However, when expectations are accessible, consumers will assess their diagnosticity relative to the other standards that are accessible in memory (e.g. the performance of a previously consumed brand). When expectations

are not diagnostic the other standards will be preferred. If expectations are highly diagnostic, they will be used. However, if they are moderately diagnostic, then a combination of expectations and norms or desires may be used in an attempt to make the best possible judgment. This result has somewhat been obtained by Tse and Wilton (1988). They found that expectations and ideal performance jointly explained consumer satisfaction (see also Gardial et al. 1993; Gupta and Stewart, 1996). Unfortunately, there was no strong theoretical foundation for that result.

The idea of accessibility of the standards of comparison is implicit in many studies (Dröge and Halstead, 1991; Halstead, 1993). Grönroos (1993) states that consumer's experiences with a service encounter may alter his/her expectations, and these altered expectations are the ones that s/he compares with his/her service experiences. In the same way, there is a research stream that shows that people are often unable to remember their expectations of the outcomes of an event correctly once the outcomes become known (Christensen-Szalanski and Willham, 1991). Zwick, Pieters and Baumgartner (1995; see also Pieters and Zwick, 1993) have also found that retrieved and biased expectations due to backward assimilation explain satisfaction better than prior expectations especially when the product has some personal relevance.

One important factor in consumer satisfaction is consumer confidence in market supplied information (Spreng, MacKenzie and Olshavsky, 1996). Many factors have been found to affect information accessibility (interference, decay, recency, primacy - see Biehal and Chakravarti, 1986; 1983; Folkes, 1994 for more). Little research has been devoted to the accessibility of comparison standards. Some results may however be found in the work by Pieters and associates (1993; 1995) on hindsight bias and backward assimilation processes, and by Schwarz and Scheuring (1988; Schul and Schiff, 1993) on questionnaire content and format. Standards of comparison may be considered as consumers' beliefs.

Expectations are beliefs that consumers make prior to product purchase. Confidence in one's expectations may be a requirement for consumers to rely on their expectations (Spreng and Olshavsky, 1993; Spreng and Dixon, 1992).

Confidence increases the likelihood that a previously made belief will be activated from memory in a consumption experience evaluation. In other words, expectations formed with a large amount of confidence will be more easily retrieved and used in a judgment of satisfaction. Similar arguments can be found in Berger and Mitchell (1989) and Fazio and associates (1986; 1989). When expectations are formed with a small amount of confidence, they are likely to be inaccessible from memory. As a result, other references provided by the other standards may be more preferable. Confidence in one's expectations is a function of the amount of information (Peterson and Fitz, 1988; Oskamp, 1965). Amount of information is likely to provide more opportunities for product relevant cognitive elaboration (Einhorn and Hogarth, 1978; Petty and Cacioppo, 1986; Berger and Mitchell, 1989). When consumers are informed by friends (Arndt, 1967; Bearden and Teel, 1983; Herr et al. 1991) or salespeople about technically complex (i.e. with experience and credence attributes) products, they are more likely to express much confidence in their expectations. On the contrary, when amount of information is low, consumers may express little confidence in their expectations (Sanbonmatsu et al. 1992) and are likely to use the other standards.

Proposition 2: Consumers are Likely to Construct Ad Hoc Standards Based on Their Interaction with the Product/Service or when Asked a Disconfirmation Question

One of the assumptions in this research is that consumers could also construct standards based on their interaction with the product or service. Iacobucci et al. (1994) maintains that "a service encounter may be compared with an ad hoc norm constructed simultaneously with the experience of the service encounter, not to a precomputed or preexisting expectation" (p. 23). They state that perhaps expectations for the unfamiliar service are generalized from expectations based on services that are not identical, but similar and more familiar. For example, a person might have no experience with a realtor but might conjecture a cross between a salesperson and an attorney or some such roles and the resulting evaluation would be a global evaluation conducted at a higher level

(see Johnson, 1984). Moreover, standards are likely to be constructed when consumers are asked to answer questions concerning whether product quality has met their expectations, favorite brand or desires (see Fitzsimons and Morvitz, 1996).

When are prior standards and ad hoc standards differentially operative?

To better explain standards construction, we can draw on the work on cognitive factors in survey research. Based on the work by Simmons, Bickart and Lynch (1993) we argue that when consumers have made prepurchase evaluations (e.g. expectations), comparison standards could be retrieved directly from memory and need not be computed on the spot using cognitions situationally made salient by product consumption experience. The Feldman and Lynch (1988) framework implies that, because prior standards should be more accessible and highly diagnostic, consumers who have a priori standards in memory should not be influenced much by product consumption experience. However, those who had no accessible and relevant prior standards would be likely to build ad hoc standards on the spot. As a result, they would be much influenced by product performance. This argument corresponds to Hastie and Park's (1986) memory-based versus on-line judgments. Memory-based satisfaction judgment refers to the use of prior standards while on-line satisfaction judgment refers to the construction of ad hoc standards. The use of a priori standards is memory-based as the subject must rely on the retrieval of what s/he believed to render a judgment on whether or not s/he is satisfied. The construction of ad hoc standards, on the other hand, is on-line because the subject is forming the satisfaction judgment on the spot as product performance is experienced. The distinction between the two processes is based on differences in the sources of information that is entered as input to the satisfaction judgment: what existed before and what has been constructed.

The ease of product evaluation (i.e. because of experience and credence attributes) and consumer experience with the product are such important constructs in standard construction.

Some standards would be constructed because either the product has a lot of experience (Nelson, 1970) and credence (Darby et al. 1973) attributes or the consumer lacks significant experience

(Simmons et al. 1993). Experience and credence attributes may only be available or may be more easily judged only after rather than before the consumption experience. A recent study by Wright and Lynch (1995) shows that confidence and accessibility for experience attributes are greater after direct experience than after advertising. Arnould and Price (1993) found that when the experience is extraordinary (e.g. river rafting) , expectations are less likely to affect satisfaction because consumers are unable to say in advance what the service or the product will provide them. Therefore, when prepurchase evaluation is difficult consumers are likely to build standards upon product consumption. Whereas when prepurchase is easier (i.e. because there are less experience and credence attributes and more search attributes) they are likely to use their previously formed standards or frames of reference. This observation is important as in most studies of CS/D expectations are manipulated through ad messages. Ads will be effective in manipulating expectations only when they communicate search attributes (Wright and Lynch, 1995).

Looking at consumer experience, we propose that when consumers have significant experience they may have preexisting beliefs (e.g. expectations and norms) and attitudes in memory. When they evaluate their satisfaction, consumers can retrieve those beliefs and compare product performance with them. However, when consumers lack significant experience and knowledge about product or service, they are likely to build standards of comparison on the spot. These arguments can be interpreted in terms of accessibility and diagnosticity. That is experience makes existing standards more accessible while lack of knowledge requires that consumers build on-line standards because of inaccessibility of the a priori standards (similar arguments can be derived from the work by Kline and Wagner, 1994, and Kalwani et al. 1990). On the other hand, some implications may be drawn from the work on cognitive factors in survey research. Bickart (1993) has found interesting results in a study on carryover and backfire effects in surveys. Carryover effects occur when respondents give answers that are consistent with beliefs rendered accessible by a previous response. Backfire effects occur when respondents give

answers that are inconsistent with beliefs rendered accessible by a previous response. Bickart's (1993) evidence suggests that relative accessibility and diagnosticity of a previous response will determine the occurrence of a carryover effect. Knowledgeable respondents are less likely to experience backfire effects as they can recall different beliefs from memory. Again, as high knowledge leads to more perceived self-relevance, the likelihood of backfire effects is greater for low than for high knowledge respondents. Similarly Morwitz et al. (1993) have shown that measuring intent changes subsequent behavior and repeated measurement of purchase intent increases the purchase rate for those who had a strong intent and decreases purchase rate for those who had a weak intent. These authors underline the particular role of product knowledge. Measuring intent affects behavior only when one does not have prior experience with the product. This is because measuring intent makes respondents' attitudes more accessible and can change these same attitudes. But, well-articulated beliefs (held by familiar individuals) are less likely to be affected by intent and attitude questions.

The implications of this literature on the construction vs retrieval of comparison standards is that *consumption experience will affect the retrieval or construction of comparison standards*. That is, low knowledge consumers are likely to build ad hoc standards as they are more likely to be affected by product consumption. They do not have well articulated beliefs about the product (similar to a backfire effect). High knowledge consumers however are less likely to be affected by the consumption experience, and build ad hoc standards, as they have well articulated beliefs about the product (similar to a carryover effect).

Proposition 3: Comparison Standards (Retrieved and/or Constructed) Must be Diagnostic or Goal-Relevant to be Used

Diagnosticity or relevance of comparison standards is a function of the consumption or purchase goal. Usually, consumers buy products and services with some goal in mind be it central or not. Goal relevance in turn is affected by individual, product and contextual factors. Some investigations recognize that the context of

Table 2
Involvement and Product Type as Determinants of Standard Diagnosticity

		Involvement	
		High involvement	Low involvement
Product type	New product	(1) Desires most diagnostic	(3) Expectations most diagnostic
	Old product	(2) Desires/Experience-based norms moderately diagnostic	(4) Experience-based norms most diagnostic

evaluation can influence standard utilization (Woodruff et al. 1991; Higgins et al. 1986). For example (Spreng and Dixon, 1992), if the product is used in a public situation (e.g. serving wine to guests), the standard may be what one desires the most, while in a private situation (e.g. drinking wine with just one's family) a standard such as favorite brand may be used. Other factors are involvement and product type. For instance, the choice between experience-based norms and desires may depend upon consumer involvement. High involvement consumers are likely to use desires since the product domain has a high degree of self-relevance. Desires are defined according to the means-ends model (Gutman, 1982). They are what the consumer needs to achieve her or his values. Gutman (1982) suggests that low involvement products are not linked to values because of the lack of relationships between product benefits and consumer's values (see also Mulvey et al. 1994).

When a consumer evaluates satisfaction with a new product, desires or expectations (e.g. what the seller has said the product will do) may be the appropriate standards. Experience-based norms are less likely to be used as the consumer lacks appropriate experience with the product. However, when satisfaction judgment is related to a familiar product, experience-based norms may be the most appropriate standards because they require some previous experience with the product. Moreover, when product performance is very poor, equitable performance is likely to be the appropriate standard as this might result in mistrust towards the firm (Oliva, Oliver and MacMillan, 1992).

Proposition 4: Standard Disconfirmation Must be Diagnostic to be More Effective than Product Performance

Researchers have shown that product performance or service encounter perceptions have a direct influence upon satisfaction (Tse and Wilton, 1988). LaTour and Peat (1979) proposed that consumers who are obliged to buy a poor quality brand (if their favorite brand is out of stock) may be directly dissatisfied with any consumption experience. In the same way, buyers of a new brand facing expectations disconfirmation can still be satisfied if it provides the attributes valued by consumers of competing brands. Empirical results have been obtained by Churchill and Surprenant (1982) for a durable good, by Patterson (1993) for high-involvement products, and Swan (1988) found that product performance was a significant predictor of satisfaction while for services different attributes affected CS differently. A recent study by Pieters et al. (1995) also supports the direct influence of experiences in services through a backward assimilation process.

We explain this based on the accessibility-diagnostics framework. When standards are not diagnostic, product performance (or service encounter experiences) will have a stronger impact upon satisfaction. The work by Dabholkar (1993) on the relationship between perceived quality and satisfaction may inform us on this phenomenon. Product performance is more cognitive and satisfaction is both cognitive and affective (but more emotional). As a result, the attitude model used by the consumer can make product performance more diagnostic than disconfirmation

and vice versa. When consumers evaluate consumption experience first and then form a feeling about it (i.e. cognitive states are followed by affective states), it is more likely that product performance will be more diagnostic than disconfirmation. On the other hand, if consumers develop an affective state first as a basis to develop cognitions about the experience then it is likely that disconfirmation will be more diagnostic in informing the consumer. This, however, is possible only under some conditions.

Some products or services are naturally more emotional than others (e.g. movies). If a product is more cognitive than product performance is likely to be more diagnostic. This is the case for products which have been used by most of the authors who found a significant direct relationship between product performance and satisfaction (e.g. VCR in Churchill and Surprenant, 1982; low-combustion heater in Patterson, 1993). On the contrary when the product is more emotional then its evaluation is more likely to be diagnostic (i.e. standards of comparison are more likely to be used). If a product or service has low emotional possibilities consumers will tend to evaluate it cognitively and performance will be more diagnostic. Also, some consumers are more cognitive than others and are likely to evaluate consumption experience rationally at the cognitive level. For instance, Smith and Petty (cited by Cacioppo et al. 1996, p.229) have found that attitudes of individuals high in need for cognition are affected by argument quality regardless of the confirmation or disconfirmation of expectations. However, attitudes of individuals low in need for cognition were influenced by argument quality only when the type of argument they received was unexpected.

Other consumers express their emotions very strongly. That is they have a high affect intensity (Larsen and Diener, 1986) and would evaluate experiences at an emotional level. High affect intensity individuals have been found to express their emotions very strongly (Larsen and Diener, 1986; Moore, Harris and Chen, 1995). As standard disconfirmation generates emotions (Krishnan and Olshavsky, 1995) we argue that high affect intensity individuals express their emotions and (dis)satisfaction more strongly than low affect intensity individuals. For these subjects

disconfirmation is likely to be more diagnostic than product performance. High involvement also decreases consumers' sensitivity to preusage phenomena and increase their sensitivity to outcome phenomena (Oliver and Bearden, 1983; Barber and Venkatraman, 1986). In this case, product performance may be more diagnostic than standard disconfirmation.

Table 3
Summary of Propositions on Standards Utilization

Proposition 1: Standards must be accessible to be used in satisfaction evaluation

1.1: When expectations are held with much confidence they are likely to be more accessible and used in the comparison process.

1.2: Lack of confidence makes expectations less accessible. As a result consumer satisfaction is likely to be affected by other standards.

Proposition 2: Consumers may also construct ad hoc standards based on their interaction with the product/service or when asked a disconfirmation question

2.1: Consumers are likely to retrieve prior standards when product performance is easy to evaluate

2.2: Experts are less likely to build ad hoc standards

2.3: When product or service is new, consumers are likely to build ad hoc standards

Proposition 3: Accessible standards (retrieved and/or constructed) must be goal-relevant to be used.

3.1: When the product is new and has high self-relevance, desires are likely to be used.

3.2: When the product is very familiar and has high self-relevance, desires and experience-based norms are likely to be used because they will be moderately diagnostic.

3.3: When the product is new and has low self-relevance, accessible expectations (seller's promises) are likely to be the most diagnostic standard

3.4: When the product is old and has low self-relevance, accessible norms are likely to be the most diagnostic standards.

Proposition 4: Product performance outperforms standards disconfirmation in satisfaction evaluation when it is more diagnostic

4.1: For individuals high in need for cognition, product performance is likely to be more diagnostic while it is likely to be less for those low in need for cognition.

4.2: For individuals high in affect intensity standards disconfirmation is more likely to affect satisfaction than product performance. Individuals low in affect intensity product performance is likely to be more diagnostic.

CONCLUSION

This article began with an interest in understanding when consumers (1) utilize one or more standards, (2) construct ad hoc or retrieve a priori standards or (3) emphasize product performance more than standard disconfirmation in the consumption experience evaluation. Based on the accessibility-diagnostics model, we have made some propositions to provide preliminary answers to these questions. We first identified different standards for evaluating product performance and classified them based on their underlying theories. Based on these standards, we discussed factors affecting their utilization in the comparison process.

The first implication of our research is that CS scholars have to test the structure of comparison standards. Particularly, how do consumers represent standards in their memory? Our framework can provide a starting point in the development of a confirmatory factor model. The concept-disaggregation method proposed by Bagozzi and Heatherton (1994; see also Abe, Bagozzi and Sandaragani, 1996) could help researchers achieve this objective. The standards issue has been investigated for more than twenty years, but so far there is no agreed-on typology. Structuring the standards of comparison is a prerequisite for the study of their use by consumers. As one reviewer has said, we should "address the possibility that all of these standards are but variations on a single standard or determinants of this single standard. Until this issue is solidly addressed, effort to explain the condition under which different standards are used appear simply unnecessary." Yet, we believe that these standards are likely to be different because, for example, we cannot call product evaluation with one's ideal an expectation because consumers do not expect their consumption experience to meet their ideals (see Liljander and Strandvik, 1993). We have much theoretical discussion on standards of comparison now (see Iacobucci et al. 1994, p.19-31). Consequently, the time appears to be ripe to clear it up.

Once this question is addressed, future research should also consider the propositions we have made to advance our knowledge of standards use. As far as empirical testing is concerned, we

suggest that given that measurement scales may affect standard accessibility (Schwartz and Scheuring, 1988; Schul and Schiff, 1993) researchers could utilize the response latency technique (Fazio, 1986). This technique could contribute to the elimination of measurement instrument effect. Specifically, expectations accessibility could be manipulated and measured through the latency to answer to expectations recall questions. On the other side, it may be difficult for researchers to capture standards construction processes given that this may occur during product consumption. As a result, we suggest that researchers design experiments which manipulate standards measurement order in relation with product consumption. The difference in standards values after consumption could express the influence of product performance and standards construction (similar to backfire effect) while the lack of difference could be interpreted as retrieval of standards (similar to carryover effects).

Understanding all these processes seems important as CS ratings might differ if different standards are used in different settings, by different individuals for different products and services. Today's businesses are required to apply TQM and ROQ (Rust et al. 1995) techniques. Knowing the standards applied will probably make the measurement and interpretation of CS ratings easier and meaningful for managers.

Empirical results based on our propositions will also advance work on measurement of CS. Woodruff et al. (1993, p.107) for example suggest two ways for measuring satisfaction: avoiding measurement of any particular standard versus specifying one or more standards that respondents are to consider when making a scale response. Knowledge of which factors influence the utilization of standards will inform researchers and practitioners on which standard should be applied. This in turn will inform managers on which variables should be acted on to improve customer satisfaction. With the development of National Customer Satisfaction Indexes (Fornell, 1992; Fornell et al. 1996) it is necessary that we improve the quality of the information obtained.

Current debate on whether expectations should be measured before or after the consumption experience (Grönroos, 1993) or whether performance-based scales are better (see

Grapentine, 1994; Cronin and Taylor, 1994; Teas, 1994; Parasuraman et al. 1994) could be solved if we establish circumstances under which consumers might be expected to retrieve prior standards and conditions under which constructed standards might be more diagnostic. One can think that standards are to be measured before the consumption experience when consumers retrieve prior standards and measured after the consumption experience when consumers build ad hoc standards. Moreover, performance-based measures could be more informative in conditions under which product performance is more diagnostic than standard disconfirmation. As far as managerial implications are concerned, we believe that firms could affect consumers' consideration sets of standards with ad messages.

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MODELING THE COGNITIVE ANTECEDENTS OF POST-CONSUMPTION EMOTIONS

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ABSTRACT

While much work has been done to model the antecedents of satisfaction, very little attention has been paid in the marketing literature to the antecedents of consumption emotions. This paper explores one cognitive model of emotions and provides experimental evidence to show that cognitive appraisals such as goal significance, outcome desirability and attribution do influence various emotions. It is further shown that the effect of cognitive appraisals on behaviors are almost totally mediated by the emotions. Empirical evidence which shows that emotions such as anger and shame are significant predictors of consumer behaviors over and above the predictive power of customer satisfaction is provided.

INTRODUCTION

Keith Hunt (1993) wrote that it was obvious 'that CS/D&CB are emotion driven, not cognition driven' and that 'emotion is the critical element in CS/D&CB.' Woodruff (1993) suggested that the study of emotions as it relates to CS/D&CB should be a priority research stream. The growing importance of emotion is illustrated by the increasing numbers of papers published in JCS/D&CB that investigate the role of emotion in the CS/D&CB paradigm. The research done on emotions (as it applies to this field) have either concluded that emotions are antecedents of CS/D (Oliver 1989; Westbrook 1987) or that other emotions coexist with CS/D (Westbrook and Oliver 1991), and that satisfaction is an emotional reaction.

Satisfaction and Emotion

The impact of emotions on satisfaction has been well documented. Westbrook (1987) included emotions as antecedents of satisfaction, and found support for this by showing that positive and negative affect were significant predictors of satisfaction over and above the expectancy disconfirmation evaluations. Oliver (1989)

hypothesized that emotions formed as a result of attribution processing combine with primary affects (happy/ sad) generated by the goodness or badness of the product experience, to form the summary evaluation of satisfaction. Oliver (1993) modeled satisfaction as the consequence of the traditional expectancy disconfirmation model, but in addition included the antecedents of positive and negative affect (which in turn was influenced by attribution) and equity. Other researchers too have found significant impact of affect on satisfaction (Dube-Rioux 1990; Evrard and Aurier 1994). Westbrook and Oliver (1991) posited that 'a number of qualitatively different affective experiences coexist with, and are related to, the common unidimensional satisfaction continuum.'

Satisfaction as an Emotion

Having shown the significant impact that emotions have on satisfaction, the next issue is whether satisfaction is an emotion. Satisfaction has been defined as an 'emotional response manifested in feelings . . . conceptually distinct from cognitive responses, brand affect and behavioral responses' (Day 1983, p.113) and as an emotional state resulting from a process of combining cognitive evaluations (Sirgy 1984). Woodruff and colleagues (Woodruff et al. 1983; Cadotte et al. 1987) have included emotion as a part of the satisfaction construct. A recent empirical study of various models of post-consumption reactions concluded that the best representation of the data was the conceptualization which included separate positive and negative emotion constructs (Babin et al. 1994). Of particular significance was the observation made by the authors that this model failed to discriminate between satisfaction and positive emotion. Nyer (1997) found that the constructs of satisfaction and joy were so highly correlated that they could not be teased apart into two constructs. So are we to conclude not only that satisfaction is an emotion, but also that satisfaction is merely a variation of some positive emotion?

Shaver et al. (1987) in investigating emotion prototypes found satisfaction in a cluster along

with joy, gladness, happiness, delight etc. forming a subordinate category of joy. Satisfaction-dissatisfaction is one of the measures of the pleasure dimension in the PAD model (Mehrabian and Russell 1974). 'Satisfied' is located right next to 'content', 'pleased' and 'happy' in the various circumplex models of emotions (Russell 1980; Watson and Tellegen 1985). Satisfaction has frequently been measured using scales based on emotion words such as contented, pleased and delighted which according to the Shaver (Shaver et al. 1987) typology are subordinates of the joy category (see Hausknecht 1990 for a review of the various scales used to measure satisfaction). Therefore there is much evidence to show that satisfaction is an emotion.

Antecedents of Emotion

If satisfaction is an emotion (and perhaps merely a variation of the emotion of joy), then what are the antecedents of emotions? If consumption emotions have significant influence on behavior, we need to know how these emotions are formed. Clearly the expectancy disconfirmation model by itself cannot model all the emotions. Various models have been suggested in which emotions are a consequence of the expectancy disconfirmation evaluations and in some cases other evaluations including attribution and equity (Muller et al. 1991; Oliver 1989, 1993; Westbrook 1987). The focus of these models has been on customer satisfaction and as such they are limited in their ability to predict and discriminate among the many consumption emotions. A broader approach to the modeling of emotions is therefore called for.

Cognitive Models of Emotion

According to Arnold (1960), emotions occur when events are appraised to be harmful or beneficial. Lazarus (1974) argues that emotions are the result of the cognitive appraisal of an event in terms of its relevance for the individual's well being and in terms of the available potential to cope with the event. Many models with detailed sets of cognitive appraisals leading to the various emotions have been proposed (Frijda 1993; Ortony et al. 1988; Scherer 1993). Though these

appraisals are termed cognitive, they need not involve conscious processing. According to Lazarus (1991) cognitive appraisals are necessary and sufficient for the formation of emotions. However not everyone believes that cognitions are necessary for the formation of emotions. Izard (1993) and Zajonc (1984) believe that affect can be triggered without any preceding cognitive processing. Independent studies have found evidence for the cognition-affect model (Anand et al. 1988, Russell and Woudzia 1986). The use of such models is slowly becoming popular in the marketing literature. Bagozzi (1992) has used this framework to study the self-regulation of attitudes, intentions and behavior while Godwin et al. (1995) have used it to study coping and complaining behavior.

Cognitive Appraisals

An examination of some of the cognitive models of emotion reveal that the cognitive appraisals suggested in these models include (but are not limited to) goal significance (Scherer 1984; also called goal relevance, Lazarus 1991), outcome desirability (Roseman 1984; also called pleasantness, Scherer 1984, Smith and Ellsworth 1985; or goal congruence, Lazarus 1991), and attribution (Lazarus 1991; Roseman 1984, Smith and Ellsworth 1985). Even though this list of cognitive appraisals is by no means complete, space limitations force us to limit our discussion to these three factors. The selection of these three cognitive appraisals is based on the fact that these appraisals have been the focus of much attention in the satisfaction literature. Nyer (97) has examined the emotional consequences of goal significance, outcome desirability and coping potential.

Goal significance is the appraisal of the Significance of an event to the individual. It is therefore not unlike the concept of involvement. The more relevant a situation is to an individual, the more intense are the consequent emotions likely to be. Various studies have shown that involvement has a significant role in satisfaction formation (Evrard 1989; Evrard and Aurier 1994; Mano and Oliver 1993; Richins and Bloch 1986; Singh and Pandya 1991). While the concept of involvement is not included in the traditional expectancy disconfirmation model, it is a

fundamental component of various cognitive models of emotion.

Outcome desirability is an evaluation of how desirable or pleasant the situation is. Pleasant situations lead to positive emotions while unpleasant situations lead to negative emotions.

Attribution can be internal or external and takes place only if the person being credited or blamed for a given situation is perceived as being responsible and in control of the situation. Internal attribution could lead to internally directed emotions such as pride or shame, while externally directed attribution could lead to externally directed emotions such as gratitude or anger directed at some external agent. Though attribution is not part of the expectancy disconfirmation model, it has received much attention in the CS/D literature (Blodgett and Granbois 1992; Folkes 1984; Oliver and DeSarbo 1988; Richins 1983; Singh and Wilkes 1991) and models in which attribution has been added to the expectancy disconfirmation model have been proposed (Oliver 1993). The cognitive models of emotion have the advantage of having appraisals such as attribution as an integral part of the model.

Apart from the three cognitive appraisals listed above, there are many others suggested in the various cognitive models of emotion. Lazarus (1991) for example also includes appraisals such as the type of ego involvement, coping potential and future expectancy and these appraisals further help to discriminate among the various emotions.

The cognitive models of emotion are thus capable of predicting a broad range of emotions and are thus more suited to the study of post-consumption reactions than the traditional expectancy disconfirmation models. Furthermore when modeling post-consumption behaviors such as word-of-mouth and repurchase intentions, the model that includes emotions such as anger and sadness as well as satisfaction can be expected to be significantly superior to the model that has satisfaction as the only predictor.

Hypotheses

The three cognitive appraisals that were discussed earlier were goal significance, outcome desirability and attribution. Desirable outcomes lead to positive emotions while undesirable

outcomes lead to negative emotions. This effect of outcome desirability will be moderated by goal significance as explained earlier.

H1.a Goal significance will moderate the effect of outcome desirability on emotions such as joy, satisfaction and sadness, leading to a significant Goal significance x Outcome desirability interaction for all emotions.

Individuals experiencing an undesirable outcome may attribute the situation internally and consequently experience shame, or they may engage in external attribution leading to emotions such as anger directed at some external entity. Desirable outcomes will lead to neither shame nor anger being experienced. This two way interaction between outcome desirability and attribution will be further moderated by the effect of goal significance as detailed in the previous hypothesis.

H1.b Emotions such as anger and shame will exhibit a significant Goal significance x Outcome desirability x Attribution interaction.

The two hypotheses above are designed to address the issue of whether cognitive appraisals such as goal significance, outcome desirability and attribution are capable of causing certain patterns of emotions. Once that has been established, the next question to answer is whether using a broad palette of emotions is significantly superior to using satisfaction alone in predicting post consumption behaviors?

H2. Post consumption behaviors such as complaining behavior and intention to repurchase can be predicted better by using various emotional measures such as anger, sadness, shame and joy in addition to satisfaction.

Having established that cognitive appraisals are antecedents of emotion and that the emotions are predictors of various behaviors, the last step is to show that the emotions mediate the effects of cognitive appraisals on behaviors.

H3. Emotions mediate the effects of cognitive appraisals on behavior.

METHOD

Subjects were 159 undergraduate students at a large mid-western university who were paid \$10 and were entered into a raffle to win a grand prize of \$200. A full factorial experiment was designed using the three factors goal significance (high, low), outcome desirability (high, low) and attribution (internal, external) and subjects were randomly assigned to one of the eight conditions. The experiment was administered one subject at a time, and therefore all instructions and manipulations were put down on paper to eliminate any variations across the 159 experimental sessions.

Subjects were seated in front of an IBM compatible computer and informed that they would be evaluating a shortened version of the new Computer Aided Aptitude Test (CAAT), which they were told was designed by the Institute of Psychometrics (IPM) and the National Science Foundation (NSF).

Subjects were then given a realistic looking 'fact sheet' from IPM which repeated the cover story and also included manipulations of goal significance. Subjects in the high goal significance condition were told that the CAAT was currently being used by many firms to evaluate potential employees, and that these employers have reported a high correlation between the CAAT scores and employee performance. The 'fact sheet' went on to say that IPM and NSF expected the CAAT to be used extensively by firms in their recruitment efforts in the immediate future. Subjects in the low goal significance condition were informed that though the CAAT was not designed to be a test of the aptitude of college students, it was being tested on college students to detect any problems with the test. They were further informed that IPM and NSF did not expect the CAAT to be used for many years to come.

Subjects were then given instructions on how to run the test, and a few practice questions were first provided. Subjects took the test unobserved, and the test consisted of 15 randomly selected verbal and quantitative multiple choice questions, some of which were fairly difficult. These difficult questions were included in order to lend credence to the low scores that half the subjects would eventually get. After finishing the test

subjects were instructed by the computer to complete questionnaire #1 which included the manipulation checks for goal significance. Once that task was done, the computer displayed the subject's aptitude score in percentile format. Subjects in the high outcome desirability condition got scores ranging between 91% and 94% (a small amount of randomness was introduced to achieve realism), while subjects in the low outcome desirability condition received scores between 61% and 64%. The computer then instructed the subjects to complete questionnaire #2 which included the measures of outcome desirability.

Subjects in the internal attribution condition were given a filler reading task while those in the external attribution condition were handed a sheet of paper which included among other things a 'press clipping' reporting how one researcher had suggested that the CAAT might be an unreliable test. All subjects were then asked to complete questionnaire #3 which included measures of emotion (including satisfaction), word of mouth intention, willingness to use the test in the future and some manipulation checks. Since the experiment attempted to evoke fairly strong emotions in the subjects by providing them with false information, the debriefing exercise took on added importance. The 159 experimental sessions were conducted over a period of a few weeks and, since it was crucial that the real purpose of the study not be known to subjects prior to the end of data collection, the debriefing was conducted after all the data was collected. All aspects of the study including the debriefing had been previously approved by the committee overseeing the use of human subjects. Subjects participating in the study were notified by mail that the aptitude test that they had taken was not a real test and that the score awarded to them was randomly assigned. The letter briefly outlined the purpose of the study and invited subjects who were interested to contact the author for more information.

Measures

Of the various measures used in this study, those being reported here fall into three basic categories: manipulation checks, emotions and post-consumption behaviors. The manipulation of goal significance was measured using the following

two questions. 'How important is it you that you do well in this test?' followed by a 7 point scale ranging from not at all important to very important; and 'How relevant is this test to you?' with a 7 point scale going from not at all relevant to very relevant. The manipulation of outcome desirability was checked using two measures; 'How do you rate your score on this aptitude test?' followed by two seven point scales ranging from very desirable to very undesirable and the other ranging from very good to very poor. The manipulation of attribution was measured using one question which had a 7 point scale ranging from 'I am totally responsible for my score' to 'I am not at all responsible for my score'. Only one question was used to measure the attribution manipulation because of the concern that adding a second question may inject doubts about the cover story.

The emotions included in this study were anger (directed externally), shame, sadness, joy and satisfaction. Subjects were instructed to indicate the extent to which they were experiencing these feelings at that point in time. Anger was measured using unipolar 7 point scales ranging from not at all to very much and anchored on the emotion words angry, furious, annoyed. Similarly ashamed, embarrassed and humiliated were used as measures of shame; happy, joyful and pleased were measures of joy; sorrowful, sad and gloomy were used as indicators of sadness. These emotion words were based on measures identified in various studies of emotion (Holbrook and Batra 1987; Plutchik 1980; Russell 1980 and Shaver et al. 1985).

In measuring satisfaction, it was decided not to use scales using emotion words such as delighted, pleased or contented since the use of such measures could have lead to the dilution of discriminant validity (if any) between satisfaction and joy. Instead, satisfaction was measured using the following three questions. 'How satisfied are you with your score?' followed by a 7 point unipolar scale ranging from not at all to very much; a bipolar 7 point scale ranging from very satisfied to very dissatisfied; and 'I am very satisfied with my score' followed by a 7 point scale ranging from completely agree to completely disagree. These measures were adopted from the list of satisfaction measures reviewed by

Hausknecht (1990).

Positive WOM intentions were measured using two 7 point scales in response to the question: 'How would you respond if someone were to ask you for your opinions about the CAAT? The scales ranged from 'not at all likely to say good things' to 'very likely to say good things' in one scale and ranging from 'not at all likely to speak highly' to 'very likely to speak highly'. There were two similar measures for negative WOM. Intention to use the CAAT in the future was measured by getting subjects to respond to the following question on two different scales: 'If a potential employer required you to take an aptitude test and gave you a choice between the traditional paper and pencil test and the new computerized test, which would you be more likely to select?'

RESULTS

Manipulation Checks and Measurement Properties

The manipulations of goal significance and outcome desirability were both successful at the $p=0.01$ level or better. The means of these two variables in the high and low conditions were: goal significance (5.82, 4.01) and outcome desirability (5.83, 2.59). While the manipulation of attribution was significant, it also caused an unexpected outcome desirability x attribution interaction. See Table 1 for mean levels of the attribution variable for various levels of outcome desirability and attribution.

It is clear from Table 1 that the manipulation of attribution failed under conditions of high outcome desirability. In other words subjects who received high aptitude scores continued to attribute their success to themselves despite the external attribution manipulation. While ordinarily such a confounding would have severely limited the usefulness of the data, in this study the focus is not so much on the effect of any particular variable but rather on the larger model according to which emotions are the consequence of cognitive appraisals. Having said that, it should be noted that the interpretation of the effect of the attribution manipulation on the emotions has to be made cautiously.

The correlation matrix of all the emotion

Table 1
Mean of the Attribution Variable

Mean of attribution variable	External attribution	Internal attribution
Low outcome desirability	2.76	5.65
High outcome desirability	5.45	6.10

low numbers indicate external attribution and high numbers indicate internal attribution.

Table 2
Correlations Among the Measures of Emotion

Joy1	Joy2	Joy3	Sat1	Sat2	Sat3	Ang1	Ang2	Ang3	Sad1	Sad2	Sad3	Sha1	Sha2	Sha3
1.00	.													
.87	1.00													
.87	.89	1.00												
.84	.85	.84	1.00											
.87	.87	.86	.87	1.00										
.84	.82	.80	.83	.83	1.00									
-.45	-.45	-.44	-.47	-.48	-.50	1.00								
-.53	-.51	-.53	-.53	-.53	-.54	.84	1.00							
-.47	-.48	-.48	-.52	-.52	-.55	.80	.78	1.00						
-.68	-.67	-.63	-.67	-.68	-.69	.47	.53	.56	1.00					
-.58	-.56	-.51	-.56	-.58	-.58	.41	.48	.53	.82	1.00				
-.67	-.66	-.63	-.67	-.68	-.66	.43	.46	.51	.90	.84	1.00			
-.46	-.44	-.36	-.44	-.44	-.41	.20	.16	.34	.65	.72	.60	1.00		
-.42	-.39	-.32	-.39	-.37	-.34	.05	.03	.21	.53	.58	.55	.80	1.00	
-.42	-.38	-.32	-.40	-.38	-.37	.06	.06	.21	.54	.61	.54	.85	.89	1.00

N = 158

variables is provided in Table 2. An examination of the correlations between the joy and satisfaction variables makes it obvious that satisfaction and joy have failed to achieve discriminant validity. This is of course not unexpected as discussed earlier in this paper. The six indicators of joy and satisfaction were combined to form a new variable named Joysat. All dependent variable scales achieved high levels of reliability with Cronbach α coefficients well above 0.80.

Hypotheses Testing

Cognitions as Antecedents of Emotion. A Multivariate Analysis of Variance (MANOVA) was conducted with the four emotions as dependent variables. While anger and shame exhibited significant three way interactions, Joysat and sadness exhibited the hypothesized goal significance x outcome desirability interaction.

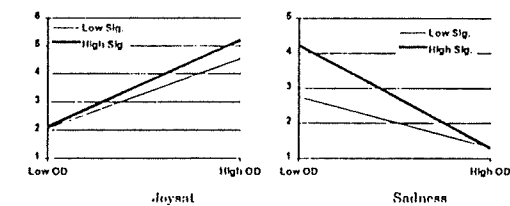
Hypothesis H1.a: ANOVA indicated a

significant Goal significance x Outcome desirability interaction ($F=5.85_{1,150}$, $p=0.02$) for the combined Joysat scale (see Figure 1). This two-way interaction is due to the fact that under conditions of low outcome desirability subjects in the high and low goal significance groups experienced similar levels of Joysat ($M=2.10$ and 2.05) while under conditions of high outcome desirability subjects in the high goal significance group experienced significantly higher levels of Joysat ($M=5.21$) than the subjects in the low significance condition ($M=4.55$, $F_{11,75} 1.79$, $p<0.01$).

The sadness variable exhibited a significant Goal significance x Outcome desirability interaction ($F=27.53_{1,150}$, $p<0.01$) (see Figure 1). Under conditions of high outcome desirability, subjects in both high and low goal significance experienced similar levels of sadness ($M= 1.30$ and 1.31) while under conditions of low outcome desirability subjects in the high goal significance

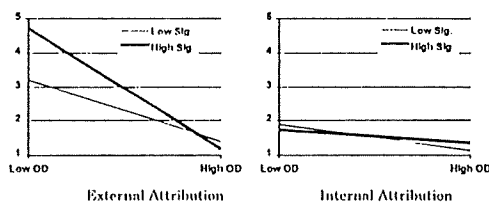
group experienced significantly higher levels of sadness ($M=4.22$) than the subjects in the low significance group ($M=2.74$; $F_{43.44, 1.75}$, $p < 0.01$).

Figure 1
Two Way Interactions on Joysat and Sadness



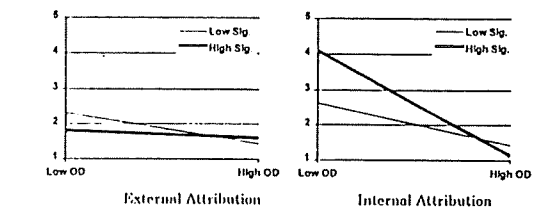
Hypothesis H1.b: ANOVA on the anger variable indicated the presence of a significant Goal significance \times Outcome desirability \times Attribution interaction ($F=14.66$, $p < 0.01$). Two two-way ANOVAs were conducted at the two levels of Attribution. The results are depicted in Figure 2. Under conditions of external attribution a significant outcome desirability \times goal significance interaction was present ($F_{12.90, 1.73}$, $p < 0.01$) while the only effect present in the internal attribution condition was a main effect of outcome desirability.

Figure 2
Three Way Interaction on Anger



A significant Goal significance \times Outcome desirability \times Attribution interaction ($F=12.54$, $p < 0.01$) was found for shame (see Figure 3). Two two-way ANOVAs were conducted at the two levels of Attribution. Under conditions of internal attribution a significant outcome desirability \times goal significance interaction was present ($F_{14.08, 1.77}$, $p < 0.01$) while the only effect present in the external attribution condition was a main effect of outcome desirability.

Figure 3
Three Way Interaction on Shame



Even with the limitation introduced by the confounding in the manipulation of attribution, it is very evident that the manipulation of cognitive appraisals have succeeded in evoking various patterns of emotions as predicted. All the hypothesized effects have been found to be significant.

Emotions as Antecedents of Behaviors. Satisfaction is often used to predict post consumption behaviors such as word of mouth and repurchase intentions. Will emotions such as anger, shame, sadness and joy significantly add to the predictive power of satisfaction in modeling such behaviors? Since joy and satisfaction failed to demonstrate discriminant validity, the following analysis tests the predictive power of Joysat against the predictive power of all four emotions. A series of regression analyses were performed on the three post consumption behavior variables, positive word of mouth intentions (WOMP), negative word of mouth intentions (WOMN) and intention to use the CAAT test in the future (USE). Table 3 summarizes the results of this analysis. F tests of the nested models indicated that for all three dependent variables, the full model was significantly superior to the restricted model with Joysat as the only predictor. Thus post consumption behaviors are best modeled using a broad range of emotions, not just satisfaction.

Emotions as Mediators of the Effect of Cognitions on Behaviors. Are emotions necessary at all to explain behavior? Cannot the cognitive appraisals by themselves be used to model post consumption behaviors? In other words do emotions mediate the effect that appraisals have on behavior? Step-down analysis using MANOVA

Table 3
Summary of the Regression Analysis

Independent Variables	Positive Word-of-Mouth		Negative Word-of-Mouth		Use in Future	
	Joysat only (1)	All emotions (2)	Joysat only (3)	All emotions (4)	Joysat only (5)	All emotions (6)
	Beta		Beta		Beta	
Joy/Satisfaction	0.68 ^a		-0.49 ^a	-	0.57 ^a	
Anger		0.33 ^a		0.04		0.20 ^b
Sadness		0.20 ^a		0.82 ^a		0.35 ^a
Shame		0.23 ^b		0.09		0.09
Signif. of F	0.00	0.00	0.00	0.00	0.00	0.00
R Square	0.46	0.57	0.24	0.67	0.32	0.46
Adj. R Square	0.46	0.56	0.24	0.66	0.32	0.44
SS. Residuals	172.08	136.62	187.00	82.00	296.03	235.84
df	156.00	153.00	156.00	153.00	156.00	153.00
F test of nested models	F13.24 _{3,153} p < 0.01		F65.30 _{3,153} p < 0.01		F13.02 _{3,153} p < 0.01	

Note.- ^a significant at 0.01, ^b significant at 0.05

was employed (see Bagozzi and Yi 1989 for an explanation of this technique). This analysis takes place in three steps. In the first step it is determined whether the experiment has any significant effects on any of the dependent variables (emotions and behaviors). MANOVA indicates that the cognitive appraisals do indeed have a significant effect on emotions and behavior. Various effects including the three way interaction are significant. In step two the behavior variables are used as dependent variables and the emotions are used as covariates. If the emotions are indeed mediators of the relationship between cognitive appraisals and behaviors, the experiment should have no significant effect on behaviors after their effects on emotion are covaried out. MANOVA indicates that the only significant effect now is a

main effect of the goal significance manipulation. In the last step further evidence is gathered for the cognition-emotion-behavior causal model by showing that the alternate cognition-behavior-emotion model does not fit the data. This is done by using the emotions as dependent variables and the behavior variables as covariates. Since the behaviors do not mediate the relationship between cognitions and emotion, the use of behaviors as covariates should not prevent the experiment from having significant effects on emotions. Table 4 summarizes the results of the step-down MANOVA, and it clearly indicates that cognitive appraisals have many significant effects on emotions despite the use of behaviors as covariates. Overall this analysis provides strong evidence proving that emotions mediate the impact

of cognitive appraisals on post consumption behaviors.

DISCUSSION

This paper provides empirical evidence that shows that emotions such as anger and shame are significant predictors of consumer behaviors over and above the predictive power of customer satisfaction. The R^2 statistics in Table 3 clearly indicate that the inclusion of the emotions anger, sadness and shame lead to a significant improvement in the prediction of word of mouth intentions and usage intentions. Therefore marketers interested in influencing customer behaviors such as repurchase and word of mouth have to go beyond measuring and shaping customer satisfaction. They have to also measure and influence other consumption emotions. But how are these consumption emotions formed. While much work has been done to model the antecedents of satisfaction, very little attention has been paid in the marketing literature to the antecedents of consumption emotions. This paper explores one cognitive model of emotions and provides experimental evidence that shows that cognitive appraisals such as goal significance, outcome desirability and attribution are antecedents of various emotions. It is further shown that the effect of cognitive appraisals on behaviors are almost totally mediated by the emotions.

How can the proposed framework to study post consumption emotional responses integrate the rich body of research already done on the antecedents of customer satisfaction? According to the cognitive models of emotion, many appraisals interact to form the emotions. We feel that the expectancy disconfirmation model of satisfaction and the many variations of it (for example different standards of comparison) are part of the appraisal process leading to the evaluation of outcome desirability. This evaluation of outcome desirability then interacts with other appraisals such as goal significance, attribution, coping potential and future expectancy to name a few, to form emotions. Thus it becomes clear that past research into the antecedents of CS/D can easily be incorporated into this broader model of post consumption emotional reactions.

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TAXONOMY OF CONSUMER COMPLAINT BEHAVIOR: REPLICATION AND EXTENSION

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ABSTRACT

Understanding consumer dissatisfaction and its outcomes plays a key role in post-purchase satisfaction, customer retention, and long-term customer relationships. The research in outcomes of customer dissatisfaction, or "consumer complaint behaviors" (CCB), grows primarily out of the U.S.-based consumer satisfaction/dissatisfaction research and may have a strong U.S. domestic (vs. international) orientation. The authors analyze the cross-cultural impact on CCB, and then empirically investigate (1) the robustness of Singh's (1988) taxonomy of CCB across different geographic regions in the U.S. and with different product types, and (2) the extension of the taxonomy in different cultures. The findings from both exploratory and confirmatory factor analysis indicate that, while data from individualistic or similar culture countries or regions fit well into Singh's three-factor model (i.e., voice/private/third-party responses), data from a typical collectivist culture country such as Korea fit well into the two-factor model (i.e., public/private responses). The implications of results and further research are discussed.

INTRODUCTION

A central aspect of successful customer relationship management is the effective management of post-purchase satisfaction. However, while studies of cross-cultural factors affecting international business have been dominantly focused on pre-purchase strategy or management, such as entry mode, standardization vs. adaptation, technology transfer, management style, product diffusion, country-of-origin, etc. (Inkpen and Beamish 1994 Wright and Ricks 1994), the area of post-purchase management seems ignored.

No firm is able to provide perfect products or services, especially outside its home country where the product/service operating condition or situation may not be the same as in its home country.

Therefore, when firms enter a foreign country with a different culture, no matter how successful their entry strategy is, they may eventually fail there because of poor management for the outcomes of post-purchase dissatisfaction, which leads to the declining of customer retention rates or even worse. Therefore, understanding dissatisfaction and its outcomes plays a key role in post-purchase satisfaction, customer retention, and long-term customer relationships.

The research in outcomes of customer dissatisfaction, or "consumer complaint behaviors" (CCB), grows primarily out of the U.S.-based consumer movement of the 70s, and thus has had a strong U.S. domestic (vs. international) orientation. In recent years, CCB researchers have moved beyond the measurement rates of voice, word-of-mouth (WOM), and exit behaviors to develop taxonomies and typologies of CCB (Richins 1987, Singh 1988, 1989) and to develop and test theories of the antecedents to CCB (Swan and Oliver 1989; Singh 1989; Singh and Wilkes 1996; Westbrook 1987). However, the North American focus of most of the CCB research to date raises the question of its validity in an increasingly worldwide economy. Research in cultural psychology has found that individuals' values, perceptions of others, and patterns of interaction with their environments are profoundly influenced by the "cultural meaning systems" (Triandis 1989) in which they operate. Similarly, patterns of response to post-purchase dissatisfaction may be expected to be affected by culture.

Because the taxonomy of CCB provides the basic foundation and building blocks for further CCB research, it is of practical and theoretical importance to raise questions about the appropriateness of adopting the U.S.-based taxonomy of CCB outside of the U.S. In the following sections, first the conceptual and taxonomic issues in CCB literature are reviewed; next the cross-cultural literature concerning the core concepts such as collectivism, individualism, and construals of the self and the impact of these

concepts on consumer complaint behavior are discussed; and then the research design is discussed in detail and the results of hypothesis testing with samples from both the U. S. and foreign countries are presented; finally, the results and further research are briefly discussed.

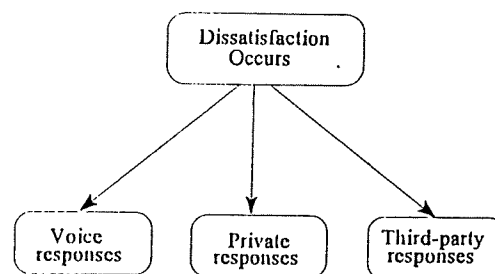
CONCEPTUAL AND TAXONOMIC ISSUES

Singh (1988) has indicated that there is substantial agreement in conceptualizing the CCB phenomenon "as a set of multiple (behavioral and non-behavioral) responses, some or all of which are triggered by perceived dissatisfaction with a purchase episode." CCB behaviors generally have been viewed as falling into one of three categories: "exit" behavior, or the failure to rebuy the offending product; "voice" or complaining behavior addressed to the manufacturer or retail outlet; or "negative word-of-mouth" to friends and associates (Richins 1983, 1987; Singh 1990). Importantly, these are largely independent behaviors: a consumer may switch products, or complain to a retailer, or tell friends about the problem, or do any combination of the three in response to a single dissatisfying consumption incident (Richins 1987).

Most CCB research has concerned itself with one or more of these outcomes and their antecedents without exploring the taxonomy of the CCB construct itself. Several authors have pointed to the importance of properly defining and conceptualizing CCB (Bearden and Teel 1983; Day 1980; Landon 1980; Singh 1988) and various formal classification approaches or taxonomies of CCB have been suggested. Using factor analysis techniques (both exploratory and confirmatory) and a U.S. sample, Singh (1988) found empirical support for the dimensional taxonomy involving "voice responses" which are directed to objects that are external to the consumer's social circle and are directly involved in the dissatisfying exchange (e.g., seeking redress from seller), "private responses" in which the objects are not external to the consumer's social circle and are not directly involved in the dissatisfying experience (e.g., word-of-mouth communication or exit), and "third-party responses" which include objects that are external to the consumer but are not directly involved in the dissatisfying transaction (e.g.,

reporting to a consumer agency or taking legal action against the firm). FIGURE 1 describes Singh's taxonomy of CCB:

FIGURE 1
Singh's Taxonomy of CCB



However, in his study, Singh (1988) warns that the generalizability of findings would be affected if the respondents were substantively different from persons in his sample which is drawn only from Southwest Texas. Kahle, Liu and Watkins (1992) found values and psychographic variation across United States geographic regions, especially between the South and two other regions: the West and Northeast. In addition, Singh's taxonomy was tested only with four different services and with no tangible goods. Therefore, it is very important to examine the results in different regions of the United States with both services and tangible goods before claiming robustness for the taxonomy of consumer complaint behavior. In other words, it is desirable to replicate Singh's study and to test the following hypothesis with samples from different regions of the U.S. and with different product types (i.e., tangible goods and intangible services) before examining its applicability to cross-cultural settings:

H1: The taxonomy of CCB (Singh 1988) is robust across different regions of the United States and with different product types (i.e., tangible goods and intangible services).

THE IMPACT OF INDIVIDUALISM, COLLECTIVISM AND IMPORTANCE OF IN-GROUPS ON CCB

While many factors are useful in characterizing and contrasting cultures and subcultures, one of the most widely studied and validated dimensions of culture is that of individualism/collectivism. Triandis (1989) summarizes the differences between collectivists and individualists as falling primarily in the nature of their relationship with significant in-groups: collectivists tend to subordinate their individual goals to the goals of collectives (e.g., family, tribe, firm, etc.) while individualists do not. Markus and Kitayama (1990) argue that collectivists tend to have an interdependent self-view which "entails seeing oneself as part of an encompassing social relation and recognizing that one's behavior is determined, contingent on and, to a large extent, organized by what the actor perceives to be the thoughts, feelings, and actions of others in the relationship." This is in contrast with the individualist's independent self-view wherein the individual is viewed as "an independent, self-contained, autonomous entity who (a) comprises a unique configuration of internal attributes (e.g., traits, abilities, motives, values), and (b) behaves primarily as a consequence of these internal attributes" (Markus and Kitayama 1990). In collectivist cultures, attitudes towards events, actors, and objects depend on how they relate to the individual's need to belong, to fit-in, to engage in actions that are contextually appropriate, to maintain social harmony, and to save face for self and others. In contrast, an individualist's self-esteem and attitudes depend more on success in being unique, in self-expression (including expressing negative emotions), and in validating internal "defining" attributes.

A fundamental attribute of collectivist cultures is that individuals are typically induced to subordinate their personal needs to the needs of one or (at most) a few collectives, which are usually stable in-groups (e.g. family, tribe, company, etc.). Self-definition and self-esteem among collectivists depend on succeeding at belonging, fitting-in, engaging in actions that are contextually appropriate, maintaining social

harmony, and saving face for self and others. Emotions, particularly negative emotions, tend not to be outwardly expressed, and are often repressed in intimate social contexts. (Markus and Kitayama 1990).

In contrast, individuals raised in individualistic cultures tend to subordinate group needs and goals to their own personal goals. An individualist's self-construal is relatively independent of social context and depends instead on success in being unique, in self-expression (including expressing negative emotions), and in validating internal attributes. While for collectivists, others aid in self-definition, for individualists, others are relatively more important for self-evaluation (Markus and Kitayama 1990).

Not surprisingly, these differences have profound impacts on group membership and social interaction. For example, collectivists tend to be concerned about the results of their actions on members of their in-groups, tend to share resources with in-group members, and typically go to great lengths to maintain harmonious relationships with in-group members. In collectivist cultures, the relationship of the individual to the in-group tends to be stable; entry and exit are difficult and rare; acceptance of in-group power differences is high; and even when the in-group makes extensive demands, the individual remains loyal (Triandis 1989).

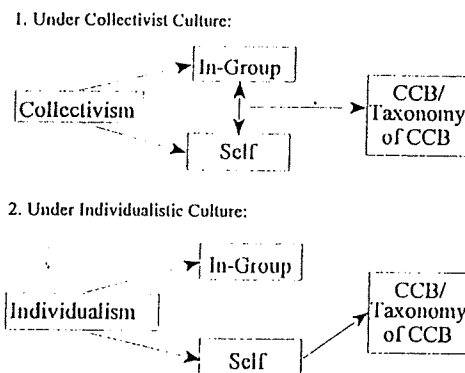
In other words, as shown in FIGURE 2, (1) individualism/collectivism has a direct impact on the meaning and importance of self-construal/self-definition and in-group membership; (2) while self-construal/self-definition and in-group membership interact constantly in a collectivist culture, they are relatively independent in an individualistic culture; (3) while the interaction of self-construal/self-definition and in-group membership has an impact on CCB in a collectivist culture, self construal/self definition affects CCB alone without the interaction with in-group membership in an individualistic culture.

Therefore, as we discussed above, as a theoretical foundation for CCB research as well as a managerial classification of the outcomes of post-purchase dissatisfaction, the taxonomy of CCB might be influenced by consumers' cultural identity as well. Particularly, the taxonomy of CCB in collectivist cultures might be different from the

one in individualistic cultures, which yields the following hypothesis:

H2: There is a difference between the taxonomy of CCB in collectivist cultures and the one in individualistic cultures.

FIGURE 2
Cultural Impact on CCB/Taxonomy of CCB



Furthermore, given that collectivist cultures treat in-groups and out-groups profoundly differently, who is in the in-group(s) or out-group(s) is particularly important. In individualistic cultures, the in-group is defined (Triandis 1972) as "people who are like me in social class, race, beliefs, attitudes, and values." In contrast, the in-group in a collectivist culture is more intimately defined as "family and friends and other people concerned with my welfare" (Triandis 1972). This would imply that in some collectivist cultures, where most interactions with businesses (particularly multinational firms), government representatives, policemen, and so on are out-group interactions, the amount of inter-group conflict and distrust is necessarily high. In particular, the perceived in-group/out-group in collectivist cultures could have an impact on CCB as well as the taxonomy of CCB. For example, in collectivist cultures, a consumer who reports "avoid doing business with a firm because of bad experience with that firm" may also report

"convince friends and relatives not to do business with that firm," simply because it is important for a consumer under collectivist culture not to let his in-group members have the same bad experience as he had. On the other hand, the *third-party responses* (i.e., report to consumer agency, court, or local newspaper) and *voice responses* (i.e., complaint to the firm) are all the responses that require interaction with out-groups.

Therefore, it might be more appropriate to treat the third-party responses and voice responses as one factor in collectivist cultures. In contrast to the private responses, this factor, including voice responses and third-party responses, could be referred to as *public responses*. That is:

H3: The taxonomy of CCB in collectivist cultures is a two-dimension structure: private responses and public responses.

RESEARCH DESIGN

Operationalization of CCB

To operationalize CCB, this study used existing scales (Singh 1988) for measuring *voice responses*, *private responses*, and *third-party responses*. However, in the original measures, only one action item was used to measure *exit responses* and two items to measure *voice responses*, but as many as four items to measure *third-party responses*. After pretests and a pilot study with samples from different ethnic backgrounds (e.g., Caucasian-American, Asian-American, etc.) and from different regions in the U.S., we found that the third-party responses were the least likely behavior among the three responses. According to the pretests and pilot study, it would be more balanced and meaningful to reduce one or two items on third-party responses and to add more items on other responses. Therefore, the measures were modified and refined (see Appendix A). All the items were scored on a 7-point scale with anchors "very unlikely (=1)" and "very likely (=7)."

The *voice responses* construct was measured by four items: (I2) discuss the problem with manager or representative of the firm, (I6) ask the firm to take care of the problem, (I10) inform the firm so that they will do better in the future, and

(I9) forget about the incident and do nothing (this item is in reverse order). The *private responses* construct was measured by four items: two exit responses items and two word-of-mouth items: (I3) avoid doing business with the firm from then on, (I7) buy from another firm the next time, (I4) speak to your friends and relatives about your bad experience, and (I8) convince your friends and relatives not to do business with that firm. The *third-party responses* construct was measured by three items: (I1) write a letter to the local newspaper about your bad experience, (I5) report the problem to a consumer agency, and (I11) take legal action against the firm.

Instead of using all services as in Singh's study, we used both services and tangible goods with which the respondents experienced a dissatisfying problem: (1) home appliances, (2) store-bought clothing, and (3) eating at a restaurant.

The questionnaire distributed in the U.S. and India, where English is one of the official languages, was written in English. After translation and back translation, the one distributed in Korea was in the Korean language.

Data

Random samples from the West and Northeast regions of the United States were used, in addition to random samples from India and Korea. While the West and Northeast regions of the U.S. were chosen to represent typical individualist culture, Korea was selected to represent a typical collectivist culture (Hofstede 1980). According to Hofstede's individualism/collectivism dimension continuum of culture, India is in between the U.S. and Korea, although it is often considered as a collectivist-culture country. The degree of collectivism is low because it had been a British colony for a long time and has been influenced by the British individualistic culture ever since. Therefore, we may expect Indian respondents to show some individualistic characteristics.

In the Northeast region of the U.S., a three-step random sampling procedure was followed. First, from 198 towns or cities in eastern Massachusetts, 15 communities were selected; then, 5 blocks of each community were randomly selected through the local street atlas; finally, a

questionnaire with a cover letter was randomly distributed to the doors of 3 households of each selected block. After a follow-up contact, 138 completed questionnaires were collected. 21 did not report any dissatisfying problem and another 3 were not usable. The final usable response rate was 50.7%, which is considered very high when compared with those in similar studies in the field.

In the West region of the U.S., the same sampling procedure as in the Northeast region was used. 300 questionnaires were randomly distributed in central California and 176 complete and usable questionnaires were collected. The response rate was 58.7%, which is even higher than in the Northeast region of the U.S.

In Korea, a similar sampling approach was applied in the Seoul area. 200 questionnaires were distributed and 121 complete and usable questionnaires were collected. The response rate was 60.5%.

In India, a professional research firm was hired to conduct the random sampling process. 250 questionnaires were distributed and 164 complete and usable questionnaires were received. The response rate was 65.6%.

In the sampling process, all the questionnaires were distributed and collected by people who were trained for the data collection of this study. Compared to a mail survey, this sampling procedure is very labor intensive and costly, but it produced a very high response rate.

Appendix B summarizes the demographic characteristics of the sample from the four surveys. It shows the balance across different demographic categories in all the four samples. In total, 45% of the respondents reported a dissatisfying problem with home appliances, 20% of them with clothing, and 35% of them with eating at a restaurant. Appendix B also shows variability in some demographic characteristics. For instance, notice that there were more male respondents (55%) than female ones (45%), and it is not surprising to see that more female respondents reported problems with clothing (52%) but not with eating at a restaurant (39%). Marital status also shows some differences: married respondents reported more problems with home appliances and fewer problems with eating at a restaurant than singles. Respondents with lower levels of education reported more problems with

Table 1
Means and Standard Deviations of CCB Items^{a,b}

Item	Korea	India	West	Northeast	F-value
I1	3.134 (1.678)	3.994 (2.385)	2.153 (1.661)	2.212 (1.605)	33.13**
I2	4.084 (1.973)	5.648 (1.872)	5.653 (1.775)	5.142 (2.107)	19.90**
I3	6.017 (1.420)	5.336 (2.059)	5.324 (1.966)	5.411 (1.832)	4.12**
I4	6.227 (1.060)	5.906 (1.623)	5.869 (1.466)	5.378 (1.780)	6.32**
I5	3.613 (1.733)	4.726 (2.336)	3.233 (2.022)	3.721 (2.045)	15.74**
I6	4.630 (1.910)	5.750 (1.803)	5.801 (1.805)	5.549 (1.937)	11.35**
I7	6.008 (1.387)	5.507 (1.940)	5.625 (1.794)	5.664 (1.649)	2.06
I8	5.345 (1.763)	4.931 (2.070)	4.477 (2.084)	4.964 (1.891)	4.76**
I9 ^b	5.471 (1.632)	4.888 (2.213)	5.642 (1.802)	5.150 (2.109)	4.74**
I10	4.193 (1.925)	5.152 (2.079)	5.102 (1.989)	4.794 (2.090)	6.41**
I11	1.924 (1.336)	3.573 (2.222)	1.705 (1.383)	2.372 (1.703)	38.27**

Where:

I1 = Write a letter to the local newspaper about your bad experience?

I2 = Discuss the problem with a manager or representative of the firm?

I3 = Avoid doing business with the firm from then on?

I4 = Speak to your friends and relatives about your bad experience?

I5 = Report the problem to a consumer agency?

I6 = Ask the firm to take care of the problem (to fix or replace item or to return your money)?

I7 = Buy from another firm the next time?

I8 = Convince your friends and relatives not to do business with that firm?

I9 = Forget about the incident and do nothing?^a

I10 = Inform the firm so that they will do better in the future?

I11 = Take legal action against the firm?

^aStandard Deviations are in parentheses.

^bP-value is less than 0.01.

^aIt is in reverse order.

^bSample size N=575 (N_{Korea} = 121, N_{India} = 164, N_{West} = 176, and N_{Northeast} = 114).

clothing but fewer with home appliances. However, age does not show significant variability, which is a finding different from those of previous studies (e.g., Singh 1988).

RESULTS

As an initial analysis, Table 1 summarizes the mean and standard deviation for each of the 11 CCB items and the significant differences among the sample means from different regions or countries. An examination of the values in Table 1 shows that there were significant differences among the means for almost all the items, especially the differences between Korea and other areas. For example, Korean respondents rated I2,

I6, and I10 (i.e., voice responses) lower and rated I3, I4, I7, and I8 (i.e., private responses) higher than other areas' respondents.

In order to test the hypotheses in this study, we conducted both exploratory and confirmatory factor analysis. Let us report them in turn.

Exploratory Factor Analysis

Table 2 indicates that the data from the West region and Northeast region of the U.S. clearly generate three-factor results: items for *private responses* clearly load on factor 1 (i.e., I3, I4, I7, and I8), items for *voice responses* clearly load on factor 2 (i.e., I2, I6, I9, and I10), and items for *third-party responses* clearly load on factor 3 (i.e.,

Table 2
Varimax-Rotated Factor Matrix for West Region and Northeast Region Data*

West Region Sample				Northeast Region Sample			
Item	Factor1	Factor2	Factor 3	Item	Factor1	Factor2	Factor3
I3	.877	.08	-.08	I7	.876	.12	-.11
I7	.871	.05	.03	I3	.830	.22	.08
I8	.709	-.06	.23	I8	.662	.14	.39
I4	.697	.21	-.03	I4	.653	.38	-.08
I2	.12	.853	.12	I10	.17	.779	.05
I6	.09	.834	.01	I6	.24	.726	-.18
I10	.04	.731	.15	I9	.06	.670	.17
I9	.03	.652	-.01	I2	.43	.646	.14
I5	.23	.24	.746	I11	.03	-.10	.795
I1	.09	.18	.736	I1	-.06	.06	.776
I11	-.14	-.13	.574	I5	.12	.15	.696
Eigen-value	3.25	2.08	1.36		3.79	1.91	1.16
Percent of Var.	29.5	18.9	12.4		34.5	17.3	10.5
Alpha	.78	.80	.65		.74	.80	.66

*Sample size $N_{West} = 176$, and $N_{Northeast} = 114$.

Table 3
Varimax-Rotated Factor Matrix for Different Product Types from the U.S. Data

Home Appliance Data ^a				Meal at Restaurant Data ^b			
Item	Factor1	Factor2	Factor 3	Item	Factor1	Factor2	Factor3
I9	.812	.08	-.01	I7	.898	.10	-.01
I10	.764	-.01	.29	I3	.866	.03	.02
I2	.693	.37	.14	I8	.734	.03	.22
I6	.686	.42	-.13	I4	.718	.24	-.21
I7	.06	.883	.09	I6	.12	.808	.05
I3	.26	.877	.01	I2	.10	.798	.15
I8	.11	.651	.30	I10	.05	.776	-.07
I4	.41	.430	-.01	I9	.05	.600	.08
I1	.17	.07	.784	I1	-.05	.17	.758
I5	.27	.18	.747	I5	.11	.19	.710
I11	-.30	.04	.651	I11	-.01	-.15	.663
Eigen-value	3.99	1.66	1.36		3.20	1.99	1.54
Percent of Var.	36.3	15.1	12.4		29.1	18.1	14.1
Alpha	.752	.761	.650		.722	.813	.659

^aSample size = 108; ^bSample size = 142.

Table 4
Varimax-Rotated Factor Matrix for Korean and Indian Data

Korean Sample				Indian Sample			
Item	Factor1	Factor2	Factor 3	Item	Factor1	Factor2	Factor3
I10	.797	-.12	.05	I11	.797	.08	.05
I6	.777	-.17	.20	I1	.767	-.08	.09
I5	.776	.30	.09	I5	.743	.04	.26
I2	.737	-.26	.19	I3	.02	.736	.10
I1	.702	.26	.08	I8	-.09	.722	.05
I11	.595	.28	-.20	I7	-.02	.654	-.10
I7	-.18	.812	.10	I4	.14	.629	.26
I3	.01	.797	-.03	I10	.12	-.04	.734
I8	.25	.768	.12	I6	.24	.05	.669
I9	.04	-.05	.867	I2	.14	.13	.658
I4	.21	.37	.634	I9	-.32	.10	.439
Eigen-value	3.60	2.30	1.16		2.56	1.90	1.24
Percent of Var.	32.7	20.9	10.6		23.3	17.3	11.3
Alpha	.84	.75	.41		.70	.65	.72

*Sample size $N_{\text{Korea}} = 121$, $N_{\text{India}} = 164$.

I1, I5, and I11). Table 3 reports the same three-factor structure for CCB from the U.S. (i.e., combining both West and Northeast regions) under different product types (i.e., "Home Appliance" and "Meal at Restaurant"). All the results are in favor of H1 and consistent with the findings in Singh's study (1988).

However, Table 4 indicates that the data from foreign countries generate somewhat different results.

The Indian data generate the same three factors with *third-party responses* as factor 1, *private responses* as factor 2, and *voice responses* as factor 3. As we predicted earlier, although the factors had a different order from the ones generated from the U.S. data, the Indian respondents did show individualistic characteristics in their CCB classification.

However, the Korean data generate a different three-factor result in that items I1, I2, I5, I6, I10, and I11 load on factor 1; items I3, I7, and I8 load on factor 2; and items I4 and I9 load on factor 3. It shows that factor 1 represents *public responses*, factor 2 represents *private responses*, and factor 3 is unclear. It is very different from the three-

factor structure generated in individualistic cultures, which supports H2.

Because Cronbach's alpha for the third factor from the Korean data was quite low, the measures for the factor might not be very reliable. It may imply that some item(s) might not be appropriate or should be eliminated in the situation of a collectivist culture. In fact, according to a recent study of Liu (1996), when dissatisfied, both Koreans (28.9%) and Americans (22.1%) responded very low on "forgot about the incident and did nothing." In other words, they all "did not forget about the incident and did something." The fundamental difference Liu (1996) found is that, while "did something" means "did some voice actions" for the majority of Americans, it means "did some private actions" for the majority of Koreans.

It explains that, although the factor is not very reliable, this item (i.e., "forget about the incident and do nothing") still loads with a private-response measure (i.e., "speak to your friends and relatives about your bad experience"). Therefore, it is more appropriate to drop this item because when reversing the order of the item, it produces

different meanings in different cultures.

Table 5 shows the results after dropping the item I9. The rotated factor matrix generates two-factor structure with reliable Alpha coefficients for both factors. It is clear to see that one factor is loaded with all public-response measures and the other with all private-response measures, which supports H3.

Table 5
Varimax-Rotated Factor Matrix for Korean Data Without I9*

Item	Factor1	Factor2
I6	.812	-.101
I10	.806	-.078
I2	.772	-.202
I5	.759	.348
I1	.680	.296
I11	.530	.270
I7	-.223	.807
I8	.221	.790
I3	-.049	.785
I4	.292	.465
Eigenvalue	3.56	2.303
Percent of Var.	35.6	23.0
Alpha	.825	.729

*Sample size N_{Korea} = 121.

Confirmatory Factor Analysis

A series of confirmatory factor analysis are conducted to further test our hypotheses. The estimated parameters (i.e., λ 's, ϕ 's, and T-values of these estimated parameters) and overall model fit indexes (i.e., GFI, AGFI, RMSE, and χ^2 with corresponding degree of freedom) by maximum likelihood method through LISREL are reported in Table 6, Table 7, and Table 8.

The estimates for almost all the λ 's are statistically significant (t-values > 2.0), and the composite reliability for most constructs exceeds .70, with the highest being .89 and the lowest being .65. All of the cross-construct correlations are significantly different from 1.00; therefore the measures appear to achieve adequate discriminant

validity (Bagozzi and Yi 1991). The overall model fit index GFI and AGFI are all greater than .90 and .80 respectively, which are the typical cutoff points for GFI and AGFI according to a rule of thumb (Sharma 1996, p159). Therefore, as expected from the results of exploratory factor analysis, the hypothesized factor structure with voice-response, private-response, and third-party-response dimensions appears to be a reasonably good fit for the West region data, the Northeast region data, the Indian data, and the combined data from the U.S. with different product types. The hypothesized factor structure with public-response and private-response dimensions also has an acceptable fit for the Korean data. Thus, H1, H2, and H3 are all supported in this study.

Table 6
Standardized Value from Confirmatory Factor Analysis with LISREL for India Data, West Region Data, and Northeast Region Data^{a,*}

Parameter	India	West	Northeast
λ_{21}	.553 (4.28)	.905 (10.49)	.790 (6.25)
λ_{61}	.594 ^b	.800 ^b	.674 ^b
λ_{91}	.135 (1.36)	.454 (5.82)	.458 (4.16)
$\lambda_{10,1}$	.595 (4.36)	.578 (7.59)	.628 (5.40)
λ_{32}	.652 ^b	.874 ^b	.836 ^b
λ_{42}	.587 (4.57)	.564 (7.64)	.656 (6.95)
λ_{72}	.416 (3.77)	.875 (11.89)	.782 (8.35)
λ_{82}	.551 (4.48)	.556 (7.51)	.604 (6.33)
λ_{13}	.653 (5.81)	.488 (2.05)	.701 (3.87)
λ_{53}	.757 (5.84)	.920 (1.86)	.555 (3.95)
$\lambda_{11,3}$	.625 ^b	.173 ^b	.652 ^b
ϕ_{12}	.305 (2.23)	.230 (2.57)	.687 (4.34)
ϕ_{13}	.486 (3.25)	.391 (1.72)	.153 (1.15)
ϕ_{23}	.089 (0.78)	.239 (1.55)	.104 (0.83)

Overall Model Fit

GFI	.944	.919	.908
AGFI	.910	.870	.822
RMSE	.026	.021	.030
χ^2 statistic	54.42	83.98	76.46
Degree of freedom	41	41	41

^aT-values are in parentheses.

^bCorresponding λ set to 1.0 to fix the scale of measurement.

*Sample size N_{India} = 164, N_{West} = 176, and N_{Northeast} = 114.

Table 7
Standardized Value from Confirmatory Factor
Analysis with LISREL for Product Types^a

Parameter	Home Appliance*	Meal at Restaurant**
	Estimate	Estimate
λ_{21}	.918 ^b	.793 ^b
λ_{61}	.750 (7.68)	.823 (7.75)
$\lambda_{10,1}$	.696 (5.04)	.726 (5.71)
λ_{91}	.325 (3.21)	.327 (3.52)
λ_{32}	.969 ^b	.817 ^b
λ_{42}	.633 (4.72)	.649 (8.09)
λ_{72}	.778 (9.31)	.923 (11.32)
λ_{82}	.698 (5.39)	.628 (7.57)
λ_{13}	.751 ^b	.705 ^b
λ_{53}	.723 (4.40)	.688 (3.91)
$\lambda_{11,3}$	.644 (3.74)	.545 (2.98)
ϕ_{12}	.333 (5.10)	.295 (2.79)
ϕ_{13}	.384 (2.87)	.344 (2.53)
ϕ_{23}	.279 (2.26)	.070 (0.61)

Overall Model Fit

GFI	.900	.926
AGFI	.820	.872
RMSE	.024	.022
χ^2 statistic	72.51	64.34
Degree of freedom	38	38

^aT-values are in parentheses.

^bCorresponding λ set to 1.0 to fix the scale of measurement.

*Sample size = 108; **Sample size = 142.

DISCUSSION

This study aimed at empirically investigating the robustness of Singh's (1988) taxonomy of CCB (see FIGURE 1) across different geographic regions in the U.S. and with different product types and the extension of the taxonomy in different cultures. The findings from both exploratory and confirmatory factor analysis indicate that, while data from individualistic or similar culture countries or regions fit well into Singh's three-factor model (i.e., voice/private/third-party responses), data from a typical

Table 8
Standardized Value from Confirmatory Factor
Analysis with LISREL for Korean Data
Without I9*

Parameter	Estimate ^a
λ_{21}	.722 ^b
λ_{61}	.794 (7.94)
$\lambda_{10,1}$	.784 (7.85)
λ_{11}	.696 (6.14)
λ_{51}	.657 (6.83)
$\lambda_{10,1}$	.383 (3.92)
λ_{72}	.763 ^b
λ_{82}	.721 (6.55)
λ_{32}	.707 (6.47)
λ_{42}	.536 (3.22)
ϕ_{12}	.230 (4.31)

Overall Model Fit

GFI	.918
AGFI	.826
RMSE	.015
χ^2 statistic	57.32
Degree of freedom	26

^aT-values are in parentheses.

^bCorresponding λ set to 1.0 to fix the scale of measurement.

*Sample size = 121.

collectivist culture country such as Korea fit well into the two-factor model (i.e., public/private responses). As described earlier and summarized in FIGURE 2, a collectivist's self-construal/self-definition and in-group membership have a different meaning and importance from an individualist's. This fact has a significant impact on CCB as well as on the taxonomy of CCB.

In addition, consistent with the work of Watkins and Liu (1996) and Liu (1996), this study found that relative to individualists, collectivists (1) are non-confrontational and thus will tend to avoid voice responses and (2) have strong, self-determining social ties and thus will engage in private responses.

The findings from this study have some important implications to researchers and managers. First, this study has confirmed that the taxonomy of CCB in individualistic cultures is

different from the one in collectivist cultures. Therefore, it might not be appropriate to apply the taxonomy discovered in individualistic cultures to an international business setting in collectivist cultures. Second, since the taxonomy of CCB, as building blocks for further CCB study, is different in different cultures, the focus of the antecedents and consequences of CCB should be altered accordingly. For example, because of the dimensions of public responses and private responses, more attention should be paid to personal-approval of complaining in individualistic cultures in studying the antecedents for complaining, while more attention should be paid to social-approval of complaining in collectivist cultures. Third, it is a common practice of customer service departments in the U.S. mainly to handle consumers' voice behavior, which might be appropriate for the U.S. business. When dissatisfied, a majority of American consumers would engage in voice responses, but because of cultural difference, a majority of Korean consumers would engage in private responses (Liu 1996). In other words, while consumers' voice response to the firm is a relevant measure of customer satisfaction/dissatisfaction in the U.S., it is not in Korea. Therefore, it is a new challenge for American firms, especially for customer service departments of the firms, in post-purchase management at foreign countries with different cultures. Instead of paying attention to voice responses only, American managers should pay more attention to consumers' private responses which may have very important effects on the firm. For example, after customers have bought the products or services, the manager should write to the customers not only to greet them to appreciate their business with the firm, but also to express the firm's commitment to quality and customer service, and encourage them to complain if a problem occurs. The key to get friendly complaining responses from customers and to avert their private responses, according to this study, is to provide them with a culturally-appropriate complaining environment which is non-confrontational, non-public, and sincere and friendly. Finally, "when in Rome, do as the Romans do." In a collectivist culture, effective post-purchase management requires establishing long-term customer relationships which transform

the firm out-group to in-group and therefore build a successful path.

LIMITATIONS AND FUTURE RESEARCH

The findings should be evaluated in light of some shortcomings. First, although data were collected from four different countries/regions, only one data set represented a collectivist culture. For a more rigorous examination of Singh's model, data from other countries with a typical collectivist culture, such as China, Japan, or Indonesia should be collected. Also, because the sample size was not large enough to break each sample into sub-samples for all the product/service categories (e.g., clothing is not studied as home appliance and meal at restaurant), we were not able to examine the taxonomy issue across all the three product/service categories separately. A similar study across more product/service categories with a larger sample size is recommended. Finally, the preceding assessment of the CCB construct is based on our empirical analysis of 11 items which were developed from the U.S. Though the items included in this study have been refined from the original ones after pretests and a pilot study with an Asian-American sample within the U.S., other or different items might be developed to represent other or different means of CCB under different cultures.

Several aspects could be looked at in future research: (1) to discover what other or different items should be developed under different cultures, future research should compare and contrast the ways or means consumers use to respond to dissatisfaction with the product/service they purchased across cultures rather than within them; (2) because this study has dealt with only one dimension of culture: collectivism/individualism, further research might examine other dimensions of culture such as power distance, risk avoidance, and masculinity-femininity (Hofstede 1980) for their potential impact on CCB; and (3) besides examining the taxonomy of CCB, the study of the relationships between the taxonomy and its antecedents in different cultures is certainly desirable.

APPENDIX A
Items Used to Measure CCB Intentions

How likely is it that you would:

- I1 Write a letter to the local newspaper about your bad experience?
- I2 Discuss the problem with a manager or representative of the firm?
- I3 Avoid doing business with the firm from then on?
- I4 Speak to your friends and relatives about your bad experience?
- I5 Report the problem to a consumer agency?
- I6 Ask the firm to take care of the problem (to fix or replace item or to return your money)?
- I7 Buy from another firm the next time?
- I8 Convince your friends and relatives not to do business with that firm?
- I9 Forget about the incident and do nothing?
- I10 Inform the firm so that they will do better in the future?
- I11 Take legal action against the firm?

APPENDIX B
Demographic Characteristics of the Four Samples* (all values in percentages)

Demographic Characteristics	Countries/Regions				Product/Service type			Total
	Korea	India	West	Northeast	Home Appliance	Clothing	Meal at Restaurant	
Sex								
Male	64	60	50	48	53	48	61	55
Female	36	40	50	52	47	52	39	45
Marital Status								
Single	71	32	43	51	43	44	54	47
Married	29	66	50	38	53	51	39	48
Divorced/widow	2	7	11	4	5	7	5	
Age								
<=30	75	47	39	54	52	53	51	52
30<, , <=50	18	38	43	32	34	35	34	34
>50	7	15	18	14	14	12	15	14
Education								
High school	13	5	27	49	18	26	25	22
College	80	77	56	47	68	64	63	65
Graduate School	7	18	17	4	14	10	12	13
Number of People in Your Household								
=1		3	7	11	4	4	8	5
=2	3	3	31	25	14	16	19	16
=3	6	16	24	25	16	19	20	18
=4	37	30	25	18	30	26	25	28
=5	31	24	7	9	17	19	17	17
>5	22	24	7	11	19	16	11	16
Income Compared with Others								
Much lower	6	7	21	14	14	8	13	12
Little lower	11	7	9	16	9	6	13	10
Average	55	49	33	47	45	50	44	45
Little higher	18	9	25	12	13	19	19	17
Much higher	10	28	13	11	19	17	11	16

*Sample size N=575 (N_{Korea}=121, N_{India}=164, N_{West}=176, and N_{Northeast}=114; N_{Appliance}=258, N_{Clothing}=115, N_{Meal}=202)

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A VISUAL APPROACH FOR IDENTIFYING CONSUMER SATISFACTION SEGMENTS

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ABSTRACT

Much of today's consumer satisfaction research relies on ratings obtained through the administration of consumer surveys. A key item of interest to the researcher is the existence of underlying segments in the market place. Such information can be uncovered by studying the shape of the distribution of the obtained consumer satisfaction measure. The shape of this distribution can for example provide insights on the number and size of the underlying segments in the market place. This paper discusses various approaches available for graphing the distribution of consumer satisfaction responses and demonstrates the use and benefits of a proposed non-parametric method.

INTRODUCTION

Marketing managers often rely on ratings obtained through surveys to assess the degree of satisfaction experienced by consumers. The use of surveys in consumer satisfaction research has in fact witnessed a dramatic growth in the past two decades, and corporate use of customer satisfaction research has contributed billions of dollars to the market research industry (e.g., Advertising Age 1993; Gengler and Popkowski 1997). Survey-based studies of consumer satisfaction span the business horizon from small local retailers to large multi-nationals and cover industries ranging from insurance and financial services to the automotive and home appliance industries. Customer satisfaction measurement has therefore become a standard part of corporate performance assessment in many organizations (Parasuraman et al. 1991; Rapert and Babakus 1995).

Once a customer satisfaction survey has been administered, one typically relies on the emerging basic statistics such as the mean and the variance to make the necessary managerial judgements. For example, year-to-year comparisons can be conducted and comparisons to specific baselines and benchmarks can be made. However, in addition to the mean and the variance, managers can often rely on an equally vital measure: the

distribution of the satisfaction ratings. The shape of the distribution of the satisfaction ratings provides one with a better understanding of the customer base. For example, the existence of a multi-modal distribution of satisfaction ratings may signal the potential existence of multiple consumer segments. Such information may prompt additional managerial attention, and could initiate a more focused and segment-based marketing program.

As will be demonstrated in this paper, using the existing approaches for obtaining the shape of the distribution of consumer satisfaction ratings often results in ambiguous and unreliable interpretations of the data. Therefore, in this paper, a new approach for estimating the shape of the distribution of consumer satisfaction ratings will be introduced. The proposed approach, based on an established non-parametric method in econometrics, is shown to have superior properties to existing approaches used for graphing consumer satisfaction response distributions. Benefits of the proposed approach are demonstrated and replicated in two different consumer satisfaction settings.

IMPORTANCE OF CONSUMER SATISFACTION DISTRIBUTIONS

From an applied survey research point of view, the appropriate understanding of the shape of the distribution of consumer satisfaction responses is a valuable undertaking for three key reasons:

First, the distribution of consumer satisfaction responses in a satisfaction survey can reveal information about underlying consumer segments: The estimation of consumer satisfaction distributions is useful to any survey-based consumer satisfaction study. The knowledge of the shape of this distribution is critical in assessments made regarding the existence of multiple consumer segments. A highly dense area in the distribution of the satisfaction ratings would represent a high concentration of consumers. For example, if the distribution of the consumer satisfaction measure is multi-modal or highly dense in certain regions of the response scale, multiple

consumer segments may potentially exist. Such graphical inspections can aid one in identifying the relevant market segments. A study by Kumar and Rust (1989) on managers' preferences for various segment identification methods has in fact shown that practicing managers find the graphical approach of inspecting response distributions to be the most convenient way of assessing the existence of underlying segments in the market place. The authors argue for the preferred use of graphic methods since alternative segment identification methods, such as cluster analysis, and AID (Automatic Interaction Detection), rely to a large extent on the technical sophistication of the manager.

Second, the popular use of survey methods in consumer satisfaction research: Academics and practitioners have for a long time relied on survey methods in collecting consumer satisfaction data. In academia, from the earlier works of Oliver (1980) to the more recent ones (e.g., Fornell 1992; Anderson and Sullivan 1994), consumer surveys have served as a primary source of consumer satisfaction information. Industry's use of surveys in consumer satisfaction research has especially witnessed a growth in recent years (Advertising Age 1993), and many corporations are now developing employee compensation schemes based on factors related to customer satisfaction. For example, between 1992 and 1995 alone the number of companies using customer satisfaction as a basis of employee compensation grew five fold (Romano 1995).

Third, the need for better understanding segment based differences in consumer satisfaction: Understanding the shape of the distribution of consumer satisfaction ratings also facilitates the study of the largely ignored notion of heterogeneity in consumer satisfaction research. As both Yi (1991), and Iacobucci et al. (1992) assert, consumer satisfaction research needs to place more focus on the varying satisfaction dynamics across consumer segments. As Iacobucci et al. (1992) suggest, "to account for a richer variety of phenomena, reasonable models of evaluations (quality and/or satisfaction) should also explicitly incorporate some rather fundamental concepts -- like segmentation" (p. 22).

A DEMONSTRATION OF THE PROBLEM AT HAND

Using an example, we will now proceed with a demonstration of the typical problem one faces when attempting to estimate the distribution of consumer satisfaction responses. The consumer satisfaction data utilized for this example were obtained through a survey of 315 graduate business students at an East-coast educational institution. The survey, which was conducted as part of a standard annual satisfaction study, had yielded a response rate of 63% and covered various questions about the services provided at the institution. Five satisfaction-related questions, rated on a scale of 1 to 10 (with 10 being the positive end), were obtained and utilized:

Item 1: My overall assessment of the school is (very negative ... very positive).

Item 2: Considering all the services and facilities provided by the school, I am (very dissatisfied ... very satisfied).

Item 3: Considering the cost of attending this school, it is (not a good value ... a very good value).

Item 4: My decision to attend this school has left me (very dissatisfied ... very satisfied).

Item 5: The time spent at this school has left me (unhappy ... happy).

The above five variables were input into factor analysis, which yielded one factor based on the eigenvalue > 1 criterion. The satisfaction scale was therefore constructed by taking an average of the above measures for each respondent. The resulting scale yielded a high degree of measurement reliability, as reflected by a coefficient alpha of 0.92.

Once the satisfaction data have been gathered, one needs to assess the shape of the distribution of the satisfaction measure. The most common way of estimating distributions is the histogram (Silverman 1986). A histogram is defined by an origin and a bin width. Given the origin and the bin width, a series of bins are then defined by

consecutive intervals, and the histogram is constructed by graphing the percentage of responses which fall into the bins. The histogram provides an estimate of the distribution by presenting the percentage of observations which fall into each bin. In constructing a histogram one needs to make two choices: (1) a choice of the origin, and (2) a choice of the bin width. The shape of the histogram therefore primarily depends on these two decisions.

While the choice of bin width determines the degree of smoothness in the histogram, the choice of the origin determines the reference point, based on which consecutive bins are defined. As a result, depending on one's chosen value for the origin and the bin width, drastically different distributions may result. The choice of one bin width or origin over the other may therefore significantly influence one's assessment of the shape of the distribution of the satisfaction ratings. Figure 1 provides a histogram of the consumer satisfaction measure. With its origin at 5, and a bin width of 1 unit, Figure 1 suggests that the consumer satisfaction measure's distribution is uni-modal and slightly skewed to the right. However, a simple change of the bin width from 1 to 0.75 produces Figure 2, which suggests that the consumer satisfaction distribution is actually multi-modal. Figure 3 shows a similar effect resulting from a bin width of 0.5. At this point, one is left with contradicting interpretations of the exact same data, one suggesting the potential of multiple consumer segments, and the others refuting it.

An alternative approach to histogram building is the parametric approach. In this approach, one assumes that the sample data are drawn from a population with a particular distribution function. The sample data are then used to estimate the parameters of that distribution function. While the parametric approach to density estimation is computationally convenient, as we will see shortly, its main draw-back is that it constrains the shape of the estimated distribution to the one assumed by the researcher. Meanwhile, unless sufficient prior information exists, forcing a particular functional form on the distribution of satisfaction measures is both conceptually flawed and practically inappropriate.

Two commonly used distribution functions are

Figure 1
Consumer Satisfaction Histogram
(Origin=5, bin width=1)

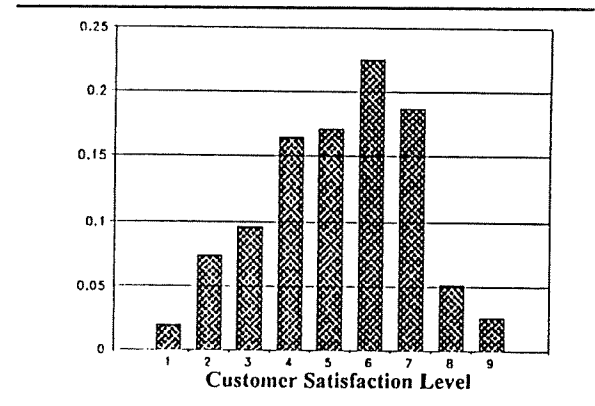


Figure 2
Consumer Satisfaction Histogram
(Origin=5, bin width=0.75)

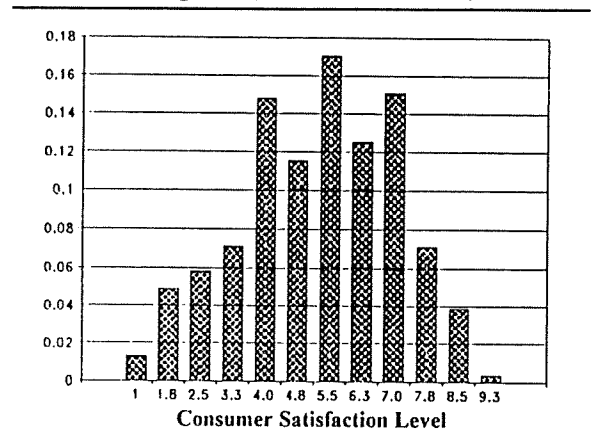
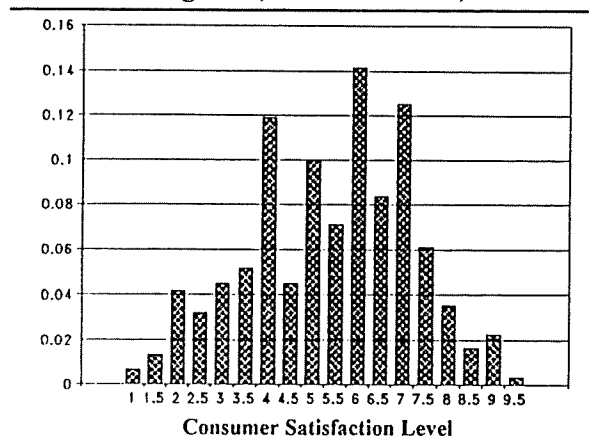


Figure 3
Consumer Satisfaction Histogram
(Origin=5, bin width=0.5)



the normal and the beta. As can be seen in the Appendix, both of these distributions are two-parameter distributions. Figure 4 shows the estimated normal distribution for the consumer satisfaction data mentioned in the previous section. As can be seen, much of the details of the data seem to have vanished. Specifically, due to the uni-modal nature of the normal distribution, the suggested high-density area in the 6-7 range of Figure 1 has disappeared. Also, due to the symmetric nature of the normal distribution, skewness in the data can no longer be observed. In order to assess the appropriateness of using the normal distribution on the consumer satisfaction data, the Shapiro-Wilk test was conducted. The results of the test rejected the null hypothesis of normality at the $p < 0.0001$ level, thereby confirming that the data are not drawn from a normal distribution. Therefore, the normal approximation seems to be an inappropriate representation for the distribution of consumer satisfaction data. This observation is in fact consistent with observations made by Peterson and Wilson (1992), that most consumer satisfaction data have significant deviations from normality.

An alternative distribution function is the beta distribution. The advantage of the beta distribution over the normal distribution is that it can take on many different forms, such as a U or an inverted U, and can also be nonsymmetric. As a result, it is a convenient distribution function for many marketing and social science applications (e.g., Morrison 1981; Heckman and Willis 1977; Sabavala and Morrison 1981). However, as in the case of the normal distribution, the beta distribution is also constrained in its shape in that, with the exception of a U or J shape, it is unable to reflect other cases of multi-modality in the data. It too is therefore limited in its application to consumer satisfaction data, where multi-modality in consumer responses is likely. Figure 5 shows the estimated beta distribution using the consumer satisfaction data mentioned earlier. Again, as in the case of the normal distribution estimate, much of the detail has disappeared due to the shape of the distribution function enforced by the beta distribution.

Figure 4
Consumer Satisfaction Density Estimate
Normal Distribution

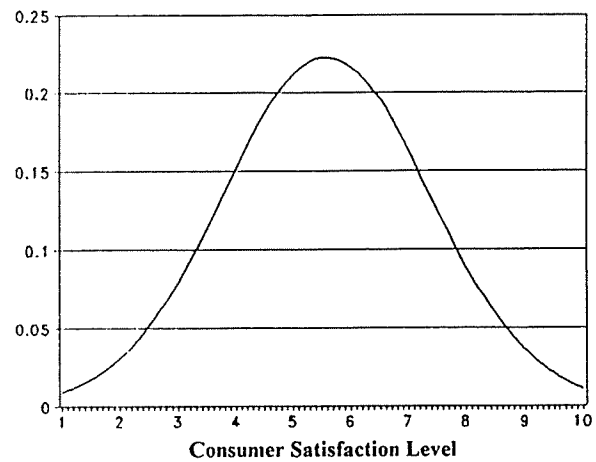
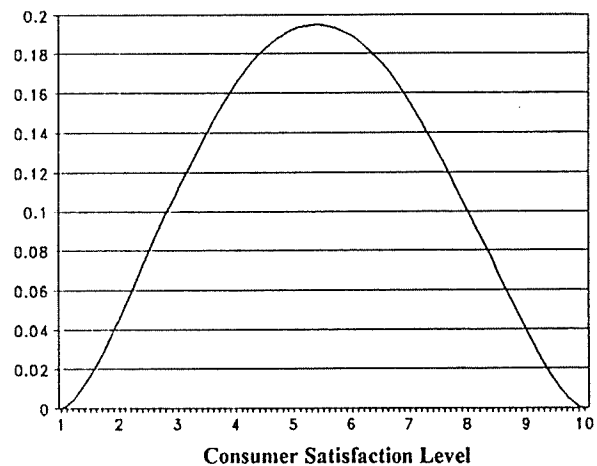


Figure 5
Consumer Satisfaction Density Estimate
Beta Distribution



THE PROPOSED METHOD: KERNEL ESTIMATION

Since the existing methods are unable to reflect subtle fluctuations in consumer satisfaction responses, a more flexible method for estimating consumer satisfaction distributions is needed. In this section, the kernel estimation method is introduced as an approach to obtaining estimates of the underlying distribution of the consumer satisfaction measures. Kernel estimation is a

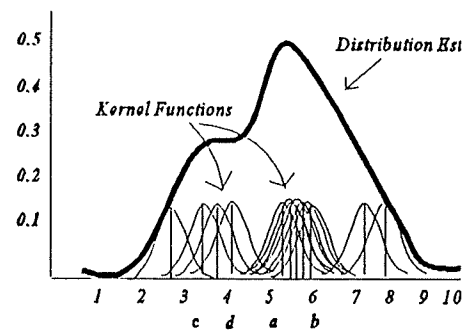
well-established non-parametric approach to estimating distributions. It is the most commonly used non-parametric distribution estimation method and has seen wide usage in a variety of applications in economics. Among its many advantages is the fact that it relaxes the restrictive assumption that the observed data are drawn from a given parametric distribution. The relaxation of the parametric assumptions is especially appealing in applications involving consumer satisfaction data, as prior assumptions about the shape of the distribution of consumer responses can often significantly restrict the shape of the estimated distribution. In addition, kernel estimation provides much more stable results than those obtained through histograms (Silverman 1986).

Prior applications of kernel estimation in the marketing literature are limited. Rust (1988) introduced the concept of flexible regression to the marketing literature, using the kernel method as a means for relaxing many of the restrictive assumptions of classical regression. Abe (1991) further advanced Rust's work by introducing the moving ellipsoid estimation method. Donthu and Rust (1989), in an interesting application of the method, used the kernel method to estimate the geographic distribution of a city's population. Having determined the shape of the distribution, they then identify the optimal location for a new retail outlet. In a later work, Donthu (1991) applied kernel density estimation in order to estimate market area densities, and Abe (1995) applied the method for studying consumers' brand choice behavior.

Conceptually, the kernel estimation method is actually quite simple. The kernel density estimate at a particular point x is simply the sum of n individual 'kernel' functions. The value of each of these n kernel functions depends on the distance between x and the observations around it. If x is close to many observations, the kernel functions are set up such that the value of the individual kernel functions are large, and therefore their sum is large. As a result if x is located in a densely populated portion of the scale, the distribution would end up being "bumped up." In contrast, if x is far from most sample observations, the individual kernel function values are small, resulting in a low distribution estimate at x . Figure 6 graphically demonstrates the basic

concept, and the Appendix presents the technical details. The horizontal axis in Figure 6 shows the satisfaction response scale. Each point on the horizontal axis represents a single observation from a respondent. Therefore, all the dots on the horizontal axis reflect the entire sample of consumer satisfaction responses in the survey. For example, the point "a" is the observation for one respondent (having a response of 5) and point "b" is another observation for another respondent (having a response of 6). The vertical axis represents the density of the distribution of observations. For example the area between points a and b has a large bump because there are many observations in this area. On the other hand the area between c and d has a drop in the distribution, because there are very few observations in this region of the scale.

Figure 6
Demonstration of Kernel Method



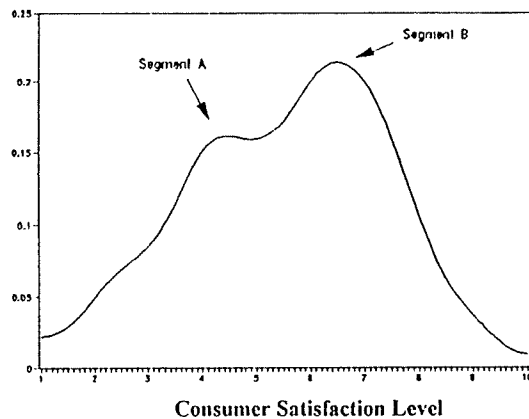
What makes kernel estimation such a useful technique is some of its attractive statistical properties. Specifically, given a sufficiently large sample size, we are guaranteed to obtain a distribution estimate which closely resembles the true distribution of the measure in the population, as the kernel estimate has also been shown to be both consistent and unbiased (Rosenblatt 1956; Parzen 1962).

ESTIMATION

Kernel estimation of the distribution of the satisfaction ratings in the survey was achieved using the Gauss programming language. Total estimation time with an Intel 486-33 processor was under 45 seconds. Figure 7 graphically presents

the kernel estimate of the satisfaction measure. Contrasted against Figures 1 and 2, visual inspection of Figure 7 shows the existence of two highly dense regions, one centered at 4.3, and the other at 6.5. Moreover, contrasted against Figures 4 and 5, the kernel estimate suggests that the estimated distribution does not look anything like a beta or a normal distribution.

Figure 7
Consumer Satisfaction Distribution
Using Kernel Estimation



In the following sub-sections, the merits of the kernel method will be discussed on three grounds: (1) the ability of the kernel estimate to fit the original data, (2) the ability of the method to identify consumer segments, and (3) the managerial implications of the findings.

Superior Fit

In order to assess the relative fit of the various approaches, the consumers' responses were randomly split into two samples. An estimation sample of 150 respondents was used to estimate the consumer satisfaction distribution using the various methods. The remaining 165 respondents' data were then used as a hold-out sample. The cumulative distribution of the resulting estimates were then compared to the cumulative density of the hold-out sample using the goodness of fit index (GFI) described in the Appendix. Table 1 shows the results of the fit test. As can be seen from the table, and as expected, the kernel density estimate

produced the best fit to the hold-out sample data. This was followed by the two parametric estimates. The worst fit was obtained using the histogram.

Table 1
Goodness-of-Fit Index

Estimation Method	Goodness of Fit Index (GFI)
Kernel	18.52
Normal	11.41
Beta	3.03
Histogram (origin=5, bin width=1)	2.10

Segment Identification Ability

Since the kernel distribution estimate is an unbiased and consistent estimator of the underlying distribution (Silverman 1986), one can reasonably conclude that the fluctuations observed in the distribution graph are likely to be due to the underlying distribution of consumer satisfaction. Visual inspection of the resulting kernel estimate indicates two consumer segments, one with satisfaction levels centered at 4.3 (referred to as segment A), and another with satisfaction levels centered at 6.5 (referred to as segment B), with the midpoint separating the two segments. To further establish the existence of these segments, it is preferable to demonstrate that the two identified segments are conceptually different from one another in some managerially meaningful way. This may therefore help guide further managerial actions. It may also help address the largely ignored notion of consumer heterogeneity in consumer satisfaction research and the possibility that consumer satisfaction dynamics might vary from one consumer segment to another (Yi 1991).

In order to do so, in addition to the satisfaction measures, the survey had also obtained measures of the performance of the institution on individual aspects of its services. These include performance perceptions of the student service offices, the physical facilities, the administration, and teaching quality. These measures were obtained in order to assist the management in identifying areas where quality improvement initiatives can be directed. The items in the scales

were developed based on management input, followed by a set of pre-tests, and are outlined in Table 2. As can be seen from the table, the multi-item scales all provide highly reliable measures, reflected by coefficient alpha values of 0.74 and higher.

Table 2
Multi-item Scales Used in the Survey
(All items on a 1-10 scale)

Physical Facilities: Coefficient alpha = 0.74
Room availability for group projects and meetings (low...high)
My desire to spend more time in the building (low...high)
The cleanliness of the building (low...high)
The overall quality of the building's facilities (low...high)
Student Services: Coefficient alpha = 0.80
The usefulness of the Career Resource Center in my job search (low...high)
The professionalism and courtesy of the Placement Office (low...high)
The ability of the Placement Office in bringing in a variety of companies (low...high)
The ability of the Placement Office in bringing in a large number of companies (low...high)
The overall quality of the school's student services (low...high)
Administrative Offices: Coefficient alpha = 0.89
The dean's office's effort in improving the quality of student life (low...high)
The honesty and openness of the administration (low...high)
The availability of the administration to discuss student issues with students (low...high)
The administration's follow-up of issues that are presented by students (low...high)
The Admissions Office's ability to present a true picture of the school to prospective students (low...high)
Teaching Quality: Coefficient alpha = 0.87
The level of quality of the teaching by professors is (low...high)
The accessibility of professors for questions outside of class (low...high)
The overall level of satisfaction with the teaching approach (low...high)

One possible way in which the two identified segments might vary is in the way the dynamics of the satisfaction process function. In other words, the way consumers form their satisfaction evaluations, based on the individual components of

the service, may vary between the two segments. In order to test the above assertion, a standardized regression analysis was conducted on the obtained measures. Specifically, the satisfaction measure was regressed on the component level performance measures outlined in Table 2 (i.e., physical facilities, student services, administration, and teaching quality). The analysis was conducted separately for each segment, and the standardized coefficients were then used to gain insights on the varying satisfaction dynamics between the two segments. Table 3 presents the results of this analysis.

Table 3
Segment-Level Estimates of the Consumer Satisfaction Model
(numbers in parentheses are standard errors)

<u>Service Component</u>	<u>Standardized Beta's</u>	
	<u>Segment A</u>	<u>Segment B</u>
Physical Facilities ^{††}	0.187 ^{**} (0.079)	0.088 (0.076)
Student Services ^{††}	0.128 (0.085)	0.002 (0.079)
Administration [*]	0.141 (0.084)	0.162 [*] (0.079)
Teaching Quality ^{††}	0.341 ^{**} (0.078)	0.256 ^{**} (0.076)

[†]Segment differences significant at the $p < 0.05$ level

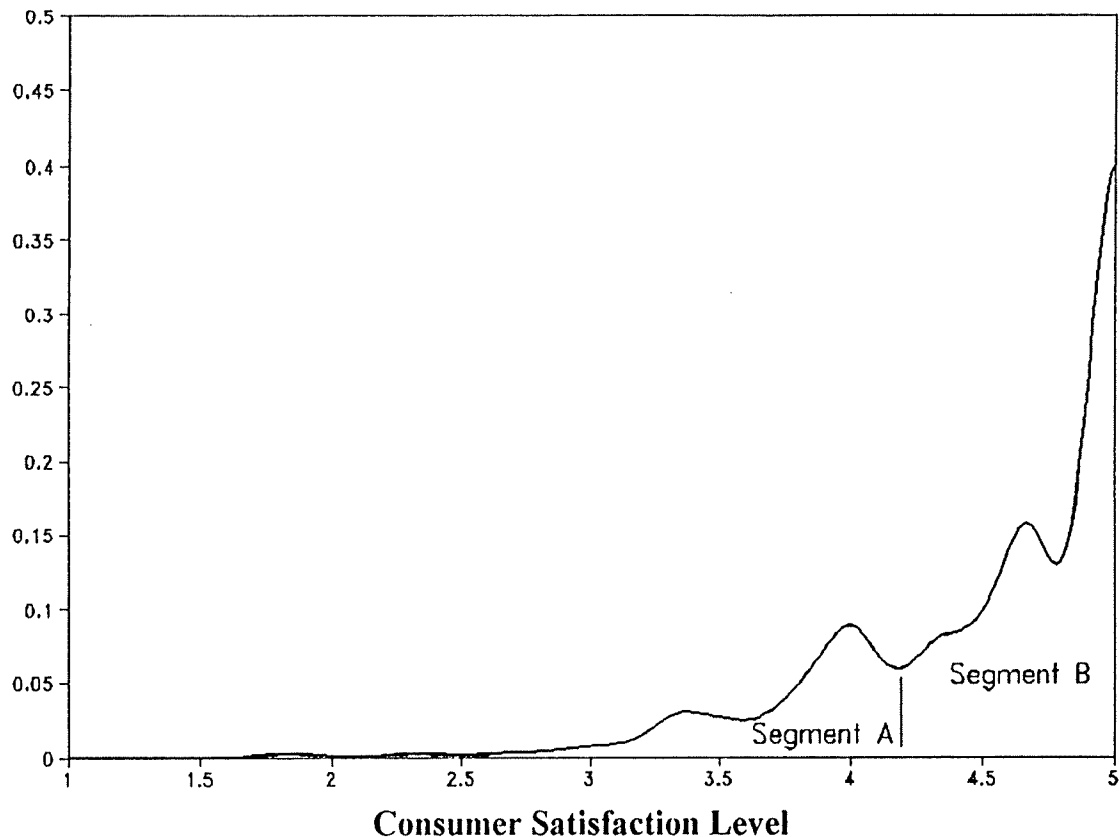
^{††}Segment differences significant at the $p < 0.01$ level

^{*}Coefficient significant at the $p < 0.05$ level

^{**}Coefficient significant at the $p < 0.01$ level

As can be seen from the results, the two segments vary in their satisfaction dynamics. For segment A respondents, teaching quality and the physical facilities are the strongest driver of satisfaction, reflected by the high t-values. Student services and administration do not seem to have any significant influence on the satisfaction ratings of this segment. For segment B, on the other hand, the effect of teaching quality on satisfaction is considerably lower, and the effect of the physical facilities is negligible. In contrast to segment A, for segment B respondents, the perceptions of the administration are a significant driver of satisfaction.

Figure 8
Consumer Satisfaction Density for Retail Outlet
Using Kernel Estimation



Managerial Implications of the Findings

From a marketing management perspective, the above findings suggest that in order to improve consumer satisfaction levels, the management may need to consider addressing the two segments in different ways. Moreover, the management can prioritize and focus quality improvement efforts based on which consumer segment is considered to be more important to serve. For example, addressing segment A consumers would clearly require improvements to the physical facilities and improved teaching quality. On the other hand, while improvements in teaching quality would also improve segment B's satisfaction level, addressing the needs of this segment would also require improvements in the perceptions of the administration. Physical facility improvements would not significantly improve this segment's satisfaction ratings. Based on the expected costs

and benefits of each of these improvements, the management can therefore proceed to develop an optimal quality improvement program.

REPLICATION

In order to further test the proposed method, a replication of the previous analysis was done on consumer satisfaction survey data obtained from a very different service setting: a retail outlet. The retail outlet is part of a regional chain of fast food convenience stores, which sell grocery items, beverages and fast food. The consumer satisfaction data utilized were obtained from a standardized survey done in order to assess consumer perceptions of service quality at the retail outlet. A total of 242 customers were administered the consumer satisfaction questionnaire, which assessed their perceptions of various aspects of the service, such as its

cleanliness, employee responsiveness, and food quality.

As in the previous example, a multi-item scale was developed in order to obtain reliable measures of consumer satisfaction. The satisfaction scale was constructed by averaging six survey questions, each on a scale of 1 to 5 (with 5 being the positive end). The six questions were regarding (a) the cleanliness of the food area, (2) the cleanliness of the cash register area, (3) the freshness of the food, (4) the speed of preparation of the food, (5) the friendliness of the employees, and (6) the speed of service by the employees. The coefficient alpha for the scale was 0.85, and the mean satisfaction rating was 4.39.

As in the previous case, kernel estimation was done using the Gauss programming language. Figure 8 shows the resulting kernel distribution estimate. A split sample analysis found the kernel estimate to provide a fit to the holdout data superior to the alternative methods. The goodness of fit index (GFI) for the kernel was 21.29, as compared to 13.34 for the normal, 11.72 for the beta, and 14.92 for the histogram. Moreover, as can be seen, multiple consumer segments can be identified on the basis of the peaks exhibited in the distribution of the satisfaction measure. A highly satisfied group of consumers can be observed in the 4.2-5.0 portion of the response scale (Segment B), as indicated by the peaks. Moreover, a low satisfaction segment can be found in the sub 4.2 region of the scale (Segment A).

To assess the difference between the two segments, standardized regression was conducted to examine the relative impact of the various service attributes on consumer behavior. To do so, data obtained from scales assessing the rating of employees, the quality of the food, and the cleanliness of the retail outlet were used. Table 4 outlines the items used to develop these scales. A standardized regression analysis for each segment was conducted. The dependent variable used was consumers' self-reported level of frequency of visiting the retail outlet. Table 5 shows the resulting standardized beta coefficients for the two segments.

As can be seen, segment B's behavior seems to be mostly affected by perceived food quality. On the other hand, segment A seems to be less sensitive to food quality. For this segment, the

cleanliness of the outlet and employee responsiveness seem to be more important. The two segments are further differentiated based on their demographics. The high satisfaction segment, Segment B, is mostly made of males. Males account for 60.8 % of respondents in this segment. On the other hand, the low satisfaction segment is equally represented by the two sexes.

Table 4
Multi-item Scales for Service Quality Components

Cleanliness (Coefficient Alpha = 0.90)

Cleanliness of the Sidewalk
Cleanliness of the Parking
Cleanliness of the Coffee Area
Cleanliness of the Fountain
Cleanliness of the MTO
Cleanliness of the Cash Register
Cleanliness of the Rest Room

Employees (Coefficient Alpha = 0.86)

Employee Friendliness
Employee Speed
Employee Appearance

Freshness of the Food (Coefficient Alpha = 0.80)

Speed of Food Preparation
Cleanliness of Food Preparation Employees
Freshness of the Coffee

Table 5
Replication: Segment-Level Estimates of the Consumer Satisfaction Model
(numbers in parentheses are standard errors)

Service Component	Standardized Beta's	
	Segment A	Segment B
Employees [†]	0.21 (0.11)	0.17 (0.21)
Food Quality ^{††}	-0.02 (0.15)	0.27* (0.13)
Cleanliness ^{††}	0.19 (0.13)	-0.30 (0.14)

[†]Segment differences significant at the $p < 0.05$ level

^{††}Segment differences significant at the $p < 0.01$ level

*Coefficient significant at the $p < 0.05$ level

The gender difference between the two segments is significant at the $p < 0.1$ level. No other

significant demographic differences were found between the two segments. From a managerial perspective, the above results suggest that each of these segments needs to have different marketing programs tailored to them. Improving consumer satisfaction in segment A requires improvements in the cleanliness of the outlet. On the other hand segment B may benefit from improvements in the quality of the food. Moreover, since the high satisfaction segment (segment B) has a higher proportion of males, further research on the needs of female consumers may facilitate further service quality improvements.

PROS AND CONS OF THE METHOD

It is important to note that despite its favorable statistical properties and ease of use, the kernel estimation method does have some minor drawbacks. It has for example been shown that when applied to data from long-tailed distributions, the distribution estimate in the tails may become unreliable. An alternative estimation method, called the nearest-neighbor method needs to be used in such cases (Silverman 1986, p. 19). In addition, while the kernel technique is easy to program, it is a data intensive procedure. As a result with very large samples (i.e., one thousand or more), the estimation procedure may become considerably slow. In such cases fast Fourier transforms can be applied to speed up the process (Hardle 1993). Moreover, with small sample sizes (i.e., less than a hundred), the reliability of the obtained estimates tends to be low, as shown by the simulation work of Donthu and Rust (1994). In such cases, the histogram approach is likely to be preferable.

Fortunately, the above concerns typically do not apply to most consumer satisfaction data, as consumer satisfaction response scales are limited in their range of possible values, and many consumer satisfaction surveys utilize moderate sample sizes. The proposed method is especially relevant since many consumer satisfaction studies utilize survey methods to gauge consumer satisfaction. Moreover, as shown by Kumar and Rust's (1989) study, a visual approach for detecting segments such as the one proposed here is the most preferred approach by practicing managers. As the authors argue, to utilize alternative approaches

for segment identification, such as cluster analysis and AID (automatic interaction detection), "a great deal of sophistication is required to accurately interpret the results" (p. 24). On the other hand, with a method such as kernel estimation, the resulting distribution graph can easily be inspected, analyzed, and communicated, making it a useful tool for both applied and academic research in consumer satisfaction.

CONCLUSION

In this paper, we have reviewed various popular methods for estimating the shape of the distribution of consumer satisfaction ratings obtained from consumer surveys. We further offered the kernel estimation method as a tool for improving our ability to assess the shape of this distribution. In doing so, we demonstrated that kernel estimation enables us to better visualize and interpret the distribution of consumer satisfaction measures. The method is superior to the traditional approach of building histograms which is highly sensitive to one's choice of the origin or the bin width. In addition, unlike parametric estimation methods, kernel estimation does not constrain the form of the estimated distribution to a particular shape. Therefore, the kernel method allows the consumer response data to "speak for itself" in determining the shape of the distribution of consumer responses.

The application of the method on consumer satisfaction data in two separate scenarios helped identify underlying consumer segments. These segments were further differentiated based on the dynamics by which satisfaction is arrived at. As a result, the proposed method facilitates the study of heterogeneity in consumer satisfaction data, an issue of equal concern to academics and practitioners. Moreover, it facilitates the development of segment-based and focused quality improvement programs in consumer services.

APPENDIX

Distribution Estimation and Comparison Approaches

Normal Distribution:

Formally, the normal distribution at a point x is defined by:

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2}$$

where μ and σ are the population mean and standard deviation, respectively. The normal distribution has a symmetric and uni-modal shape. Moreover, it ranges from minus infinity to positive infinity.

Beta Distribution:

The beta distribution on the other hand, can take on a variety of shapes. The beta distribution at a point x is defined by:

$$f(x) = \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} x^{\alpha-1}(1-x)^{\beta-1} \quad \text{for } 0 < x < 1;$$

where α and β are the distribution parameters. Depending on the values of α and β a variety of distribution shapes, including U, inverted U, J, and inverted J can be produced. Moreover, in contrast to the normal distribution, the range of values which x can hold is bounded.

Estimation of Distribution Parameters:

For both the normal and beta distributions, parameter estimation can be achieved through maximum likelihood estimation or the method of moments. In this paper, the method of moments was used due to its computational convenience (Freund and Walpole 1980). Using the method of moments, the first and second moments of the sample are set equal to those of the distribution and the pair of equations are solved in order to determine the distribution parameter values.

Kernel Density Estimation:

Formally, the kernel density estimate at a point x is defined by:

$$\hat{f}(x) = \frac{1}{nh} \sum_{i=1}^n K\left(\frac{x-x_i}{h}\right),$$

where n is the sample size, h is the smoothing parameter, K is the kernel function, and the x_i are the data points. In order to conduct kernel estimation, one has to choose both a kernel function K , and a smoothing parameter h . Often the kernel function is chosen such that it is non-negative, symmetric and integrable to 1. Many choices of the kernel function, such as the normal, the Epanechnikov, and the uniform exist. Interestingly, it has been shown that the choice of the kernel function, even with small sample sizes, does not greatly affect the resulting kernel estimate (Silverman 1978).

The smoothing parameter h is also chosen such that as $n \rightarrow \infty$, $h \rightarrow 0$. The correct value of the smoothing parameter is pre-determined such that it minimizes the expected error

in the distribution estimate and is approximated by (Silverman 1986, p.45):

$$h_{opt} = \left(\frac{4}{3}\right)^{1/5} s n^{-1/5}$$

where s is the standard deviation of the measure in the sample, and n is the sample size.

Goodness of Fit Comparisons:

In order to compare the performance of the various distribution estimates (e.g., normal, beta, histogram, and kernel), a goodness-of-fit index expressed by:

$$GFI = \frac{1}{U} \int_L^U [F_{estimate}(x) - F_{sample}(x)]^2 dx$$

was used, where $F_{estimate}(x)$ and $F_{sample}(x)$ are the cumulative distribution functions at point x of the distribution estimate and the sample, respectively, and L and U represent the lower and upper bounds of the scale. The higher the index, the better the fit. The intuition behind this fit measure is that a good fit would result in a cumulative distribution estimate which closely follows the actual distribution of the hold-out sample. As a result, the better the fit, the smaller the denominator, and the higher the GFI.

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SEX DIFFERENCES AND CONSUMER COMPLAINTS: DO MEN AND WOMEN COMMUNICATE DIFFERENTLY WHEN THEY COMPLAIN TO CUSTOMER SERVICE REPRESENTATIVES?

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ABSTRACT

This paper examines the potential effect that a consumer's sex may have on the communication that occurs between complaining consumers and customer service representatives. Two competing theoretical approaches in the communication discipline to the study of sex differences-- the "dual cultures" perspective and the "no differences" perspective-- are discussed. Content analysis of 531 complaint conversations showed no significant difference in the communication content spoken by female and male consumers in their interactions with customer service representatives. Also, this analysis revealed no significant differences in the communication content spoken by customer service representatives in their interactions with female and male consumers. These findings, supportive of the "no differences" perspective, suggest that consumer affairs managers may not need to consider the sex of consumers as a central variable in the design of complaint management systems.

INTRODUCTION

In recent years, managers at progressive companies have increasingly encouraged customers to voice their complaints directly to company representatives. To facilitate this communication process, many of these companies have instituted toll-free "hot lines" staffed by specially trained service representatives who are responsible for responding to consumers' complaints (Garrett and Meyers 1996; SOCAP 1992, 1996). In theory, this complaint communication process should benefit both dissatisfied consumers and corporate consumer affairs managers. For consumers, complaining directly to company service representatives offers the opportunity to express dissatisfaction and hopefully receive appropriate redress. For corporations, receiving consumers' complaints provides the chance to collect valuable

information regarding problematic products and corporate procedures.

Despite these presumed benefits, however, research shows that consumers are satisfied with companies' responses to their complaints only about fifty to sixty percent of the time (Andreasen 1988). One of the major reasons for this relatively low effectiveness rate may be the inability of customer service representatives to understand and respond appropriately to the wide variety of communication messages and styles used by complaining consumers (Agin 1990; Fornell 1988).

OBJECTIVE

Researchers in the marketing discipline have long considered consumers' demographic characteristics (e.g., age, racial background, sex) to be potentially significant determinants of complaining behavior (e.g., LaForge 1989; Cornwell, Bligh, and Babakus 1991; Mason and Himes 1973). Although limited in number and scope, research which explicitly examines the impact of a consumer's sex on the complaint process generally finds that women and men differ in the complaint channels they choose and their frequency of complaining (Bolfing 1989; Solnick and Hemenway 1992).

However, no previous studies have analyzed the potential effect that a complaining consumer's sex may have on the communication that occurs during interactions between complaining consumers and customer service representatives. This research issue has potentially important implications for customer service managers. If significant sex differences do exist in the communication used by complaining consumers, this may indicate that customer service representatives should be trained to communicate differently with male and female consumers in order to increase the likelihood for successful complaint interactions.

The importance of this study is further underscored by literature in the communication discipline regarding male and female communication. Two opposing camps have developed in the communication discipline concerning this area of research. The "dual cultures" advocates maintain that there are indeed fundamental and enduring differences in the communication used by females and males. They further argue that these communication differences affect the manner in which men and women conduct their lives and maintain their relationships with other individuals. Because of these differences, they would argue that customer service managers must train their service representatives to consider the sex of the complaining consumer as an important variable when responding to consumers' complaints. In sharp contrast, proponents of the "no difference" perspective in the communication discipline assert that there are few, if any, significant differences in the communication used by men and women. To bolster their stand, they point to several recent meta-analyses that conclude that the empirical evidence collected from hundreds of studies regarding male and female communication do not justify a claim of a significant sex impact on communication. Therefore, they would argue that customer service managers do not need to train their service representatives to adopt specialized communication messages for male and female consumers.

Given the potential importance of this topic to customer service managers and the current unresolved debate in the communication discipline, the objective of this paper is to examine if the sex of the complaining consumer may affect the content of communication that takes place during these interactions between consumers and service representatives. That is, do male and female consumers communicate their complaints differently when they interact with company service representatives? Also, because interactions between complaining consumers and service representatives are a dyadic process, it is important to evaluate the type of communication used by service representatives with male and female consumers. Thus, this study will also evaluate if service representatives communicate differently when they respond to complaining female and male

consumers.

Relevant research from both the communication discipline and the marketing discipline is reviewed next. Then the research questions addressed in this study are presented, followed by an explanation of the study's methodology. Finally, the results are presented and discussed.

LITERATURE REVIEW

Researchers in the communication discipline have extensively analyzed potential communication differences between women and men during the past several decades. Two dominant and competing perspectives are apparent in this literature--the "dual cultures" approach and the "no differences" perspective. Each of these two perspectives will be discussed in detail in this section.

An Overview of the "Dual Cultures" Perspective

Much of the previous research on sex differences has adopted a "dual cultures" framework (Coates 1986; Coates and Cameron 1989; Eagly and Wood 1991; Johnson 1989; Kramarae 1981; Tannen 1990, 1994; Thorne 1993; Wood 1993, 1994, 1997). This view assumes that women and men grow up in gender-segregated worlds, and therefore adopt separate behaviors, strategies, and values (Maltz and Borker 1982; Tannen 1990, 1995). As Wood (1996, p. 150) states:

Although not all girls and boys are socialized into, respectively, feminine and masculine communication cultures, the majority of us are. Because children's activities tend to be sex-segregated, gendered patterns of interaction are learned early and may persist throughout life.

From this view, men and women are more different than similar, and are often viewed in juxtaposition. Tannen (1995, p. 140) suggests that "in every community known to linguists, the patterns that constitute linguistic style are relatively different for men and women....The result is that women and men tend to have different habitual

ways of saying what they mean, and conversations between them can be like cross-cultural communication.”

Some of the distinctions that researchers in the “dual cultures” approach have identified as characteristic of men and women include (a) men as competitive, women as cooperative (Berryman-Fink, Ballard-Reisch and Newman 1993; Maltz and Borker 1982); (b) men as autonomous, women as connected (Meyers, Brashers, Winston and Grob 1996; Tannen 1994; Wood 1994); and (c) men as self-oriented, women as other-oriented (Lesch 1994; Wyatt 1984, 1988).

One of the more prominent distinctions, however, that permeates much of the literature is the difference between men as task-oriented and women as relationship-oriented (Pearson, Turner and Todd-Mancillas 1991). Two decades ago, Baird (1976, p. 192) noted this distinction between men and women in a review of research on sex differences in communication:

Males, encouraged to be independent, aggressive, problem-oriented, and risk-taking are more task-oriented in their interactions, . . . more interested and capable in problem-solving, . . . and more likely to assume leadership in task-oriented situations. Females, taught to be noncompetitive, dependent, empathic, passive, and interpersonally oriented, typically are more willing to self-disclose, more expressive of emotions and perceptive of others' emotional states, . . . less interested and able in problem-solving, . . . and less likely to assume leadership.

Kramarae (1981, p. 145) echoed Baird's analysis, stating that “the ‘sex role differentiation hypothesis’--that men specialize in instrumental or task behaviors and women specialize in expressive or social activities--has been influential in communication studies of the past twenty-five years.” Similarly, Eagly and Wood (1991, p. 309) indicated that “women are expected to possess high levels of communal attributes, including being friendly, unselfish, concerned with others, and emotionally expressive. Men are expected to possess high levels of agentic qualities, including being independent, masterful, assertive, and

instrumentally competent.”

More recently, Wood (1996) summarized this distinction by outlining these differences in women's and men's communication. She suggests men use communication to (a) achieve instrumental goals, (b) establish individual status and authority, and (c) compete for attention and power. Women, on the other hand, use communication to (a) build connections with others, (b) include others, and (c) cooperate, respond, show interest, and support others. Similarly, Tannen (1995, p. 140) suggests that boys (and subsequently, men) “learn to use language to negotiate their status in the group by displaying their abilities and knowledge, and by challenging others and resisting challenges.” Conversely, girls “learn to talk in ways that balance their own needs with those of others--to save face for one another in the broadest sense of the term.”

In sum, the “dual cultures” approach views men and women as culturally dissimilar and separate. Their behaviors and communication differ along many dimensions, one of the most prominent being task and relationship dimensions. Men are most often categorized as task-oriented, problem-solvers, and focused on instrumental goals. Women, conversely, are viewed as relationship-oriented, cooperative, and focused on maintenance goals. If the “dual cultures” perspective is correct, we should find differences in the type of communication used by female and male consumers when they express their complaints to customer service representatives. Likewise, we should also find differences in the communication used by service representatives to respond to female and male consumers during these complaint interactions.

An Overview of the "No Differences" Perspective

A growing number of researchers are beginning to question the “dual cultures” approach to studying the impact of sex on communication interactions. Thorne (1993) suggests that there are many exceptions and qualifications that do not fit the “dual cultures” assumptions. Similarly, Inman (1996) suggests that in comparing women's and men's friendships, men and women are more alike than different. Inman (1996, p. 97) states that

men and women "are similar in what we seek and value in friends. We all want close, meaningful connections with others with whom we share interests, values, or goals."

Other researchers have argued that our view of sex differences is overshadowed by stereotypes regarding men's and women's behaviors (Canary and Hause 1993; Ragan 1989). That is, we may perceive differences to be greater, or more pervasive than they are, because we are viewing them through the lens of sex role stereotypes. For example, if we find differences between the sexes in our research, we are quick to attribute those differences to sex role stereotypes over other possible explanations. In addition, if we discover findings contrary to sex role stereotypes, we are quick to explain those differences within a stereotypical framework. For instance, if we find women to be as, or more, competitive than men, we try to explain that finding within a stereotypical lens by referring to the situation (an organizational setting where that behavior is necessary and more highly valued), or the task (a male-oriented task), or the age of the women (younger women today are more likely to be competitive). In short, we fail to interpret our findings objectively because we are working in the shadow of stereotypes and the "dual cultures" perspective.

In addition, recent critics of the "dual cultures" approach have argued that the polarization that occurs in this perspective creates inconsistent and value-laden conclusions (Canary and Hause 1993; Putnam 1982). They assert that establishing dichotomous or polarized distinctions between men's and women's communication often leads to claims of superiority/inferiority. At times, women's communication patterns are seen as "powerless" and therefore less than adequate. At other times, men's communication is seen as nonsupportive, and therefore not helpful. What is forgotten here is that all types of communication can be valuable in various situations, and that gradations of communication behaviors exist. For example, communication can be more or less (along a continuum) assertive, supportive, competitive, cooperative, or inclusive, among other attributes. By studying communication from a "dual cultures" approach, researchers are more likely to accept the extremes and to overlook the value of a variety of communication behaviors

regardless of the sex of the participant.

These criticisms of the "dual cultures" view recently have been supported by several meta-analyses that find few differences between women and men in communication behavior. Three of the most recent, and relevant, analyses are detailed here. Wilkins and Andersen (1991) looked at differences and similarities in men's and women's management communication using meta-analytic techniques. They found few differences between men and women in their communication practices. They state (p. 26):

Although the statistically significant results suggest that differences do exist, the variance accounted for was so small, that statistical significance appears to have little social value. It can be safely concluded that there is no meaningful difference in the communication behaviors of male and female managers based on current quantitative findings.

Wilkins and Andersen (1991) indicate that no meaningful sex differences were found in affect behavior, influence strategies, autocratic behavior, democratic behavior, negative affect behavior, communication facilitation, or leader emergence. They concluded by suggesting that future research "move away from attempts to identify gender differences between managers" (p. 30), and indicated that if we are to truly understand managerial communication, researchers "need to concentrate less on identifying differences or similarities and more on identifying the situational factors that affect behavior" (p. 30).

Similarly, in a meta-analysis of sex differences in self-disclosure communication, Dindia and Allen (1993) analyzed 205 studies published between 1958 and 1989, and found that there was very little difference in self-disclosure behaviors of men and women. They concluded that (pp. 117-118):

The results of this meta-analysis . . . indicate that sex differences in self disclosure are small Thus, using the average effect size found in this meta-analysis, if approximately 45% of men would disclose a particular item, approximately 55% of women would disclose the same information.

Dindia and Allen (1993, p. 118) suggested that "sex differences in self-disclosure are not as large as self-disclosure theorists and researchers have suggested. It is time to stop perpetuating the myth that there are large sex differences in men's and women's self-disclosure."

Finally, Canary and Hause (1993) reviewed and summarized fifteen representative meta-analyses of sex differences that included over 1,200 studies. They concluded that there are few, if any, differences in the manner in which men and women communicate. Canary and Hause (1993, p 140) state:

The hundreds of studies represented in the meta-analyses indicate that sex differences in social interaction are small and inconsistent; that is, about 1% of the variance is accounted for and these effects are moderated by other variables. Given this research, we should not expect to find substantial differences in communication.

Thus, in direct contrast to the "dual cultures" approach, the "no differences" view suggests that men and women may be more similar than different. Hence, from this perspective, it is unlikely that there will be significant differences in the communication used by female and male consumers when they complain to company service representatives. Also, service representatives are likely to use the same type of communication to respond to both female and male consumers.

Summary

As this review shows, there are two dramatically different perspectives present in the communication literature regarding the potential role that participants' sex may play in communication interactions. Researchers from the "dual cultures" perspective argue that women and men are basically different and this is evident in their communication. Diametrically opposed, researchers from the "no differences" perspective strongly believe that there are few, if any, significant differences in the communication used by men and women.

In the next section, previous research in the marketing discipline regarding complaining

behavior of female and male consumers is reviewed.

MALE AND FEMALE CONSUMER COMPLAINING BEHAVIOR RESEARCH

Studies in the marketing discipline comparing male and female consumer complaining behavior have been limited in both quantity and scope. In fact, few studies have explored the issue of sex differences directly. Instead, in most cases sex is merely "added on" as an additional demographic variable (among a set of variables) to analyze. Moreover, theoretical frameworks for guiding these investigations are rarely discussed.

Much of the research on sex differences and consumer complaining behavior focuses on the frequency with which men and women complain and the channels which they choose to express their dissatisfaction. Research on the frequency of complaints filed by men and women offers inconsistent results. Some research indicates that women and men are equally likely to complain (Granbois, Summers, and Frazier 1977; Hemenway and Killen 1989; Liefeld, Edgecombe and Wolfe 1975), but other research suggests that women are more likely than men to complain (Duhaime and Ash 1980; Schwartz and Overton 1987; Solnick and Hemenway 1992). Although interpretation of these findings is difficult, some researchers have surmised that women (especially those who do not work outside the home) may have more time to register complaints than men, and therefore are likely to be the official "complainer" for the household.

The research regarding channel selection indicates that women are more likely than men to pursue a direct form of complaining action (i.e., complain directly to the company) or use negative word-of-mouth communication when dissatisfied with certain products (Bolfing 1989; Duhaime and Ash 1980; Solnick and Hemenway 1992). In addition, it appears that women have less experience than men do complaining through third party channels (e.g., consumer protection agencies, lawyers, mediators), but perceive greater value than men in complaining via these channels (Singh 1989). Also, women are less likely than men to use litigation to sue doctors (Brown and Swartz 1984).

It is important to highlight that, while sex has been recognized as a potentially significant determinant of consumer complaining behavior, none of these prior research studies specifically addressed the role of sex differences in the complaint communication process. Therefore, the objective of this study is to determine if the sex of complaining consumers has a significant effect on the type of communication spoken by consumers and service representatives during complaint interactions.

RESEARCH QUESTIONS

The first research question that will be examined in this study is:

Are there significant differences in the types of communication used by dissatisfied female and male consumers when they interact with company service representatives?

If the "dual cultures" perspective is correct, we should see significant differences in the types of communication used by female and male consumers during these interactions. If this is true, this may indicate that customer service managers should train their service representatives to alter their communication messages given the sex of the complaining consumer. However, if this study finds that there are, in fact, no significant differences in the communication used by female and male consumers in these complaint interactions, this will be added support for the "no differences" perspective. In this case, this finding would suggest that customer service representatives may not need to alter their communication according to the sex of the complaining consumer. Instead, there are probably other variables that are more critical for understanding how to resolve consumers' complaints more effectively.

Complaint communication is a dyadic process in which dissatisfied consumers interact with company service representatives. Therefore, in addition to analyzing the communication used by female and male consumers, we also are interested in determining if service representatives communicate differently with male and female consumers. If we find that male and female

consumers communicate differently and service representatives communicate differently with male and female consumers, this is additional support for the "dual cultures" perspective. In contrast, if no differences are found in both the communication of female and male consumers and the communication used by service representatives, this would lend credence to the "no differences" perspective. Thus, the second research question that will be addressed in this study is:

Are there significant differences between service representatives' communication with male and female consumers in complaint interactions?

METHODOLOGY

In this section, we discuss the methods used to answer this research question, including the data collection process, data unitizing procedures, content analysis system, and coding procedures.

Data Collection Process

Because many companies treat complaints as "bad news" (Fornell and Westbrook 1984), they are often reluctant to allow researchers to analyze their complaint management procedures. Fortunately, a regional telephone service company permitted us to tape record telephone complaint interactions (i.e., conversations) between their customer service representatives and dissatisfied customers. This company maintains a telephone system in which dissatisfied consumers with service complaints can talk directly to trained customer service representatives. Service representatives in this company agreed to participate in this research project, but they were not aware of when they were actually being recorded.

From a total of 27 service representatives employed by this company, 17 were selected for recording, based on the match between their work schedules and our authorized hours of access to company facilities. As is typical in this industry, most of the service representatives employed by this company are female (15 females, 2 males). In addition, most of the service representatives were high school educated and full-time employees.

They had an average of ten years experience with this company.

Approximately 80 hours of conversations between this company's service representatives and complaining consumers were recorded. Because it would be too expensive to transcribe this entire set of recordings, a sample of complaint interactions was selected for transcription (approximately 34 hours). An "interaction" was defined to be a complete conversation between a complaining consumer and service representative that began when the service representative answered the consumer's call and ended when the two parties concluded that conversation. Any interactions were removed that did not explicitly involve consumer complaints (e.g., inquiries regarding other services offered by the company). This yielded a total of 531 interactions between complaining telephone customers and company service representatives in the final data set for this study.

Unitizing the Data

Unitizing is the process of dividing large blocks of communication content into smaller units so that independent judges may more easily code them into categories (Folger, Hewes and Poole 1984). After considering a variety of unitizing possibilities commonly used in communication research (e.g., individual words, sentences, turns-at-talk, and complete conversations), sentences were selected as the most appropriate unit of analysis because people typically talk in sentence form in telephone conversations. Unitizing rules were then developed to define complete sentences as well as other conversational segments that did not fit the conventional definition of a sentence (a copy of the unitizing rules is available from the first author).

Using these unitizing rules, two members of the research team practiced unitizing on transcripts extraneous to this study. When an acceptable reliability level was reached in practice, the two coders then independently unitized 50 complaint interactions from this study's final data set. Unitizing reliability was computed on these 50 interactions (approximately 2200 units) using Guetzkow's (1950) formula and was found to be .004, indicating greater than 99% agreement.

Because reliability was so high on this sample, it was deemed appropriate to allow just one coder to complete the rest of the unitizing task. The total number of units contained in the 531 complaint interactions was 17,792 units (sentences).

Content Analysis System

Although some researchers argue that consumers do not necessarily have to be dissatisfied to register a complaint with a company (Jacoby and Jaccard 1981; Oliver 1987), most researchers agree that complaints are generally based on consumers' perceptions of dissatisfaction with a purchase experience (Andreasen 1988; Fornell 1976; Singh 1988). Thus, the communication content of complaint interactions should reflect closely consumers' bases of dissatisfaction. While a variety of explanations for consumer satisfaction/dissatisfaction (CS/D) formation have been advanced, we based our category system on four frequently researched bases of consumer dissatisfaction: expectations, performance, equity, and attribution (Oliver 1993; Oliver and DeSarbo 1988; Yi 1990). We briefly review these four concepts next, and then provide formal definitions for our category system.

Expectations. Consumers often form beliefs about the products or services they are considering purchasing (Boulding et al. 1993; Oliver and Winer 1987). Current academic debate in this domain concentrates on whether consumers' expectations are based on what consumers believe will happen or should happen (Boulding et al. 1993), and whether consumers compare performance to expectations or norms when forming satisfaction judgments (Cadotte, Woodruff and Jenkins 1987). Despite these unresolved issues, researchers generally agree that unfulfilled expectations can be an important source of consumer dissatisfaction.

Performance. Some researchers have demonstrated that product or service performance itself, without any comparison to expectations, may be a strong predictor of CS/D in certain consumption situations (Bolton and Drew 1991; Tse and Wilton 1988). Tse and Wilton (1988, p. 210) suggest, "because expectation and product

performance appear to assume distinctly different roles in CS/D formation, the effect of perceived performance on CS/D should be modeled separately."

Attribution. A third explanation focuses on consumers' perceptions of the causes for product performance problems, typically using components of stability, locus, and controllability (Bitner 1990; Folkes 1990). As Folkes (1990, p. 150) notes, "Product failure is the kind of negative and unexpected event that has been shown to prompt causal search." By engaging in causal search, consumers seek to identify who (consumer or company) is responsible and then choose an appropriate complaint response option.

Equity. Finally, a fourth explanation for understanding CS/D is based on equity theory (Goodwin and Ross 1992; Oliver and Swan 1989). Equity theory posits that consumers form satisfaction/ dissatisfaction judgments by assessing the fairness of their exchange relationship with the product's producer. If consumers perceive that their outcomes are not equitable or the processes used to settle conflicts are not appropriate, they are likely to be dissatisfied.

Therefore, we believe communication between complaining consumers and service representatives will focus on consumers' expectations for product/service performance, descriptions of product/service performance problems that the consumer is experiencing, analysis of likely causes (attribution) of these problems, and alternative procedures that may be used to equitably resolve the consumer's complaint.

Using these four bases of consumer dissatisfaction, we developed category definitions appropriate for content analyzing verbal communication between complaining consumers and company service representatives. In addition to the four categories previously described, a fifth category identified as "other" statements was added to our category scheme. This final category was necessary because complaint interactions contain a variety of statements which are not explicitly related to complaints. Such statements include greetings ("Hello, this is Susan. How may I help you?"), information inquiries during the telephone conversation ("What is your phone

number?", "What is your address?"), closings at the end of the conversation ("That's it, OK.", "Bye-bye.", "We'll call you back."), conversational maintenance terms ("Uh-huh.", "Umm.", "I see.", "Well, you know."), and casual conversation ("How is the weather today?").

The five categories that comprise our category system then are formally defined as follows:

Expectations: Communication that concerns the anticipated, predicted, or expected performance of a product or service.

example: "I thought my phone was supposed to be turned on by five o'clock today."

Performance: Communication that describes or explains how a customer's product or service performs, including the types of problems a customer is experiencing.

example: "Every time I try to call out I get a loud buzzing noise in my phone."

Attribution: Communication that attempts to determine why a problem occurred or the causes of a problem.

example: "My computer shows that our repair people are working to fix a broken telephone line that is disrupting all of the service in your area."

Equity: Communication that addresses the fairness of the relationship between a customer and a company, including each party's responsibilities.

example: "If the problem is in the line leading up to your house, you will not be charged for the costs of the repair."

Other Category: Basic communication that is used to conduct the conversational interaction, including greetings, closings, exchange of basic background information, and conversational maintenance terms.

example: "Could you please give me your name and telephone number?"

Coding Procedures

Six coders (who were not part of the research team) content analyzed the 17,792 units (sentences) in the final data set. These coders were provided with necessary background information regarding the company and its complaint management system, but were not told the study's research questions. The coders were trained regarding the definitions of the five categories. When an acceptable level of reliability was reached in practice coding sessions involving transcripts extraneous to the final data set, the coders were given the 17,792 content units to code. Given the large volume of data to content analyze in this study, the coders were divided into three teams of two coders per team, with each team analyzing approximately one-third of the data. The coders were instructed to work independently and not discuss their coding decisions with any other coders. The coders were directed to resolve any differences in their coding decisions by consensus when all coding was finished. If they could not reach consensus regarding the correct coding decision for any units, they were told to consult with one of the authors for a final decision.

Intercoder reliability was calculated for each team of coders for their entire data sets using both Cohen's kappa (1960) and Perreault and Leigh's statistic (1989). Cohen's kappa revealed scores of .89, .96, and .94 for each of the three teams of coders, while Perreault and Leigh's statistic yielded scores of .95, .98, and .97. While there are presently no universally accepted standards of acceptability for intercoder reliability results (Hughes and Garrett 1990), Krippendorff (1980) suggests that results above .80 are generally acceptable.

RESULTS

The 17,792 communication units in the data set were split into the 8,655 units spoken by consumers and the 9,137 spoken by service representatives. To answer the first research question, the consumers' communication units were then further divided into those spoken by the 346 female consumers (5494 units) and the units spoken by the 185 male consumers (3161 units), as shown in Table 1. The Pearson's chi-square

statistic for the data in this table is not significant ($X^2(4) = 3.06, p > .05$). Therefore, we can conclude from this data that there are no significant differences in the types of communication spoken by female and male consumers when they complain to service representatives in this company.

Table 1 points out that male and female consumers were fairly consistent in the pattern of communication messages produced. A large proportion of the communication for both males and females fell into the "other" category (47.2% of all messages produced by males and 48.4% of all messages produced by females). Equity issues and performance issues were the next most frequently voiced messages for both sexes. Females produced slightly more equity statements (19.4% of all messages produced by females) than performance statements (17.9% of all messages produced by females). Males produced approximately the same number of equity statements (19.1% of all statements spoken by men) and performance statements (19.2% of all statements spoken by men). Attribution statements were the fourth most frequently voiced message for both men (13.6% of all statements spoken by men) and women (13.3% of all statements produced by women). Finally neither female or male consumers voiced many expectation messages (1.0% of all communication spoken by women and 0.9% of all communication spoken by men).

Although there were no statistical differences in male and female consumers' communication across these five categories, it is interesting to note that almost twice as many females ($N = 346$) called in to complain as did males ($N = 185$). This result supports some earlier findings that suggest women may complain more frequently than men (Duhaime and Ash 1980; Schwartz and Overton 1987; Solnick and Hemenway 1992). However, of course, this may be partially due to a greater incidence of women not working outside the home, and thus accepting responsibility for reporting problems with their family's telephone service.

To answer the second research question regarding service representatives' communication with female and male consumers in complaint interactions, the 9,137 units spoken by service representatives were divided into the units spoken

Table 1
Communication by Female and Male Consumers in Complaint Interactions

Categories of Communication						
	Other	Performance	Attribution	Equity	Expectations	
Female Consumers						Row Total
Number Of Units	2660	983	730	1066	55	5494
Row %	48.4	17.9	13.3	19.4	1.0	100.0
Male Consumers						
Number Of Units	1493	608	429	603	28	3161
Row %	47.2	19.2	13.6	19.1	0.9	100.0
Column Total	4153	1591	1159	1669	83	8655
Column %	48.0	18.4	13.4	19.3	1.0	100.0

Pearson chi-square = 3.06 significance = .547

Table 2
Service Representative Communication With Female and Male Consumers

Categories of Communication						
	Other	Performance	Attribution	Equity	Expectations	
With Female Consumers						Row Total
Number Of Units	2787	206	1047	1849	9	5898
Row %	47.3	3.5	17.8	31.3	0.2	100.0
With Male Consumers						
Number Of Units	1594	114	531	994	6	3239
Row %	49.2	3.5	16.4	30.7	0.2	100.0
Column Total	4381	320	1578	2843	15	9137
Column %	47.9	3.5	17.3	31.1	0.2	100.0

Pearson chi-square = 4.34 significance = .362

in conversations with female consumers (5,898 units) and the units spoken in conversations with male consumers (3,239 units), as presented in Table 2. The Pearson's chi-square statistic for the data in this table is not significant ($X^2(4) = 4.34$, $p > .05$). Again, an examination of the row percentages for each of the five categories reveals that service representatives utilized similar communication messages when talking to both male and female consumers when they called to complain. Therefore, we can conclude that there is no significant difference in the manner in which service representatives in this company communicate with male consumers and female consumers.

DISCUSSION

In this section the limitations of this study are acknowledged first. Then we discuss our results and the potential significance of our findings. Finally, directions for future research regarding the potential effect of a consumer's sex on communication in consumer complaint interactions is presented.

Research Limitations

Although a large sample of complaint interactions was analyzed in this investigation, it must be emphasized that this data was from one company in one specific industry (telephone service). Because industries and individual companies vary widely in their customer service practices, a single company obviously cannot be considered representative of the entire population. In addition, because consumers have different marketplace experiences with various products and services, complaints to a telephone repair service cannot be considered representative of complaints that might be made concerning other services or products. Therefore, these results must be viewed as preliminary findings that should be compared to future studies that investigate complaint communication involving other companies in other industries.

In addition, this study focused specifically on the content of communication that occurs during complaint interactions. No attempt was made to analyze the style of communication (e.g., emotion,

rate, pitch) that was used during these interactions. Therefore, while no differences were found in the communication content used by female and male consumers, future research may find that female and male consumers use significantly different communication styles to express their dissatisfaction to service representatives.

Interpretation of Results

The fact that no significant sex differences were detected in this study of complaint communication regarding telephone service may be attributable to two factors. First, as discussed earlier, recent research studies in the communication discipline are reporting fewer sex differences than earlier research studies detected (Canary and Hause 1993; Dindia and Allen 1992; Wilkins and Andersen 1991). Hyde and Linn (1988) argue that this may be the result of changing sex roles in society. As more women and men have abandoned traditional female and male roles, they assert that actual sex differences in behavior have gradually diminished. The results of this study lend support to this general hypothesis, and the "no differences" approach to the study of sex differences, at least in terms of consumer complaint interactions.

Second, these findings may be a result of the type of service interactions that occurred. Service interactions vary in terms of their degree of personalization (Surprenant and Solomon 1987). That is, some service interactions are highly routinized while other interactions are highly personalized. The company in this study uses a service approach in which representatives are trained to follow a specific series of steps when communicating with each and every dissatisfied consumer. Thus, this more routinized process may "drown out" any potential sex differences in complaint communication. In contrast, in less routinized contexts it may be possible that sex differences in communication may be evident. Supporting this view, a recent study by Ayres (1991) showed that for automobile purchase negotiations (a considerably less routinized process than telephone service complaints), salespeople communicated significantly differently with female and male customers.

Implications of Findings

These findings have both theoretical and managerial implications. Theoretically, these findings lend support to those researchers in recent years who have called for the abandonment of the "dual cultures" approach to studying sex differences. Perhaps there are fewer differences in communication practices between men and women than previously thought. If so, we do a disservice to both women and men when we perpetuate the myth that large differences exist. By conducting research and theorizing within a "dual cultures" perspective, we consciously look for differences between the sexes that may not actually exist.

From a managerial perspective, one of the primary motivations for this study was to determine if consumer affairs managers in the corporate world should consider the sex of consumers as an important variable in the design of their complaint management systems. Based on the results in this study, it appears that the sex of dissatisfied consumers may have no discernible effect on the type of communication content used by either consumers or service representatives in complaint interactions, at least as measured by this content analysis system. Therefore, we can cautiously conclude that service representatives probably do not need to be trained to communicate differently with male and female consumers. Instead, what is more important is that all service representatives be trained to deliver competent and courteous service to all customers. Recent research in the marketing discipline regarding service quality stresses this very point (Bitner, Booms and Tetreault 1990; Garrett, Meyers and West 1996; Zeithaml, Parasuraman and Berry 1990).

Directions for Future Research

Based on the results of this study, we see three important directions for future research. First, as noted earlier in the limitations section, this study only investigated sex differences in complaint communication in one specific industry (telephone service) with one specific company, in which service representatives use a fairly routinized service interaction process. Therefore, before we can safely conclude that there are no sex

differences in complaint communication, similar interactions in highly dissimilar industries, using companies in which service representatives use more personalized interaction styles, must be analyzed.

In particular, it might be important to look at complaint communication in situations where men and women may have different levels of marketplace experience with products or services. Men's and women's experience with telephone repair (as investigated in this study) may be highly similar. But, even if traditional female and male roles are becoming less distinct, it is possible that men's and women's marketplace experiences with some products/services (e.g., automobiles or childcare) still may be more varied. This would mean that their complaints about these products/services may also be more differentiated along sex lines. If so, these industries may wish to consider training service representatives to address men's and women's complaints differently.

Secondly, there is a pressing need to examine the style of communication that is used by female and male consumers when they express their dissatisfaction to company service representatives. For example, do men and women express the same degree of emotion in their interactions with service representatives?

Finally, to more fully understand the complaint process from the consumer's point of view, it seems important to determine how participants in these communication interactions perceive the complaint process, and their satisfaction with that process. Because of management's concerns for consumer privacy, we were not able to contact this company's consumers to determine their perceptions of the complaint process. Future researchers might consider interviewing complaining consumers to determine if women and men have different reactions to the communication process in complaint interactions. For instance, are men and women equally satisfied with their experiences during these communication encounters with service representatives? Also, do women and men have similar preferences for service representatives' interaction styles (i.e., highly routinized vs. highly personalized)? Such issues of perception and satisfaction may be vitally important in the success of the complaint process as well.

CONCLUSION

In this study we analyzed potential sex differences in complaint communication from two competing theoretical approaches. As measured by our content analysis framework for this particular industry (telephone service), there was no significant difference between female and male consumers' communication during complaint interactions. Also, there was no significant difference in the communication used by service representatives in their interactions with female and male consumers. As such, these results add support to the "no differences" approach that suggests that traditional male and female roles are less distinct than the "dual cultures" approach has claimed.

However, as we suggested earlier, we believe our results clearly indicate that there are some important issues that should be studied before we can prudently dismiss sex differences as irrelevant to communication in complaint interactions. These issues include investigation of potential sex differences in complaint communication in other companies and industries, analysis of communication style, as well as an examination of female and male consumers' preferences for communication interaction styles. Hence, we view this investigation as a stepping stone to additional study in this area rather than as a concluding statement about the role that a consumer's sex may play in complaint interactions.

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FACTORS INFLUENCING CONSUMER SATISFACTION WITH A COMMUNITY SUPPORTED AGRICULTURE FARM (CSA)

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ABSTRACT

Community support agriculture (CSA) is a form of direct marketing of agricultural products that can be an important facet of a more sustainable, locally based food system. This study estimates consumer satisfaction using an ordinal probit model. Data were collected through phone interviews with members of three CSA farms in Vermont. Results indicate that experience with the CSA farm and reasons for joining impact satisfaction.

INTRODUCTION

There is a movement in this country and around the globe to reconnect people and their food supplies. For reasons such as food security, our impact on the environment, nutrition, and the psychological and emotional importance of food in our lives, activists are trying to circumvent the industrial food system by encouraging the development of more locally based "foodsheds" (combining the concept of a watershed and a food system). Buying locally produced food items and buying directly from the farmer are ways to facilitate the creation of foodsheds. This research investigates the factors that influence consumer satisfaction with a Community Supported Agriculture (CSA) farm. This information can help farmers, consumers, and policy makers evaluate how to retain consumers' membership to a farm.

Community Supported Agriculture (CSA) is a form of direct marketing of agricultural products which connects farmers and consumers. Some of the risk of farming is distributed back onto the consumer, and in return the consumer has a chance to become more involved in the process of growing his or her food, and may feel more connected to both the food system and the natural environment. Consumers generally pay an up-front fee which allows the farmer to purchase seed, fertilizer, and equipment, and gives him or her a guaranteed salary for the season. The consumer receives a share of weekly harvest and

may be asked to help with weeding or harvesting at some point in the season (Smith, 1994). CSA results in an economic relationship which includes values other than just cheap food and profit maximization. It affords farmers a security which is not often achievable without large-scale operations, and offers consumers greater contact with the producers of their food and with the process itself. As one tool to be used in an attempt to address the negative aspects of our current food system, CSA seems to have promise.

However, anecdotal evidence from CSA farmers indicates that a significant portion of members change from year to year, indicating that many consumers of CSA fail to develop a long term relationship with their member farm (Jones, 1996). Yet, the customer satisfaction literature clearly points out that it is more cost effective to keep customers than to continually search for new ones (Cohen, 1973; Reichheld & Sasser, 1990), and that satisfied customers are more likely to repurchase a product or service (Droge & Halstead, 1991; Kolodinsky, 1993). Thus, there is a need to examine the factors that affect consumer satisfaction with CSA farm memberships in order to help farmers increase satisfaction and "staying power" of members.

REVIEW OF LITERATURE

Most of the literature concerning Community Supported Agriculture is descriptive, anecdotal, or instructional in nature (see Demuth, 1993). Suput (1992), Laird (1995), and Kelvin (1994) conducted small sample analyses of CSAs to examine economic viability and benefits. Generally, all the findings indicate that positive benefits to consumers include high quality food, increased sense of "community," organic food, and variety. Pick-up schedules and convenience are problem areas for CSAs. Many consumers find that pick up times are limited and that an extra trip for part of a household's weekly groceries is time consuming.

Organic or low-input production methods are an important aspect of the CSA philosophy.

Therefore, research investigating consumer attitudes and behavior relating to organic food and direct marketing gives insight into consumer attitudes toward CSA membership. During the 1980's, consumption of organic produce increased dramatically due primarily to four factors: health concerns led to a desire for a low-fat, high-fibre diet; perceived health risks were associated with consumption of food additives; a perception of danger was associated with agrochemical residues; and there was an increasing awareness of the environmental damage associated with modern agricultural techniques (Stopes, 1989).

A marketing study done in New York State (AHF, 1992), and studies by Goldman and Clancy (1991), Cook (1992) and Oelhaf (1978) found that individuals who buy organic produce are more concerned with safety and environmental impact than with appearance. Their findings also indicate that organic food consumption may have a link with environmental concerns. Stuhmiller (1976) and Cook (1992) found that direct connections between consumers and farmers lead to increased satisfaction, and note that organic food is not often found in supermarkets, perhaps due to a lack of flow of information between seller and consumer. This may explain why initial interest in organic foods at supermarkets waned quickly, yet people continue to purchase organic food from health food stores. Pelch (1996) examined factors that influence the probability of joining a CSA farm. Higher prices of membership increased CSA membership probabilities, while family structure, including presence of younger children in the household, decreased membership probabilities. Finally, more highly educated individuals had a greater probability of becoming a member.

Despite the growing literature about what prompts individuals to join a CSA farm, there is little research that examines satisfaction of CSA members. Pelch (1996) conducted a bi-variate analysis that examined factors associated with consumer satisfaction and plans to rejoin a CSA farm the next season. General dissatisfaction, lack of variety of produce, lack of availability of farm products other than produce, and dissatisfaction with pickup of produce were all associated with consumer plans not to rejoin a CSA farm. Kolodinsky and Pelch (1997) investigated the possibility that CSA farm members obtain utility

from time spent in activities associated with membership. They concluded that while picking up produce resulted in providing some satisfaction for members, time spent putting produce away at home created dissatisfaction.

METHODOLOGY

Conceptual Model

We develop a simple model of CSA farm satisfaction based on the assumption that there are primary, secondary, and tertiary factors that affect consumer satisfaction. We hypothesize that consumer satisfaction with CSA membership is influenced by factors that are directly related to that membership, including cost of membership, time spent in activities related to the membership, reasons for joining the farm, experience with the farm, and perceptions of the adequacy and quality of produce received. Secondary factors that may affect satisfaction with a membership include the amount of space a consumer has to store produce received each week, where they do their usual shopping for groceries, and whether or not they purchase organic produce from outlets other than the CSA farm (e.g., in winter when the farm is closed). These factors are related to food purchase and consumption, but are not directly tied to the specific activities of a CSA. Tertiary factors include the socio-demographic profile of the consumer and his or her family, and household behavior related to socially responsible behavior (e.g., recycling behaviors). These factors may influence consumer choices, and should be controlled for, but they are not directly tied to a specific food purchase or consumption. Figure I depicts this model.

The dependent variable is consumer satisfaction with a CSA farm membership. Satisfaction is an ordinal construct, regardless of the scale of measurement used. Despite the fact that the measurement of satisfaction can be conceptualized using an interval scale, differences in people's perceptions of that scale makes measurement on an interval level non-operational. In order to use a multi-variate regression type of analysis, this limitation in the measurement of the dependent variable is an important consideration. Therefore, to operationalize the model outlined in

Figure 1
Conceptual Model Outlining Factors Affecting Satisfaction with CSA Membership

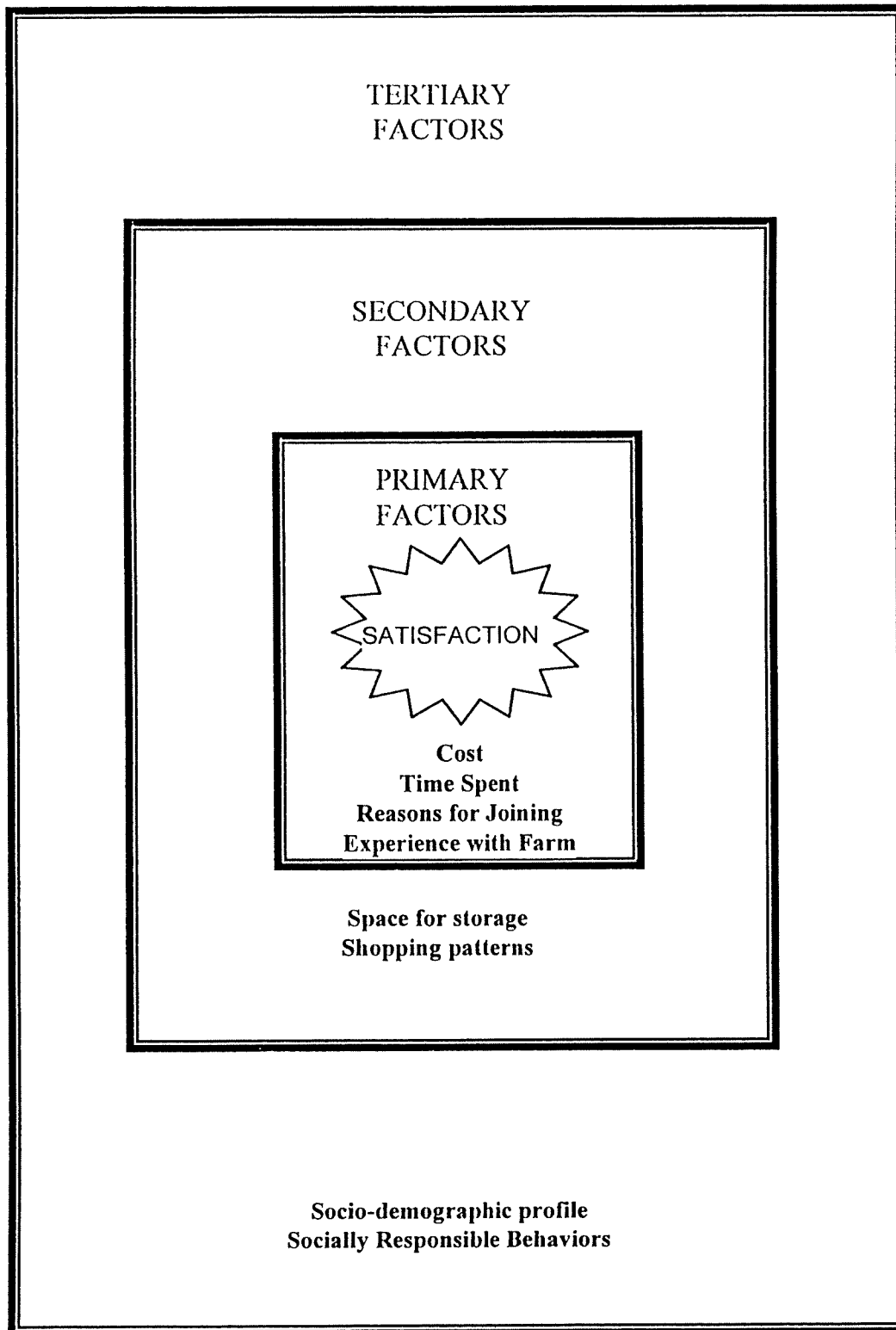


Figure 1, an ordered probit model is used (McKelvey & Zavoina, 1975; Winship & Mare, 1984). The dependent variable is a measure of overall satisfaction. Several items are hypothesized to impact overall satisfaction, including factors specifically related to the quantity and quality of produce received at the CSA.

Data Collection and Variable Creation

Survey questions were developed with the input of the farms involved, and reference to Frey's *Survey Research by Telephone* (1989). The surveys were pretested on the members of a CSA who did not participate in the study. Input from the pretesting process was used to revise the surveys. Data were collected via phone survey during October of 1995. Members and a random sample of non-members of three CSAs in Vermont were surveyed. Member phone numbers were obtained from the farms. Data were collected using the CI2 Computer Assisted Telephone Interviewing (CATI) system (Sawtooth Software). The population of members was 277; 184 usable responses gave a response rate of 66%. Non-member phone numbers from the regions surrounding each CSA. The number of usable responses was 238, for a response rate of 30%. The farms were chosen to represent different regions, rural/urbaness, and sizes of CSAs within the state.

Empirical Model

To operationalize the model proposed, we use ordinal probit. If the probability that the dependent variable increases slowly at low and high levels and increases more quickly at intermediate levels, the cumulative normal probability function is an appropriate representation of the underlying, unmeasurable scale for satisfaction. An ordered probit specification is preferable to the linear model because it takes into account the floor and ceiling effects of the dependent variable (Hanushek & Jackson, 1977). Because the cumulative normal transformation is non linear, we must obtain estimates for the parameters that influence satisfaction using maximum likelihood methods (Pindyck & Rubinfeld, 1991).

The technique of ordinal probit not only provides estimates of the impact of independent variables upon the dependent variable, it also provides additional parameters. The number of the additional parameters are one fewer than the number of responses coded for the ordinal dependent variable, satisfaction. They provide information as to the location on the *implied* interval scale measuring the dependent variable, but which is not made explicit when the dependent variable is measured using an ordinal scale, such as the Likert scale used to measure satisfaction in this research. The equation used to obtain an estimate of satisfaction with CSA farm membership is:

$$(2) \text{SATISFACTION} = B_0 + B_1\text{COST} + B_2\text{PICKUP} + B_3\text{PUTAWAY} + B_4\text{IMPROVE} + B_5\text{YRSMEM} + B_6\text{QTPROSAT} + B_7\text{QLPROSAT} + B_8\text{FRZSPACE} + B_9\text{CANSPLACE} + B_{10}\text{SUPERMKT} + B_{11}\text{ORGANIC} + B_{12}\text{EDUC} + B_{13}\text{LOWINC} + B_{14}\text{HIGHINC} + B_{15}\text{KID12} + B_{16}\text{RECYCLE} + \text{Error}$$

SATISFACTION is measured using a five point Likert scale with responses ranging from very dissatisfied to very satisfied. Note that in this study, no respondent reported being dissatisfied or very dissatisfied; only responses of neutral, satisfied and very satisfied were recorded. **COST** is a continuous variable measured by the per person cost of membership to a household as reported by respondents. Consistent with economic theory, it is hypothesized that the higher the cost of membership, the lower the satisfaction with membership. **PICKUP** and **PUTAWAY** are continuously measured variables measured as the number of minutes spent picking up a weekly share of produce at the farm and the number of minutes spent unpacking, cleaning, and putting the share away at home. **PICKUP** is hypothesized to have a positive effect on satisfaction, while **PUTAWAY** is hypothesized to have a negative effect. Pelch (1996) found that while members obtain utility or satisfaction from time spent at the farm, they obtain disutility from the work associated with putting the produce away at home. **IMPROVE** is a dummy variable that is coded as 1 if the respondent reported joining the CSA farm

for the reason of improving his/her nutrition. Its effect is hypothesized to be positive on satisfaction as the produce received from the farm is fresh and free of chemicals. **YRSMEM** is a continuously measured variable representing the number of years the respondent has been a member of the farm. If a respondent has developed a relationship with the farm over a period of years, their current satisfaction is hypothesized to be greater. **QTPROSAT** and **QLPROSAT** are dummy variables that equal 1 if the respondent agreed that the quantity of produce provided was satisfactory and the quality of produce provided was satisfactory. All of the above are considered to be the primary determinants of satisfaction with CSA farm membership. The following variables represent secondary factors that may affect satisfaction with CSA farm membership. **FRZSPACE** and **CANSPLACE** are dummy variables coded as a 1 if the respondent reported having enough storage space for the produce received from the farm. Typically, members received quantities of certain items, including summer squash and tomatoes, that require storage methods beyond refrigeration. Without adequate storage space, members are forced to throw out or give away excess produce. It is hypothesized that having adequate storage space will have a positive effect on satisfaction. **SUPERMKT** is a dummy variable coded as 1 if a respondent typically shops at a supermarket for produce rather than a neighborhood market or co-operative when the CSA farm is not in operation (7 months of the year). **ORGANIC** is a dummy variable coded as 1 if the respondent purchases organic produce in markets other than the CSA farm, either in- or out- of- season. The direction of effects on satisfaction is unknown for these variables. On the one hand, consumers who usually shop at supermarkets and purchase organic produce may find the CSA experience to be positive in comparison. However, the opposite may also be true if the quality of produce is equal and consumers consider travel costs to an additional venue. **KIDS12** is a continuously measured variable representing the number of children under the age of 12 in the household. The presence of children in a household increases household productivity. However, the effect of having children on CSA satisfaction may be negative,

since children compete for time spent in CSA related activities. **EDUC** is a continuously measured variable representing the years of education completed by the respondent. The effect of education on satisfaction cannot be predicted. **HIGHINC** and **LOWINC** are dummy variables that equal 1 if a respondent's income falls in the highest or lowest quartile of income for the state of Vermont. The sign on this variable will give an indication of whether CSA farm satisfaction is a "normal" or "inferior" good in economic terms. **RECYCLE** is a dummy variable that equals 1 if a respondent "recycles as much as they are able to" in his/her given locale. Summary statistics are presented in Table 1.

While the equation to estimate satisfaction with a CSA farm appears straightforward, there are two complications that must be accounted for. First, there is the issue of sample selection bias. Second, there is the issue that years of membership can be a function of satisfaction, and satisfaction can be a function of years of membership. To correct for the first problem, we use Heckman's (1979) sample selection bias correction procedure. While we have information on both members and non-members of a CSA for several of the independent variables, we have a measure of satisfaction only for members. In order to fully utilize the information available, we estimate the probability of belonging to a CSA farm using information on all respondents. Next we estimate satisfaction.

The second complication is one of simultaneous equation bias. To correct for this, we use a technique similar to two stage least squares. However, we use ordinal probit to estimate the satisfaction equation, and Ordinary Least Squares (OLS) to estimate years of membership. After correcting for sample selection bias, we estimate reduced forms of the equations for years of membership and satisfaction, ensuring identification of both equations and using estimates of satisfaction and years of membership from the reduced forms, we estimate the structural forms of both equations. The data were analyzed using Limdep (Greene, 1986).

ESTIMATION RESULTS

Table 1 provides parameter estimates for the

probability of joining a CSA and structural equations for years of membership and satisfaction. Five variables are significant in predicting the probability of joining a CSA, and the significant coefficient on Lambda indicates there is sample selection bias. Having more children under age 12 and buying organic produce in the "off" season both increase the probability of joining. Higher incomes, shopping at supermarkets in the "off" season and growing more of a household's food at home all decrease the probability of joining a CSA. While these results are only an intermediate step in the estimation of satisfaction, the primary goal of this research, they are interesting in their own right. There appears to be a niche market for CSA membership. Such a target includes families with children who already purchase organic produce in "unconventional" outlets (co-coops, farm stands) and do not garden.

In the structural equation that estimates years of membership, having children under age 12, joining a CSA to improve nutrition, and cost all increase years of membership. Shopping in supermarkets in the off-season and increases in the percentage of food grown at home decrease years of membership. Being satisfied with a CSA farm does increase years of membership. Thus, keeping members satisfied is essential in ensuring a long-term relationship with customers.

In the equation of particular interest, satisfaction with a CSA farm, several primary factors and one secondary factor are found to be significant in increasing satisfaction (See Figure 1). Increasing time spent picking up produce, longer membership experience, and choosing to join the CSA farm to improve nutrition, and perceptions that the quantity of produce received is satisfactory all increased respondent satisfaction with CSA farm membership. Cost was the only insignificant primary factor. Only shopping in a supermarket in the off-season was significant and negative in this study.

The estimated variable MU is significant and identifies the locations on the underlying interval scale of the ordinal measures strongly agree to strongly disagree with overall satisfaction with CSA farm membership. This variable is translated into three categories as follows:

<u>Estimated Scale Location</u>	<u>Satisfaction Level</u>
< 0	Neutral
0-1.69	Satisfied
> 1.69	Very Satisfied

CONCLUSIONS AND DISCUSSION

The results of this analysis indicate that CSA farmers may want to target their efforts and mold their operations in the following ways if they want to increase satisfaction of members. First, results indicate that developing a long term relationship pays off in terms of consumer satisfaction, and there is a simultaneous relationship between years of membership and satisfaction. This is news for individuals interested in sustainable agriculture, but old news for those who have studied consumer satisfaction with other products and services. Second, a focus on areas that are directly related to farm activities is important in keeping members satisfied. Although previous research has used a link between other socially responsible behaviors, including recycling and the support of the concept of community supported agriculture (AHF, 1992; Cook, 1992; Goldman & Clancy, 1991; Kelvin, 1994; Laird, 1995; Oelhaf, 1978; Suput, 1992), this study shows that satisfaction is only impacted by those factors that are central to the CSA farm experience, including time spent and nutritional quality. Thus, CSA farmers should keep their focus on offering high quality produce and communicating that message to current members. CSA farmers should also strive to get members involved. This study shows that the more time spent at pickup, the more satisfaction a consumer receives.

The findings that factors not central to the CSA farm experience have no influence on satisfaction are interesting. This is in direct contrast to research that has found that the decision to join a CSA depends on educational attainment and presence of children, with those with higher educations having an increased likelihood of joining and families with young children have a decreased likelihood (Kolodinsky & Pelch, 1997). This points to the need in future research to examine a double hurdle model in which the process of becoming a member and satisfaction are treated as one. Overall, the ordinal probit technique has promise in estimating satisfaction as

Table 1
Summary Statistics and Parameter Estimates of Satisfaction with CSA Farm Membership

VARIABLE	DEFINITION	SUMMARY STATISTICS	PARAMETER ESTIMATES		
			JOIN CSA	YEARS	SATISFIED
CONSTANT			-.10 (.28)	-5.8 (10.72)	-.62 (960.0)
COST	Cost of CSA membership on a per person basis	83.69 (40.12)		.08*** (.01)	-.00 (.00)
PICKUP	Minutes spent picking up weekly CSA share	51.6 (27.37)			.008** (.004)
PUTAWAY	Minutes spent putting away weekly CSA share	21.61 (22.8)			.001 (.005)
IMPROVE	1=joined CSA farm to improve nutrition	.79 (.62)		1.56*** (.23)	.67*** (.25)
QTPROSAT	1=agrees that the quantity of produce provided is adequate	.93 (.24)			1.20* (.72)
QLPROSAT	1=agrees that the quality of produce provided is adequate	.99 (.07)			-.35 (.96)
FRZSPACE	1=has adequate freezer space for storage	.55 (.50)	-.04 (.13)	.17 (.18)	-.17 (.21)
CANSPLACE	1=has adequate space to store canned goods	.73 (.44)	-.17 (.15)	.21 (.21)	-.16 (.25)
ORGANIC	1=purchases organic produce from outlets other than CSA farm	.82 (.38)	.54*** (.15)	.22 (.24)	.22 (.26)
SUPERMKT	1=shops at supermarket in off-CSA season	.57 (.49)	-.72*** (.15)	-.26* (.19)	-.58** (.23)
GROWOWN	Percentage of food grown at home.	12.29 (31.4)	-.025*** (.004)	-.02*** (.006)	
KIDS12	Number of children under age 12 in household	.65 (.88)	.24*** (.07)	.18* (.10)	.05 (.14)
EDUC	Years of education of respondent	16 (2.24)	.000 (.001)	.002 (.002)	-.009 (.03)
LOWINC	1=in bottom 25% income for state.	.09 (.12)	-.09 (.23)		-.10 (.32)
HIGHINC	1=in top 25% income for state.	.24 (.30)	-.29* (.16)		-.04 (.29)
RECYCLE	1= recycles "most of what the household can"	.68 (.46)	.20 (.13)	.14 (.19)	.24 (.20)
MU					1.69*** (.59)
YRSMEM	Years belonged to CSA farm	2.09 (1.31)			.29*** (.11)
SATISFIED	Level of satisfaction with CSA farm (range 0-2)	1.63 (.48)		.31*** (.02)	
Lambda	Correction for sample selection bias		1.39*** (.07)		
N		422	422	184	184

***Sig. at > .01 level ** Sig. at > .05 level * Sig. at > .10 level; Standard errors in ()

impacted by various independent variables since it uses the full spectrum of information available on satisfaction when measured using an ordinal scale.

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CUSTOMER CARE, CUSTOMER SATISFACTION, VALUE, LOYALTY AND COMPLAINING BEHAVIOR: VALIDATION IN A UK UNIVERSITY SETTING

Dave Webb, University of Western Australia
Abiodun Jagun, University of Wales

ABSTRACT

This paper examines the importance of customer care in a UK university setting. It is argued following the analysis of an exploratory survey instrument that customer care consists of two main components, 1. a level of perceived care commitment, and 2. the behaviors manifested by this commitment. On the assumption that staff and student loyalty is linked to the financial strength of the university, the relationship between a number of conceptually linked variables, for example, customer care, customer satisfaction, perceived value, loyalty and complaining behavior is also examined. Correlation analysis of the presented conceptual model reveals significant positive associations between customer care and the above variables. Perhaps the most revealing finding following structural analysis, pertains to the evidence of a strong and significant positive path coefficient between care commitment and complaining behavior. This finding is important in that it suggests a need for education institutions to view with greater importance both staff and students (potential complainers) in a broader strategic success framework. A complete review of the conceptual model, findings, implications for education managers and future research suggestions are presented.

INTRODUCTION

In many industry sectors constant change has led to increased competition. The education environment is no different, with institutions competing more fiercely for both funding and students. Not only has the number of university institutions increased, but likewise, so too has the portfolio of education products on offer. This has led to greater choice for the consumer and as a result, universities are finding it increasingly more difficult to differentiate themselves on the basis of reputation or the education product alone. One recognized differentiation strategy, the delivery of

enhanced service quality, is treated in many sectors as a prerequisite for success such that 'excellence in delivery' now appears on the agendas of many organizations.

To an extent, the potential benefits which can be derived by following customer-oriented service quality strategies are also recognized by education managers (Olshavsky and Spreng, 1995), though institutionalization has perhaps been hampered by a reluctance to view staff and students as 'consumers'. Indeed, Olshavsky and Spreng (1995) warn of the dangers in recognizing students as co-developers on the basis that "...they cannot specify what it is that they want from the education product in a detailed manner". Taylor (1996) while agreeing that "...faculty should retain the lion's share of input in curriculum development", i.e., against the core components (e.g., rigor, relevance, substance), notes that these aspects currently comprise only one dimension which is evaluated by students when assessing service quality. Other components such as faculty responsiveness, empathy, availability, respect etc., together with supplementary services, e.g., housing, financial, food, health, career advice etc. all likewise contribute toward an overall evaluation of the institution in question.

Hence it is argued that, where these components reflect issues of concern and importance for both students and staff alike, no compelling reason exists to suggest that they should be treated differently from consumers of other service organizations. This is particularly true where negative performance against these criteria impacts on the revenue stream of the institution.

Not that service quality alone is a guarantor of success; it is also evident from the consumer psychology literature that consumers seek to fulfill many needs beyond those relating to service quality deliverables. It is to the fulfillment of these diverse needs that universities, and indeed many organizations are directing their attentions. Consequently, to optimize the value delivered to

consumers, an increasing number of organizations are initiating customer care principles and monitoring their performance against a number of defined standards (IRS Employment Trends, 597 (1995). In this way, superior added value is seen as the key towards satisfying the psychological needs of consumers, which in turn it is hoped, will ensure their enhanced loyalty, and thus a healthy long-term revenue stream for the organization concerned.

With respect to the identification of loyalty antecedents, the conceptual positioning of the variables explored in this study is in-line with the extant literature in the area. For example, in their examination of the behavioral consequences of service quality, Zeithaml *et al.* (1996) reveal the existence of a strong relationship between service quality and loyalty across a number of different contexts. Furthermore, two developments are evident concerning the relationship between customer satisfaction and behavioral intentions (which includes a measure of loyalty). First, it has been suggested that customer satisfaction be positioned superordinate to service quality (Woodside *et al.* 1989; Cronin and Taylor, 1992), and second; both customer satisfaction and service quality are considered independent moderators in a broader behavioral intentions framework (Taylor and Baker, 1994).

Findings from the above studies would tend to suggest that the correct causal ordering of customer satisfaction with respect to loyalty would be to position customer satisfaction as an antecedent variable. The relationship however is not believed to be one of sole-dependency, rather, and in-line with Taylor and Baker's (1994) suggestion concerning the moderating effect of these variables, customer satisfaction is conceptually believed to represent one of a number of moderator variables in a broader loyalty antecedent framework. A more substantial investigation of the identity of and relationship between these variables is arguably beyond the parameters of this study.

An extensive review of the literature reveals that confusion reigns as to how 'customer care' and 'customer service' can best be differentiated. While many studies ignore issues of differentiation, Howcroft (1992) and Gibbs (1993) suggest that differentiation can be made by

viewing customer service as a 'process' and customer care as 'an expression of a firm's motives or value systems'. This view supports the position taken by Lewis and Smith (1989) who note that "care is more than service", it is "all encompassing" and "a way of approaching business". Thus while an accepted more formal definition could not be located in the literature, this bifurcated perspective is intuitively appealing and could provide a framework which managers can use to ensure fullness in measurement.

In addition to addressing offensive marketing acquisition activities, organizations are also emphasizing a need to minimize internal and external customer defections (Reichheld, 1996). To develop a fuller appreciation for the rationale behind customer defection, a number of authors have sought to understand switching activity through an understanding of 'complaining behavior'. Indeed, this issue has received much attention in the recent marketing press (Parasuraman *et al.* 1994, Zeithaml *et al.* 1996; Lee & Leelakulthanit 1994; Pinney *et al.* 1995; Walsh 1996).

On the basis of the above presented arguments, a study to explore the importance of customer care, customer satisfaction, value, loyalty and complaining behavior in a university setting was conducted. Essentially the objectives of the study were threefold:

1. To identify through qualitative interviews the dimensions of customer care as perceived by staff and students in a UK higher education institution.
2. To explore, following the design and implementation of a survey questionnaire, the psychometric properties of the 'customer care' construct.
3. To examine the relationships of customer care, customer satisfaction, and perceived value with loyalty and complaining behavior.

RESEARCH DESIGN

To identify the dimensions of customer care, qualitative interviews with both staff and students of a higher education institution in the UK were

conducted. Commentary arising from the interviews led to the construction of a questionnaire, which formed the basis for further exploration of the key issues outlined above.

Exploratory and Confirmatory Factor Analysis were applied to explore the factor structure of the customer care construct. A structural equation model was then designed to explore the nature of the relationship between both academic staff and student perceptions of customer care and loyalty. In line with the above objectives a number of hypotheses provide the analytical framework for the quantitative stages of the study.

Hypotheses

H₁: The greater the level of perceived customer care, the greater the level of customer satisfaction

H₂: The greater the level of perceived customer care, the greater the level of perceived value

H₃: The greater the level of customer satisfaction, the greater the level of customer loyalty

H₄: The greater the level of customer satisfaction, the lower the level of internal complaining behavior

H₅: The greater the level of customer satisfaction, the lower the level of external complaining behavior

Unit of Analysis

This study consisting of three phases was conducted by the authors at a single higher education institution during the summer months of 1996. Phase one sought through face to face interviews to identify the dimensions of customer care. Twenty-five interviews with an approximate equal mix of both staff and student members revealed following content analysis the identification of 11 separate dimensions that were believed to conceptually relate to customer care (Appendix 1). Phase two included the development and evaluation of an exploratory

survey instrument. On the basis of the identified dimensions a series of 16 statements representing customer care, together with a number of other statements pertaining to customer satisfaction, perceived value, complaining behavior and customer loyalty were introduced into the instrument (Appendix 2). Complaining behavior comprised of two variables; the first assessed the respondent's willingness to complain externally - that is to other 'customers' - and the second - the respondent's willingness to complain internally - to a figure in authority within the institution (Zeithaml *et al.* 1996). Perceived value was treated as a two-dimensional composite measure, comprising an assessment of the benefits received versus sacrifices made together with a rating at the stipulated overall level. Customer satisfaction was likewise assessed at the overall level using a simple unidimensional measure. Loyalty was treated as an aggregate construct and included aspects of the respondents willingness to say positive things about the institution, and also, their willingness to return to the institution (Zeithaml *et al.* 1996) for their further educational needs. Finally the questionnaire included a number of demographic items, thus allowing for the exploration of differences between categories across each of the variables.

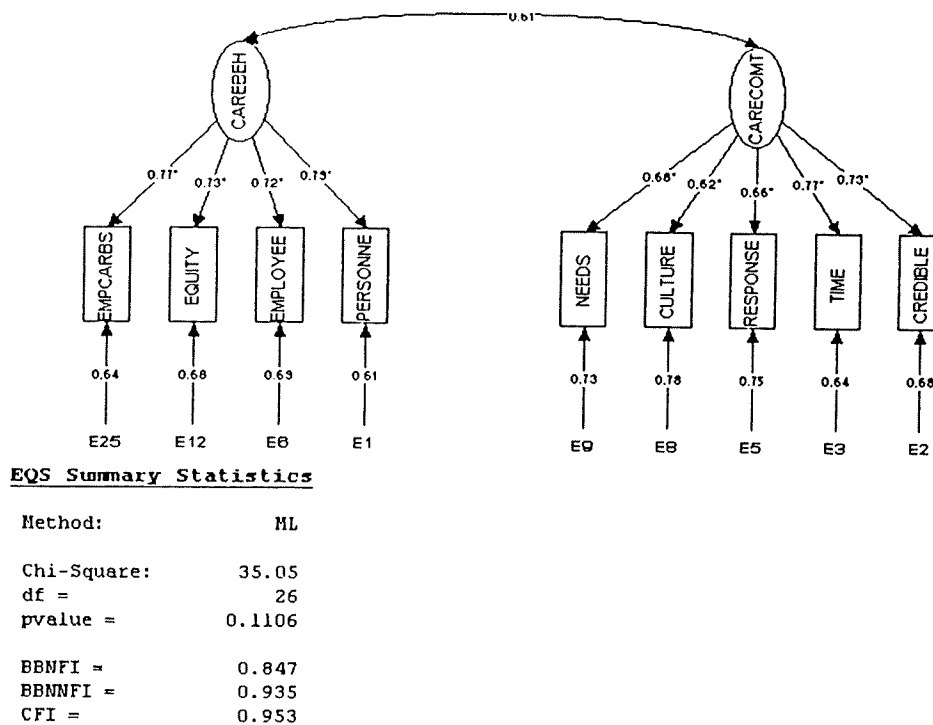
With the exception of the demographic items, all items were measured using a five-point Likert type scale with no mid-point descriptors.

To allow for the psychometric testing of the instrument, the questionnaire was dispatched through the internal mail system to a random sample of $n = 180$ individuals. Following a period of approximately three weeks, 60 useable questionnaires had been returned (response rate 33%). The mix of respondents was also fairly equal and comprised of 32 students and 28 members of staff. Phase two continued with an evaluation of the instrument for its psychometric soundness.

Psychometric Testing

Following the satisfactory evaluation of the questionnaire for normality of distribution, the analysis commenced with the testing of the customer care section for its unidimensionality and internal consistency.

Figure 1



Exploratory principle components analysis using oblique rotation and a suppression limit set at 0.30 revealed four factors above the eigenvalue = 1 cut-off level. These factors accounted in total for 67.6% of the explained variance. The distribution of items across the four factors was as expected unequal, with the first factor accounting for seven of the fifteen items (42.6% of the variance). The remaining items were structured - factor 2, four items (9.3% of the variance), factor 3, three items (8.7% of the variance) and factor 4, two items (7% of the variance).

Prior to an assessment of the reliability of the above resulting factors, confirmatory factor analysis using the EQS structural equation package was conducted. Chi-square statistics together with the Conformance Fit Index (CFI) were used to validate the null hypothesis that the tested model reproduced the population covariance matrix of the included observed variables. By convention, an acceptable model is one where the p-value is greater than or equal to 0.05 (Bagozzi and Foxall 1996), and the CFI value above 0.90 (Bentler 1990). Specifically, CFI is selected for this study

on the grounds that it is one of the few indexes which are relatively unaffected by sample size and indeed, Monte-Carlo studies have revealed the CFI to provide unbiased estimates of low variability with samples of between 50 and 1600 (Bentler 1990).

An assessment of the initial four-factor structure revealed considerable model misspecification ($\chi^2 = 125.085$, p-value = 0.001, CFI = 0.81). Refinement using the Lagrangian multiplier and the Wald Test criterion revealed a significantly better model fit to the data with a two factor first-order structure consisting of 9 items ($\chi^2 = 35.05$, df = 26, p-value = 0.1106, CFI = 0.953) (Figure 1). The items which represent the dimensionality of these two factors are labeled as CARECOMT (Organization Commitment to Care = 5 items) and CAREBEH (Care Behavior = 4 items).

Validity

Convergent and Discriminant validity testing of the resulting first-order two-factor model

(Figure 1) was conducted by first calculating the average variance extracted (AVE) for each factor (Table 1). Convergent validity is established if the shared variance accounts for 0.50 or more of the total variance (Fornell & Larcker 1981). Table 1 reveals that the first factor *care commitment* does not quite reach the 0.50 level, though 0.492 is considered close enough to be acceptable given the exploratory nature of this study. Factor 2 *care behavior* satisfies the necessary level with factor loadings for this construct all > 0.70 (AVE = 0.595).

Discriminant validity was also assessed by means of the AVE calculated values. Fornell & Larcker (1981) suggest that the AVE for each factor should be greater than the squared correlation between that factor and any other factor.

Examining the correlation coefficient (0.61) provided by the EQS confirmatory factor analysis output (Figure 1), reveals that this test for discriminance holds, since the squared correlation between the two factors is 0.348.

Reliability

Internal consistency of the instrument was assessed by virtue of the associated Cronbach Alpha coefficient values provided by the EQS software package output. Both the customer care factors together with loyalty revealed alpha coefficients comfortably above the 0.70 value suggested for scale robustness (Nunnally 1967) (Table 1). *Perceived value* reveals an alpha coefficient below the 0.70 level but above the 0.50 level suggested as acceptable for exploratory studies (Nunnally 1967). The low magnitude of the coefficient could be indicative of the low number of items comprising this dimension.

Given the exploratory nature of this study, the resulting instrument was accepted as a psychometrically sound representation of customer care.

RESULTS

Phase three commenced with an initial exploration of the resulting data for differences in perception between staff and student respondents

with respect to customer care, customer satisfaction, perceived value, loyalty and complaining behavior. T-test statistics revealed no significant differences for any of the items included in the measurement instrument.

Table 1
Unidimensionality and Internal Consistency

FACTOR	CRONBACH ALPHA	AVERAGE VARIANCE EXTRACTED (CORR) ²
CARECOMT	0.84	0.492
CAREBEH	0.84	0.595
LOYALTY	0.75	
PERCEIVED VALUE	0.61	

0.358

CARECOMT = Care commitment
CAREBEH = Care behavior

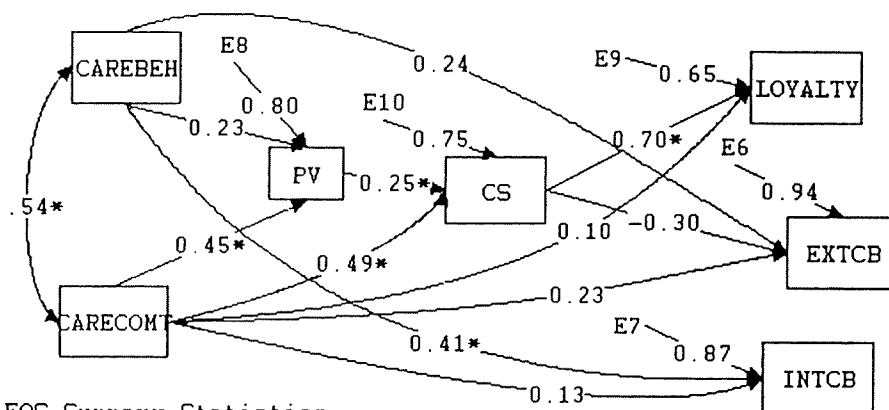
H₁ and H₂ hypothesize the presence of a positive association between customer care, customer satisfaction and perceived value. Following confirmatory factor analysis, customer care is now represented at this stage by a two-factor structure comprising 'care commitment' and 'care behavior'; hence H₁ and H₂ now each consist of two elements. The first explores the relationship between *care commitment* and *customer satisfaction* (hereinafter H_{1a}), and the second explores the relationship between *care behavior* and *customer satisfaction* (hereinafter H_{1b}). Similarly, H_{2a} now explores the relationship between *care commitment* and *perceived value*, and H_{2b} the relationship between *care behavior* and *perceived value*. H₃ to H₅ explore the relationships between *customer satisfaction* and *loyalty*, *internal complaining behavior* and *external complaining behavior* respectively.

Both the magnitude of the resulting Pearson correlation coefficients (Table 2), and a simple path analysis using the EQS structural equation software (Figure 2) provides support for all seven hypotheses. Furthermore, Figure 2 reveals a very good fit of the model to the data ($\chi^2 = 14.08$, df. = 9, p-value = 0.1195, CFI 0.965).

Table 2
Correlation Matrix

	EXTCB	INTCB	PV	LOYALTY	CS	CARECOMT
EXTCB	1.000					
INTCB	0.166	1.000				
PV	0.112	0.381	1.000			
LOYALTY	-0.285	0.227	0.393	1.000		
CS	-0.060	0.232	0.523	0.757	1.000	
CARECOMT	0.172	0.354	0.570	0.534	0.627	1.000
CAREBEH	0.246	0.484	0.471	0.262	0.386	0.539

Figure 2



EQS Summary Statistics

Method:	ML
Chi-Square:	14.08
df =	9
pvalue =	0.1195
BBNFI =	0.916
BBNNFI =	0.919
CFI =	0.965

*Denotes significant path coefficients

DISCUSSION

To provide a structure to this section, the managerial and academic relevance of the relationship between the following will be discussed:

1. care commitment and both customer

satisfaction and perceived value - $H_{1a} + 1b$, and $H_{2a} + 2b$,

2. customer satisfaction and loyalty (H_3).
3. customer care (care behavior and care commitment) and complaining behavior (internal and external) - H_4 - and H_5

Following the preliminary interview phase, it was initially suggested that customer care comprised of 11 dimensions. Extensive factor analysis however revealed these dimensions falling more comfortably into two broader dimensions. This does not come as a surprise; in fact, an explicit objective of the factor analysis was to identify similar item clusters to facilitate the interpretation of complex qualitative interview commentary. Before points 1-3 above are discussed, it is necessary to differentiate between the 'care behavior' and 'care commitment' constructs. *Care commitment* can be interpreted at the organizational level to represent elements of a care culture expressed in the form of values, such as truthfulness, honesty, and, support to practice customer care. *Care behavior* on the other hand represents the manifestation of such values expressed in the form of behaviors directed toward customers, i.e., polite, considerate, friendly, sympathetic, reassuring, approachable etc. It will be noted that separating customer care in such a way complies with the 'service as process' and 'care as an expression of motives and value systems' view discussed earlier. This provides not only further confirmation of the perspective taken by Lewis and Smith (1989) that "care is more than service", but, would also suggest that a possible integration of customer service into a broader customer care construct consisting of the two dimensions is plausible.

H_{1a + 1b}, and H_{2a + 2b} - Care Commitment with Customer Satisfaction and Perceived Value

It is interesting to note that the strongest path coefficients between customer care, perceived value and customer satisfaction are those with care commitment and not care behavior (care commitment and perceived value = 0.45, care commitment and customer satisfaction = 0.49).

This result is of particular relevance to service quality researchers given that the care behavior components relate to those most usually located within service quality measurement instruments, e.g., SERVQUAL (Parasuraman *et al.* 1988). If indeed, the care commitment construct is treated as synonymous with "expressions of motives and value systems", this would tend to suggest for management that customer satisfaction and

perceived value are heightened by issues which go beyond mere delivery to encompass a broader 'commitment to customer' culture. Thus in addition to enhancing critical aspects of service delivery, it is argued that the entire structure and culture of the organization must be concomitant with this notion.

While the structure of the relationship between customer satisfaction and service quality has yet to be completely resolved (Bolton & Drew 1994), the nature of the relationship between customer care (behavior and commitment), perceived value, service quality and customer satisfaction may thus be more appropriately conceptualized with care behavior (representing elements of service delivery) constituting an expression of care commitment. This may provide a basis from which the service quality, customer satisfaction relationship can be further investigated.

H₃ - Customer Satisfaction and Loyalty

H₃ hypothesizes that as satisfaction increases in a positive direction, then so too does loyalty. The significant strong path coefficient (0.70) evidenced between these two constructs provides testimony to the strength of their relationship. Thus on the basis of the disclosed relationship between customer care and customer satisfaction, for the university to increase the stated loyalty of its customer base, *staff* and *students* alike, it would need to ensure that performance with respect to the care commitment construct items is of the desired order. This is particularly important where loyalty is associated with revenue gain either directly, e.g., a student returns to study for a postgraduate course, or indirectly e.g., a student convinces a friend to study at the university. Indeed, revenue gain can also be achieved through increased staff loyalty expressed in the form of lower turnover levels, enhanced productivity, and job referrals etc. All of these could be said to impact positively on the bottom-line of the institution through the realization of greater operating efficiencies.

It should be recognized that loyalty as measured in this study comprises a measure that includes the summed average measure of three items. Each of these items is significantly differentiated in meaning, though conceptually it is suggested that they constitute dimensions of

loyalty. In developing programs to improve customer loyalty, managers may also want to know how satisfaction and perceived value are related to the individual dimensions of loyalty. Table 3 represents a correlation matrix of the said items.

Table 3

	WORD	RETURN	RECOM	PV	CS
WORD	1.000				
RETURN	0.300	1.000			
RECOM	0.698	0.515	1.000		
PV	0.383	0.293	0.439	1.000	
CS	0.704	0.352	0.712	0.523	1.000

All coefficients significant at the $p = <0.001$ level.

It can be seen that customer satisfaction is most strongly associated with verbal expressions of intent, i.e., 'recommend to others' (RECOM = 0.71) and, 'say positive things' (WORD = 0.70).

At the individual item level, management are thus provided with an indication of how loyalty through expressed actions can lead to increased revenue, i.e., A tells B what a wonderful institution X is. As a result of what B is told, he/she decides to enroll on a degree course such as the MBA program, which in the case of an overseas student provides an increase in revenue for the institution to the tune of several thousands of pounds/dollars.

H₄ and H₅ - Customer Care (Care Behavior and Care Commitment) and Complaining Behavior (Internal and External)

At the surface level concern might be expected to result from the evident significant positive correlation coefficients witnessed between all four variables (Table 2), and the significant and also positive path coefficient between care behavior and internal complaining behavior (0.41) (Table 3). Thus as perceptions of customer care increase, so too does the likelihood of internal complaining behavior. It would be natural for most organizations to desire to reduce customer-complaining behavior by intuitively demonstrating higher levels of care activity. The positive relationship depicted in this study indicates the reverse to be true. This could be interpreted to suggest that providing lower levels of care will

result in lower levels of complaining behavior activity. While this may be the case, it should of course be recognized that total defection from the institution is possible without the actioning of any form of complaining behavior. Hence a more elaborate interpretation of the results is necessary. As the level of perceived care increases, it would be logical to suggest that customers are more willing to complain on the assumption that an organization that 'really cares' will respond more positively and favorably to the matter causing concern.

Two issues are immediately evident, first, if commitment to care is a necessary precursor to customer satisfaction, and customer satisfaction a necessary precursor to increased loyalty, then organizations that wish to increase the loyalty of their customer base must in addition to doing the things necessary to be perceived as a caring organization, be in a position to respond favorably to complaint issues. This would include among others, empowering employees to take corrective action without the need to battle through cumbersome decision-making hierarchies. Next, in addition to empowering employees and providing them with the necessary skills to interact with complainants, the appropriate support structures (to minimize the number of decision-making levels) and systems (to address such things as training and the allocation of resources) also need to be in place.

External complaining behavior, which would include students complaining to other students, and staff complaining to other staff members, can be likened to the formation of a 'club of sympathizers'. In many cases external-complaining behavior may precede internal complaining behavior. Here though it would be necessary to differentiate between complaining behavior within the 'club', and a more serious level, which may include going beyond the 'club' to encompass new students, prospective employees and other official bodies which may have a vested interest in the performance of the university (i.e., Academic Quality Audit Boards). Complaints at this level could substantially affect the financial strength of the institution in a negative manner.

CONCLUSIONS

This study has made a timely contribution to the literature by offering empirical evidence concerning 1) the structure of the customer care construct, and 2) insight into the relationships evidenced between customer care and customer satisfaction, perceived value, loyalty and complaining behavior as they apply in the context of a UK university setting. Furthermore, implications for practicing education managers have been presented. Though many education institutions find it difficult to consider staff and students as more than 'small fish in a wider ocean', logic would suggest that a more strategic view needs to be taken given the increasingly more competitive nature of the education arena where effectiveness, efficiency and the development of loyalty are seen as the key to organization success. This strategic view would include among others, first, recognizing the limitations of restrictive traditional education institution cultures with respect to care commitment and exhibited behavior toward staff and students. And second, proactively setting up the appropriate structures and institutionalizing the necessary systems to ensure flexibility and autonomy in decision-making and greater responsiveness with respect to service delivery and complaint handling. In essence, these points are tantamount to the development of an all-encompassing customer care "support" culture which embraces the overriding philosophy and key-values of the organization.

LIMITATIONS AND FURTHER RESEARCH

This study is limited in a number of ways. First, time and resource limitations prohibited the development of a more extensive measurement instrument. Second, only one organization in a single sector was examined. Third, sample sizes were uncomfortably low. And fourth, a more elaborate conceptual model to explore more conclusively some of the suggestions made in this paper with respect to the relationship between customer service and customer care would have been desirable.

Addressing these points in turn: first, a more extensive instrument development phase was not possible due to the limitations of time and resource

access placed upon the second author, who at the time of the study was working towards a Masters degree in Business. This study, which was conducted over 8 weeks, represented one compulsory element of this course. In-line with the suggested formula for questionnaire development, and more specifically item generation, (Churchill 1974), future research would perhaps benefit up-front from the development of a more extensive list of items to tap more thoroughly the initial eleven dimensions of customer care indicated in Appendix 1. A comparison following factor analysis of the resulting items with the two dimensions of 'care commitment' and 'care behavior' would prove insightful.

Second, this study sought to investigate customer care in a single university setting. An extension of this study to include additional tertiary institutions and likewise, other consumer settings would further contribute towards the development of our understanding of customer care related issues.

Third, the confidence with which findings can be generalized suffers when the employed sample size is low. Future studies would therefore benefit from the use of larger samples. If structural modeling represents the chosen analysis approach, a recommended minimum sample would be in the order of 200 which is proposed as being representative of "the critical sample size" (Hoelter 1983).

And fourth, this paper has suggested that the construct 'customer care' be separated into two dimensions representing at one level, 'customer commitment' (elements of a care culture expressed in the form of values), and at a second level, 'care behavior' (the manifestation of such values expressed in the form of behaviors directed towards customers). Separating customer care in such a way suggests at the care behavior level the integration of customer service (viewed as a process) with customer care (an expression of motives and value systems). Further research to explore the overlapping nature of the customer service and customer care relationship would likewise provide a timely contribution to knowledge, particularly given the attention being paid by organizations to service quality improvement and culture change (Webster, 1992).

As defined, 'care commitment' represents the elements of a customer-oriented culture, and 'care behavior,' the visible expression of such a culture (i.e., the provision of service), as defined by a firm's customers.

Finally, the explicit nature of the relationship between loyalty and complaining behavior was not examined in this paper. A more comprehensive project to include an examination of this issue is currently being undertaken by the first author. Again, further discussion here goes beyond the parameters of the study as defined by the study's objectives.

Future research would benefit from a consideration of these points. It is hoped that this study generates the necessary interest for such research to take place.

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Appendix 1

Key word/phrase	Examples discussed	Emphasized by..
Needs fulfillment	"care is when the organization knows and meets my needs"	All groups
Product/Service features	"appropriate...practical...convenient products/service"	All groups
Flexibility	product/service differentiation; availability of service, product and support facilities	All groups
The people factor	"people in the organization should be courteous, friendly, kind, sympathetic and attentive"	All groups
Security	"care involves safety and security of self and possessions"	Student group
Service delivery	factors mentioned included; timeliness, consistency, professionalism and continuity	All groups
Information	"the availability of information to make decisions"	Staff group
Accountability	"delegation of responsibility, timely and visible response to complaints"	All groups
C o m p l a i n t s procedure	"having the opportunity to respond to service received and being encouraged to do so."	All groups
Training	organizations were expected to provide adequately manned and trained points of contact	All groups
Relationships	"organizations are expected to operate in a manner which is consistent with trust and confidence... these are important factors in the building of relationships"	All groups

Appendix 2 Questionnaire

Factor 1: Commitment to Customer Care (CARECOMT)

- | | | | | |
|-----|--|---------------------------|----------------------|-------------------|
| C2. | xyz is truthful and honest in its dealings with me. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
Agree |
| C3. | When xyz promises to do something by a certain time, it does so. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C5. | xyz responds to complaints visibly. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C8. | Employees of xyz get adequate support to practice customer care. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C9. | My needs are consistently met by xyz. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |

Factor 2: Care Behavior (CAREBEH) :

- | | | | | |
|------|---|---------------------------|----------------------------|----------------------|
| C1. | Personnel at xyz are polite, considerate and friendly. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C6. | Employees of xyz are sympathetic and reassuring. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C12. | xyz employees treat me fairly regardless of who I am. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C25. | In general, how would you best describe employees of xyz? | 1 ... 2 ... 3 ... 4 ... 5 | not at all
approachable | very
approachable |

Perceived Value (PV)

- | | | | | |
|------|---|---------------------------|----------------------|-------------------|
| C7. | The benefits I receive from xyz are in line with the sacrifices I have to make (e.g. Money, time, labor). | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
| C11. | My association with the xyz has been of value to me. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |

Loyalty (LOYALTY)

- | | | | | |
|------|--|---------------------------|----------------------|-------------------|
| C19. | I would say positive things about xyz to other people. | 1 ... 2 ... 3 ... 4 ... 5 | Strongly
disagree | Strongly
agree |
|------|--|---------------------------|----------------------|-------------------|

Appendix 2 (cont.)

- C20. I would be prepared to return to xyz for my continuing educational needs. 1 2 3 4 5
Strongly disagree Strongly agree
- C23. I would recommend xyz to someone who seeks my advice. 1 2 3 4 5
Strongly disagree Strongly agree

Complain Externally to Other Customers: (EXTCB)

- C21. I would complain to other 'customers' if I experience a problem with xyz. 1 2 3 4 5
Strongly disagree Strongly agree

Complain Internally to Figure in Authority: (INTCB)

- C22. I would complain to some authoritative figure within xyz if and when I experience a problem. 1 2 3 4 5
Strongly disagree Strongly agree

Customer Satisfaction (CS)

- C24. Considering xyz overall, my level of satisfaction can best be described as... 1 2 3 4 5
Extremely dissatisfied Extremely satisfied

Demographics

Please tick the appropriate box:

- Status: Student lecturer/ management lecturer/ non-management Support staff
- Ethnicity: White Caucasian Black
Arabic Asian
Indian Pakistani
Bangladeshi Other (please describe) _____
- Gender: Male Female

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AN EMPIRICAL INVESTIGATION OF SCOPE AND FORMAT

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ABSTRACT

The scope and technical quality of 312 customer comment cards from a variety of service and retail industries were analyzed. The findings revealed numerous differences in card design and usage, and identified common deficiencies in the preparation and utilization of this popular research tool. Suggestions for improvements are offered.

INTRODUCTION

Customer satisfaction is central to the marketing concept and imperative to the long-term survival of any retail or service organization. An understanding of customer needs, preferences, expectations, and perceptions of service quality is the first step toward achieving customer satisfaction. While such an understanding may be aided by serendipitous informal contact with customers or with the occasional highly involved complainer or happy consumer, formal and systematic efforts to collect and analyze consumer satisfaction information will provide far better understanding of consumer reactions.

One vehicle for obtaining customer data, including evaluative feedback regarding the service experience, is the customer comment card -- utilized by more than 90 percent of U.S. hotel operations (Lewis, 1983), and rapidly gaining popularity with many other service and retail industries. To lay a foundation for the investigation of customer comment cards as a viable market research tool, this study will examine the scope and format of a sample of cards representing businesses from several service and retail industries.

BACKGROUND

(Dis)Satisfaction in the Service Sector

Services marketers and the growing number of scholars who have studied their efforts have recognized the marketing challenges posed by the special characteristics of most services (See Zeithaml, Parasuraman, and Berry, 1985). Each of

these characteristics, including service intangibility, service perishability, the inseparability of production and consumption, and the heterogeneity of service outcomes, potentially affects customer satisfaction, perceptions of service quality, and continued patronage. Given that the value added to tangible goods by retailers is largely service, these characteristics are generally relevant to retail stores as well.

These characteristics are particularly troublesome in the evaluation of consumer satisfaction, both by consumers and by the marketer. For example, prior to the sale the inseparability of service production and consumption prevents consumers from inspecting previously produced services and formulating realistic expectations of the service prior to consumption. If marketer controlled promotion and poor consumer recall of previous experiences have built unrealistic expectations, the consumer is likely to perceive a disparity between his/her expectations and perceptions of the rendered service.

Second, the actual process of evaluation by consumers is more difficult for services because of their intangibility. Consumers may have difficulty in perceiving or understanding precisely what benefits they have received in the exchange process. They may be unaware or not understand the range of value added services offered by the service or retail business. Further, the evaluation process is also more difficult because many services expire the moment they are created (perishability) and the evaluation must be nearly instantaneous. Clearly, it is difficult to adequately measure consumer responses to intangible service results which must be made immediately before the consumer loses clear memory of the experience. Service perishability requires immediate measurement of consumer evaluations.

Finally, the minimization of deviations from prescribed production standards by carefully controlling inputs and processes for every unit produced is nearly impossible and can result in considerable heterogeneity of service outputs. The actual range of output variation may vary more in the case of services than for tangible goods.

Moreover, the range of outcome variation may contribute to an accompanying volatility of consumer expectations, perceptions, and hence, satisfaction.

In summary, it is apparent that the four special characteristics of services make the process of quality and satisfaction measurement uniquely challenging because of less consumer certainty in perception, greater variability in outcomes, and a shorter time frame in which expectations and perceived outcomes can be considered by the consumer.

Feedback Mechanisms: Listening to Consumers

In many ways the consumer is much better positioned to evaluate service quality at the moment of its delivery than are managers and supervisors who experience neither the service nor the customer-employee interaction firsthand. Realizing this, astute service marketers have recognized that a wealth of information can be obtained from the consumer at or near the time of the completion of service delivery. Such feedback may be used to add or delete items from the product/service line, modify existing products/services, or improve upon the service delivery process.

A variety of marketing research tools and methods are available to businesses that recognize the value of cultivating customer feedback. Periodic surveys, focus groups, day-to-day contact with customers, analysis of consumer correspondence, and designation of "Customer Service" departments or employees represent a few traditional options (Martin, 1996). The use of consumer advisory boards (LaBarbera and Rosenberg, 1985), toll-free consumer hotlines (Bowers, 1989; Chadwick, 1991), and video-taping of consumers as they voice their comments (Sellers, 1988) are other approaches that have been utilized. Each of these approaches shares both relative advantages and disadvantages with respect to costs of implementation, timeliness of feedback, potential response and nonresponse biases, and other considerations. For a comprehensive overview of feedback mechanisms (particularly complaint handling) and their implementation, see the TARP studies (1979, 1985, 1986). Refer also

to Martin and Smart (1988) for unobtrusive (mystery shopping) data pertaining to how consumers' letters to businesses are handled, and to Martin and Smart (1994) for consumers' self-reports of their experiences calling companies' toll-free hotlines.

One feedback mechanism that has gained widespread popularity among service businesses since the early 1980s is the customer comment card, a short, written questionnaire, printed on heavy card stock, and which is continually available to all customers at the point of purchase and time of consumption. Although exceptions are not uncommon, customer comment cards are usually short, may be completed quickly, and are voluntarily self-administered. Despite their disadvantages giving rise to response and nonresponse biases (Rust, Zahorik, and Keiningham, 1996) the popularity and apparent advantages of comment cards over many other feedback mechanisms would seem to justify some research attention. Surprisingly, however, the research potential of customer comment cards has been virtually ignored by marketing scholars. Two noteworthy exceptions include Lewis (1983) who asked hotel guests about their experiences with comment cards, and Robinson and Berl (1980) who investigated the differences between hotel guests who used comment cards to complain versus those guests who expressed flattering or complimentary remarks on the cards.

THE STUDY

Objectives

Research on consumer satisfaction measurement and complaining behavior has blossomed in the past few years but little attention has been paid to customer comment cards, a ubiquitous but possibly under-appreciated means of rapid consumer feedback. Given this lack of research, this study sought to explore the nature of customer comment cards utilized by service businesses for the purpose of immediate feedback. The informational content, as well as format and scope of the cards were of particular interest. The major research questions included: What physical formats do the cards use to gain attention? What methods are used to motivate consumer response?

What were the apparent data gathering objectives of the cards' designers? Are the customer comment cards able to elicit the type of information sought? Does the information quality, particularly that of the satisfaction measurements, meet generally accepted marketing research standards? How are the cards typically collected?

Methodology

While on unrelated business and personal trips, the authors personally collected a convenience sample of 312 different consumer comment cards throughout 40 of the 50 US states. The cards represent a wide variety of consumer service businesses and retail stores as categorized in Table 1. Although the sample was large and not purposively drawn, it can not be considered random, and thus the findings should be interpreted as representing a broad range of comment card options rather than necessarily representing any larger population of comment cards, per se. Of course, a random sample of firms using comment cards would have been preferable, but no adequate sampling frame or adequate response solicitation method was available. The broad range of businesses represented and the researchers' opportunity to observe all sample members (no non-response) support the usefulness of the sample.

Next, dozens of characteristics of each card were recorded according to predetermined coding and classification heuristics. The objective nature of these heuristics, coupled with the fact that the authors coded the data personally, ensured coding reliability. Finally, the data were synthesized by using routine tabulation procedures and calculating descriptive summary statistics.

FINDINGS AND DISCUSSION

The findings are presented and discussed in the sections that follow. It should be emphasized that the findings are merely descriptive of the comment cards that service businesses and retailers use. Even for items included on the majority of cards, one should not assume that the items are the most appropriate or that they accurately measure what the card designers intended to measure.

Table 1
Sample Membership by Industry Group
(n=312)

<u>Industry</u>	<u>Frequency</u>	<u>(percent)</u>
Food Service (restaurants, fast foods)	124	(39.7)
Hotel/Motel	74	(23.7)
Department Stores	19	(6.1)
Aviation Services (airlines, airports)	12	(3.8)
Grocery Stores	11	(3.5)
Public Parks	7	(2.2)
Financial Services (banks, S&Ls)	4	(1.3)
Auto Repair Services	4	(1.3)
Miscellaneous Services	36	(11.5)
Miscellaneous Retail Stores	21	(6.7)
TOTAL	312	(100.0)

Physical Characteristics of Comment Cards

The physical characteristics of comment cards define the initial stimulus which captures the attention and interest of the consumer at the point of service delivery. Because comment cards are almost always presented to the consumer in a passive way (on table tops, on counters, in small racks, etc.) they must have at least minimal attention attraction capability.

Table 2 provides a statistical overview of the physical characteristics of the 312 cards examined. Average cards measured a bit larger than a typical 5" x 8" index card, although there was considerable variation with five percent as large, or larger than a standard 8.5" x 11" sheet of paper.

White was the most popular card color (55.4

Table 2
Physical Characteristics of Comment Cards:
Descriptive Statistics (n=312)

Color	Frequency (%)
White	173 (55.4)
Other color	139 (44.6)
Size (square inches)	
Median	32.0
Mean	44.9
Std. dev.	27.8
Perforated	48 (15.4)
Folded (1 or more folds)	192 (39.5)
Typeset	296 (94.9)
Combinations of Type Styles and Sizes	
Median	4.0
Mean	4.1
Std. dev.	1.9
Point Size (smallest)	
Median	8.0
Mean	8.3
Std. dev.	2.0
Artwork/Pictures	
Logo	258 (82.7)
Borders	232 (74.4)
Person(s)	87 (27.9)
Other	31 (9.9)
	52 (16.7)

percent), followed by an array of beige or brown colors (18.3 percent). With only a few exceptions, color shades tended to be light or pastel which clearly enhanced their readability. A few card designers (7.2 percent) created a multi-color effect by screening one or more card sections with colored ink. Apparently, color plays a minor role in attracting consumer attention to the cards.

About 15 percent of the cards were perforated and many (39.5 percent) had one or more folds. Typically, perforated cards were larger than non-perforated cards, often designed so that the company's explanatory comments or promotional messages could be detached from the feedback section of the card before mailing. The folds

appeared to assist in attracting consumer attention as folded cards often placed attention-getting artwork or creative teasers on the outer surface to entice prospective respondents. The questions remain concealed until the cards are unfolded, after interest is piqued. Some folded cards erected as "tents" also serve to capture the attention of prospective respondents.

The vast majority of the cards were professional in appearance, with almost 95 percent typeset and many cards using several type faces and sizes. While the type size on most cards was adequate for customers with normal vision, sixteen percent of the cards included five and six point type, likely too small for patrons with poor vision to read comfortably.

Most cards (82.7 percent) included artwork such as pictures, drawings, and decorative borders, all of which supported the card designers' apparent objective of gaining attention, although the artwork also served to illustrate and personalize the service, as well as to educate consumers about the service and the process of completing the card. Business logos, found on 74.4 percent of the cards, were the most prevalent type of artwork. Decorative borders were next (on 27.9 percent), followed by pictures of individuals, usually executives or employees (on 9.9 percent of the cards).

Response Solicitation

Once attention has been drawn to the card, something must motivate the consumer to read it and respond. Consumers who are satisfied or who feel no immediate significant disconfirmation of expectations will likely be uninterested in the card unless some interesting stimulus or benefit encourages them to react to it. As a result, some card designers appeared to devise physical attributes of the comment cards to motivate participation. Beyond these physical characteristics already discussed, a number of additional factors surfaced and are statistically described in Table 3.

First, creative and attention-getting headlines or teasers on over half (55.1 percent) of the cards attempted to arouse prospective respondents' curiosity. For example, the cover of the Federal Express card asked, "How Do We Measure Up?" accompanied by a picture of a tape measure shaped

Table 3
Response Solicitation Characteristics of
Comment Cards: Descriptive Statistics
(n=312)

	Frequency (%)
Creative Headlines	172 (55.1)
Explanation of Card	222 (71.2)
Value/Importance of Consumer Comments	120 (44.9)
Request to Complete Card	254 (81.1)
Signature Accompanying Introductory Comments	122 (39.1)
Executive	93 (29.8)
Title only (e.g., "Your Server")	16 (5.1)
Dept. name only	6 (1.9)
Specific employee	3 (1.0)
Business name only	4 (1.3)
Response Appeals/Incentives	
None offered	102 (32.7)
Customer benefit (e.g., "help us help you")	135 (43.3)
Altruism (e.g., "help us")	78 (25.0)
Other (e.g., gift, coupon, entry into lottery)	21 (6.7)
Number of Closed-Ended Questions (excluding demographic and other personal information noted in Table 5)	
Median	6.0
Mean	9.5
Std. dev.	11.6
Number of Open-Ended Questions (excluding demographic/personal)	
Median	1.0
Mean	2.0
Std. dev.	3.0
Line Inches Designated for Misc. "Write-In" Comments	
Median	13.0
Mean	16.3
Std. dev.	17.9
Cards with no such designation	65 (20.8)
Appreciation Expressed	221 (70.8)
For response	117 (37.5)
For patronage	37 (11.9)
For both response and patronage	26 (8.3)
For unspecified reason	41 (13.1)

as a large question mark.

Over 81 percent of all cards directly requested response. In addition, almost three quarters (71.2

percent) of the cards introduced their questions with an explanation of the purpose of the card, and 44.9 percent praised the importance of customer comments. The remarks on 39.1 percent of the cards were signed by a company representative, mostly executives.

In addition to the tactics used to give credibility to the requests to complete the cards, a large number of cards (43.3 percent) suggested that a response to the card could benefit the consumer directly (e.g. "Help us to serve you better.") The motivational potency of such intangible incentives is questionable. Only 6.7 percent of the cards actually offered any tangible reward for responding to the card's request for information. Although a few service firms reinforce consumers' decisions to respond by rewarding them with unexpected gifts, coupons or personal follow-up after comment cards are completed, this number could not be determined. Such reinforcements may motivate some consumers to comment again in the future. Nevertheless, the majority of card designers offered no tangible incentives, an indication that they believe the costs of incentives to be prohibitive relative to the value of improved customer response rates.

Ease and convenience of response are known to influence survey response rates and also should be considered when encouraging response to comment cards (Lewis, 1983). For this reason, card length and question type were considered. Most cards were short enough to be completed quickly, and three quarters asked twelve or fewer fixed response questions (not counting demographic items, discussed later). The majority of these questions required respondents only to mark one or more preprinted response categories. Although these closed-ended questions are convenient for both respondent and analyst, they rarely capture the full range of possible consumer comments. Most card designers recognized this disadvantage, and 79.2 percent of the cards included space for consumers to add additional comments, although there was considerable variation in the amount of space provided.

Finally, the majority (70.8 percent) of the cards attempted to reinforce consumers' patronage, response, or some other behavior by expressing the company's appreciation. Given the positive

effect that simple "thank you's" have on customer attitudes and repeat patronage behavior (Bergiel and Trosclair, 1985; Carey, et al, 1976; Martin, 1990), the expressions of appreciation are quite appropriate.

Consumer Satisfaction and Service Quality

As stated previously, one of the most important uses of customer comment cards is the assessment of consumer satisfaction or perceptions of service quality, although quick and convenient measurement approaches are often found lacking (Devlin, Dong and Brown, 1993; Peterson and Wilson, 1992). For example, satisfaction scales often do not have enough categories to enable respondents to make fine distinctions, especially at the high (positive) end of the scales toward which ratings tend to be biased. Furthermore, responses to satisfaction scales may also suffer from biases attributed to the mode of data collection, question form, question context, measurement timing, and the mood of respondents (Peterson and Wilson, 1992). Nonetheless, the sample of cards was examined to determine the satisfaction and quality measurement approaches used as well as the content of the actual measurement items. Although distinctions between satisfaction and service quality have been made (e.g., Parasuraman, Zeithaml, and Berry, 1986), little distinction was made in the present analysis, because the precise measurement objectives or intentions of the card designers could not be determined with certainty. For example, asking respondents to rate attribute X as either "excellent," "satisfactory," or "poor" is not clearly classifiable as either a satisfaction measure or a quality measure, but would appear to be an attempt to measure one or the other.

At least one of two direct measurement methods were utilized by 82.5 percent of the cards -- one was a global post-hoc rating and the other an attribute-specific post-hoc approach. The global approach asked respondents to evaluate their overall impressions of their experience with the service business. Slightly less than a third of the cards (32.1 percent) requested global ratings with questions such as "Did we satisfy you today?" or "Please rate your overall impression of us." A number of cards also measured behavioral intentions which could be considered by some to

be surrogates for direct global ratings by tapping general attitudes based on satisfaction levels. For example, about 24 percent asked respondents if they would patronize the business again in the future and almost eight percent asked if the consumer would recommend the business to others. Of course, some respondents are likely to respond negatively for reasons that have nothing to do with satisfaction. For example, satisfied patrons from another community may indicate that they do not plan to patronize the business in the future, but may respond this way because they do not anticipate ever being in the vicinity again.

Ratings of specific dimensions of satisfaction or service quality were requested by over three quarters of the cards (78.2 percent). These 244 cards asked respondents to rate or rank a mean of 8.95 specific attributes of the service business or experience. Respondents were most often asked to evaluate specific aspects of employees, physical facilities, and products/services, although some cards also included questions pertaining to price, information, convenience, and some attributes that tended to be business- or industry-specific.

As shown in Table 4, the service attributes on which the comment cards collected information were further categorized according to the "determinants" of service quality advanced by Parasuraman and his colleagues (Parasuraman, Zeithaml and Berry, 1986; Zeithaml, Parasuraman and Berry, 1990). This categorization reveals that the cards place heavy emphasis on the tangible attributes associated with the services provided. It is noteworthy that so many cards fail to request information on less tangible service characteristics about which consumers are frequently dissatisfied.

Personal and Behavioral Consumer Characteristics

Comment cards typically included one or more questions concerning a wide variety of possible respondent characteristics (shown in Table 5). Most noteworthy is the neglect of data commonly used by businesses to segment their markets and analyze their customers who are involved enough with the service experience to submit comment cards.

Table 4
Satisfaction/Quality Attributes of Comment
Cards: Descriptive Statistics (n=312)

	Frequency (%)
Global Evaluation of Service Experience Requested	100 (32.1)
"Would You Return?" asked	74 (23.7)
"Would You Recommend?" asked	24 (7.7)
Evaluation of Specific Attributes	244 (78.2)
Number of Specific Attributes Evaluated	
Median	5.0
Mean	7.0
Std. dev.	8.1
Service Quality Attributes or "Determinants"	
Tangibles	241 (77.2)
Responsiveness	128 (41.0)
Reliability	19 (6.1)
Assurance	
Competence	22 (7.1)
Courtesy	101 (32.4)
Credibility	115 (36.9)
Security	5 (1.6)
Empathy	
Access	41 (13.1)
Communication	46 (14.7)
Understanding/knowing the consumer	52 (16.7)

Demographic Characteristics. Fewer than ten percent of the cards asked for customers' gender, age, occupation, income, education level, marital status, or family size.

While marketers have long recognized the usefulness of demographic data in classifying research responses and in developing subsequent market segmentation strategies, the noticeable absence of demographic characteristics on the cards implies that few service businesses are interested in using comment card data in this way.

The omission of demographic data also highlights a significant problem in the interpretation of comment card data. Robinson and

Table 5
Personal and Behavioral Consumer
Characteristics of Comment Cards:
Descriptive Statistics (n=312)

	Frequency (%)
Demographic	
Gender	19 (6.1)
Age	13 (4.2)
Occupation or title	11 (3.5)
Income	2 (0.6)
Marital status	2 (0.6)
Family size	1 (0.3)
Education	1 (0.3)
Other personal information about consumers	
Name	268 (85.9)
Address	251 (80.4)
Phone number	172 (55.1)
Zip code	170 (54.5)
Name of company/employer/business of employer	24 (7.7)
Distance or travel time between home and business	8 (2.6)
Distance or travel time between job and business	2 (0.6)
Number of years lived at residence	1 (0.3)
General buyer behavior issues	
Media usage (e.g., "How did you hear about us?")	47 (15.1)
Frequency of travel (air and other)	3 (1.0)
Frequency of generic product/service usage	1 (0.3)
Number of sellers patronized	1 (0.3)
Transaction/relationship information	
Items purchased	101 (32.4)
Previously patronized this business	72 (23.1)
Reason for visit to the firm	40 (12.8)
Type of service delivery (e.g., carry out, drive thru)	17 (5.4)
Party size	12 (3.8)
Details of trip during which business visited (e.g., length of stay, travel dates, name of hotel, destination, etc.)	10 (3.2)
Member of a frequency program?	6 (1.9)
Specific account number or identifying ID	4 (1.3)

Berl (1980), Lewis (1983), and Kotler and Andreason (1987) note that data from customer comment cards are not representative of the average customer. In fact, they may actually understate the degree of dissatisfaction among a firm's customers. Merwin (1985), for example,

attributed part of the failure of the Howard Johnson hotel chain to adjust to the market to its sole reliance on customer comment cards to judge consumer satisfaction with its products. In light of this, it is surprising that most customer comment cards do not make a better effort to identify the characteristics of the customers volunteering information.

In some cases the apparent lack of interest in demographic data may be misleading. Businesses can use comment cards to identify already known consumer data in their data bases without requesting such information on the cards. In this study, for example, almost all of the hotel cards solicited guest room numbers, which allows these hotels to identify respondent address, employer and sometimes reason for travel. Retailers also can locate customer names or phone numbers in data bases which contain demographic information and data on previous purchases.

Other Personal Information About Consumers. The majority of cards asked for respondents' names, addresses, and/or phone numbers. This information enables businesses to follow-up customer comments, e.g. to thank customers for taking the time to comment, to apologize for possible mishaps prompting the comments, and to solicit additional information or clarification. These data are needed to contact customers, but they also provide a basis for tracking the frequency of comments submitted by individuals or households, and for monitoring the effectiveness of follow-up efforts. Such specific data also are useful in verifying the authenticity of consumer comments, thereby reducing the phenomena of "ballot box stuffing" by personnel with a vested interest in the content of consumer comments. Finally, in an era of direct marketing, the names, addresses and phone numbers of customers serve as fundamental cornerstones in company data bases -- facilitating a direct line of marketing communication with valuable consumers who have already begun the process of establishing an ongoing relationship with the business. Telephone numbers are one of the most important items of information collected, since they often do not change when consumers move locally.

One disadvantage of soliciting respondents' names, addresses, and phone numbers is that some

consumers may feel uncomfortable providing such information and prefer to remain anonymous. Apparently recognizing this, and not wanting to stifle comments, approximately one-third of the cards requesting name, address and phone number indicated the information was optional. Other cards asked respondents to initial the card if they wished to remain anonymous, to indicate their zip codes if not their full address, or they explained that the information was needed for follow-up purposes and that the information would be kept strictly confidential.

A few card designers recognized that respondents may represent businesses as well as households. Consequently, they asked for the name of the company or employer the customer worked for. A few probed further to learn the distance or travel time between the customer's job or home and the business. Like the demographic and other personal information about consumers, employment-related information may be used for a variety of purposes including follow-up and market segmentation.

General Buyer Behavior Issues. A few cards solicited general buyer behavior information. Of these, the most frequently visited issue pertained to media usage (47 cards). For example, these cards asked, "How did you hear about us?" or "What is your favorite radio station?" (or favorite section of the newspaper, or favorite television show, etc.). Obviously, these data could be used to assess the effectiveness of alternative media and promotional campaigns.

Transaction/Relationship Information. A number of cards attempted to ascertain specific details or circumstances pertaining to the specific store visit that prompted the customer to fill out the card, and/or requested information regarding the customer's past experiences with the business.

Of these variables, the specific items purchased was the most frequently addressed issue, included on almost one-third (101) of the cards. Presumably this information would be useful in classifying responses to customer satisfaction and quality questions, and ultimately in modifying the line of product/service offerings.

Among the variables probing customers' past experiences or their relationship with the business,

simply asking whether they had previously visited the business was most frequently asked, included on 72 (23.1 percent) cards. Six cards asked if the customer was a member of the firm's frequency program.

Inquiry about customers' patronage history with the business is quite relevant and extremely valuable. First, feedback from newer customers provides fresh perspectives as to how these customers may be made to feel more comfortable or served more effectively. Second, comments from established customers are extremely useful, given that these customers have previously gauged their expectations and garnered experience in recognizing instances when service or merchandise quality deviates from those expectations. Moreover, given the higher revenue and profit potential that existing customers represent in most service industries relative to that of new customers (Reichheld and Sasser, 1990), it would behoove service businesses to listen attentively and seriously consider the comments of these customers.

A noteworthy number of cards solicited data for three additional variables likely to be associated with variations in service quality, customer expectations, and customer perceptions. First, forty cards (12.8 percent) asked customers for the reason for their visit. In hospitality businesses, for example, the service experience sought by business travelers may differ considerably from that sought by tourists.

Second, a smaller percentage (3.8) of cards inquired about party size. Such information is useful in developing an understanding of how consumer perceptions, preferences, and behaviors vary across group sizes (Iacobucci, 1996). Marriott's restaurant operations, for example, have learned that single patrons prefer tables located near windows and table settings that include newspapers (Anonymous, 1988).

Finally, 5.4 percent of the cards asked customers which type of service they received (e.g., in store, drive-through window, ATM, catalogue, etc.). Because the processes and technology involved in these alternative delivery systems can be quite different, it follows that customers' expectations and experiences may differ as well. For example, a bank customer may expect a friendly smile and a "hello" from a human teller,

but not from the bank's ATM. Understanding these variations would seem to be a critical step toward satisfying customer requirements, improving operations, and developing appropriate marketing communications.

Administrative and Control Characteristics

Several aspects of the comment cards contribute to management's ability to centralize and systematize the data collection process and to identify precisely the personnel whose behaviors or neglect may have prompted consumers to comment. These findings are summarized in Table 6.

More than one-third (37.2 percent) of the cards clearly instructed consumers how to return the comment cards upon completion. The most frequent approach, used by 35.9 percent of the cards, was to ask respondents to mail the card. Another 80 cards (25.6 percent) did not specifically ask consumers to mail the cards, but were preprinted with the company's address and usually postage paid. Having consumers mail their comments offers the advantage of a centralized collection process which is especially useful to multi-unit operations. Other advantages of mail collection include possible consumer perceptions of convenience and confidentiality.

Of the 184 cards (59 percent) that were preaddressed, almost half (84; 45.7 percent) were addressed to the Chairman of the Board, to high ranking executives, or to line managers. This probably conveys to customers a sense that the business greatly values their comments and places a high priority on consumers who take the time to provide feedback. Unfortunately, 32 cards (10.3 percent) were preaddressed but were not postage paid; they may convey a completely opposite message.

Recognizing that some consumers might feel inconvenienced or constrained when asked to express themselves in writing, 8.3 percent of the cards offered consumers a telephone "hotline" as an additional or alternative feedback channel. In fact, the rapid growth in the use of 800 numbers suggests that such hotlines have already replaced the use of customer comment cards in some businesses (Rice, 1990).

Most cards asked respondents to provide

Table 6
Administrative and Control Characteristics of
Comment Cards: Descriptive Statistics
(n=312)

	Frequency (%)
Instructions for Completed Card Submission	
No instructions given	116 (37.2)
Mailing of card implied	80 (25.6)
Specific instructions	116 (37.2)
Mail card	112 (35.9)
Drop card in designated box	60 (19.2)
Return to service counter, check-out area, etc.	18 (5.8)
Give card to employee or to supervisor	36 (11.5)
Other	34 (10.9)
Preaddressing and Postage	
Neither preaddressed nor postage paid	128 (41.0)
Preaddressed and postage not paid	32 (10.3)
Preaddressed and postage paid	152 (48.7)
Addressee	
None	128 (41.0)
Company name only	60 (19.2)
Specific manager or top officials	84 (29.9)
President, C.E.O., or Chairman	54 (17.3)
Other executive	24 (7.7)
Unit manager or supervisor	6 (1.9)
Others	
Customer Service, Consumer Affairs, etc.	20 (6.4)
Specific individual, title not specified	9 (2.9)
Misc.: other depts. or management firms	11 (3.5)
"Hotline" Number Provided	
Toll free number	14 (4.5)
Toll number	12 (3.8)
Accountability/Tracking	
Date	222 (71.2)
Business location, address, or unit number	187 (59.9)
Time of day	134 (42.9)
Name of service provider	76 (24.4)
Name of outstanding employee	44 (14.1)
Follow-Up	
"Would you like a reply?" asked	31 (9.9)

information that could be used to track comments over time and to hold specific employees, supervisors, or franchisees accountable for

consumer comments. For example, more than two-thirds of the cards (71.2 percent) asked consumers to indicate the date, while 42.9 percent requested the time of day. About six of ten (59.9 percent) asked the store number, location, or specific address of the business, although often this information was already preprinted or stamped on the cards. About one-fourth (24.4 percent) inquired about the name of the specific employee or employees who served them, while 14.1 percent asked respondents to identify outstanding employees.

Clearly, this type of accountability information helps management to track comments over time, associating fluctuations in consumer perceptions with personnel or operational changes, with marketing programs, or with environmental concerns such as actions of competitors or changes in the economy. In addition, employee knowledge of the presence of comment cards may improve employee performance by creating a Hawthorne effect. Simply put, employees may be more service-oriented if they are aware that customers may conveniently use comment cards to evaluate employee performance and then relay the evaluations directly to management.

Finally, a few card designers seemed to recognize that acting upon consumers' comments should extend beyond possible personnel, marketing, or operational modifications to include recognition of customer comments and reinforcement of each respondent's decision to offer feedback. Toward this end, 31 cards (9.9 percent) specifically asked respondents if they would like a reply to their comments. Of course, it is likely that many businesses which omit this type of question actually do send replies to respondents.

SUMMARY AND CONCLUDING COMMENTS

Soliciting feedback from consumers has always been a central component of the marketing concept. And in the service sector, consumer feedback is especially critical because of the unique vantage point from which consumers evaluate both services and their delivery.

While there are numerous approaches to gathering data from consumers, customer comment

cards represent an alternative that has gained considerable popularity during the last decade. Despite the widespread use of customer comment cards, however, little is known about these research instruments. The study reported here lays the foundation for such a knowledge base by documenting the content of comment cards. By understanding the status quo, practitioners are better positioned to evaluate their comment card program vis-a-vis those of other service businesses in general, and those of competitors in particular. Similarly, practitioners who have hesitated to implement comment card programs will benefit from this research as they search for guidelines and insights in developing future comment card programs.

The findings suggest that few service businesses are fully tapping the potential that comment cards offer. Analysis of the cards in this study suggests some preliminary recommendations for improved practices. These primarily concern the variables measured, measurement procedures, the motivation of consumers to complete these cards and the identification of respondents' characteristics.

First, while many customer comment cards are carefully prepared, a large proportion appear poorly conceived and haphazardly developed. Customer satisfaction is arguably the most important variable measured by the cards, but while 82.5 percent of the cards requested ratings of attributes, the real meanings of the scales utilized were often difficult to determine. For example, does an attribute rated "average" mean that the consumer is satisfied or not? It would be difficult for the data user to determine what the ratings really indicate. Far greater attention to the validity of the questions employed is required before the resulting data can be trusted.

Although it seems apparent that the intent behind most of the cards was to measure customer satisfaction or service quality, it is evident that only the most obvious and tangible dimensions are typically measured, i.e. tangible characteristics of the service and service delivery responsiveness. Issues pertaining to service provider competence, reliability, accessibility, safety, and knowledge of the consumer are particularly badly neglected. (Refer again to Table 4)

More demographic data must be collected by

the cards so that the representativeness of the respondents can be judged. Limited evidence from other research indicates that volunteers of information are atypical, often better educated, younger, and have higher incomes (Kotler and Andreasen, 1987). However, with fewer than ten percent of the cards collecting such standard demographic information, little can be said to adequately characterize the respondents. In addition to the correction of the paucity of demographic information, more emphasis on the collection of patronage history would greatly assist the marketer in interpreting the strategic importance of the data.

Two special characteristics of services, perishability and heterogeneity, require that services complained about be identified in place and time. Surprisingly, only 21 percent of the cards asked for information on both the service/item purchased and the date of the purchase. This information is obviously vital to the managerial follow-up of service complaints and should be regularly requested by cards.

Finally, businesses need to reassess their methods of encouraging comment card response. The majority seem to leave response to chance, possibly believing that consumers angry or happy enough to respond are the only ones worth knowing about. This approach is almost certain to produce highly unrepresentative samples of customers which may erroneously be treated as though they represent the universe of consumer experiences.

Still, there are numerous issues left to future research. Perhaps the most fundamental of these is the evaluation of the appropriateness and effectiveness of customer comment cards relative to that of alternative research tools. Second, while experienced practitioners and researchers may be able to evaluate the pros and cons of comment cards on an intuitive basis, an experimental approach to comment card evaluation is needed. This type of investigation would lead to a richer understanding of a number of tactical research issues. For example: What is the optimum length and format of comment cards? What are the ideal physical characteristics such as card size and color? How can consumers best be motivated to respond? Further, what are the differences between paper and pencil, hard copy comment cards,

versus those increasingly being found in electronic form on companies' internet web pages?

Questions about the proper administration of comment card programs also require research. For example: Who should be responsible for implementing comment card programs -- Marketing, Operations, C.E.O.'s Office, or some other department? How should customer comments be synthesized, tracked, and reported? To whom should customer comments be distributed within the organization? How should businesses respond to customers who complete comment cards? Who should be responsible for instituting organizational change based upon customer comments?

Although this study lays a foundation for understanding customer comment card usage by service and retail businesses, it is clear that there is much work to be done both for practitioners and researchers interested in capitalizing upon the potential that these feedback devices offer.

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CONSUMERS' PERCEPTIONS OF THE USEFULNESS OF COMPANY COMPLAINT INFORMATION PROVIDED BY THE BETTER BUSINESS BUREAU

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ABSTRACT

This research investigates consumer perceptions of the usefulness of Better Business Bureau (BBB) information regarding a company's business history and performance. The results of a telephone survey suggest that consumers generally perceive the usefulness of BBB information highly, even more valuable than information provide by friends or family, and generally are most interested in information regarding the number of prior complaints against a company. Several issues for BBB consideration are discussed relating to this information, including the effects of company size on the number of complaints, the potential for categorizing the specific types of complaints, and the advantages and disadvantages of the BBB offering company endorsements.

RESEARCH OBJECTIVE

The Better Business Bureau (BBB) provides two important services for consumers. The first, and most well known BBB service focuses on consumer complaint resolution. When consumers are dissatisfied with a purchase and are unable to receive an acceptable response from a company, they may file a formal complaint with the BBB. The BBB then contacts the company and attempts to help resolve the consumer's complaint. Prior research has shown, in fact, that when dissatisfied customers decide to utilize third-party agencies to resolve their disputes with companies, the BBB is a popular option (Andreasen, 1988; Cornwell, Bligh & Babakus, 1991; Schibrowsky & Lapidus, 1994; Singh, 1989).

The BBB also offers a second potentially valuable service for consumers. Using data collected from complaints received from dissatisfied consumers, the BBB establishes files for companies in the local area regarding their business history and performance. Consumers

may then call the BBB to obtain this background information regarding companies with whom they are considering doing business. Presumably, when consumers review a company's BBB file and find that it reveals a history of consistently poor customer service, they will not choose to do business with that particular company. Instead, they will opt to do business with a company whose BBB file demonstrates a higher degree of concern for customer satisfaction.

Unfortunately, however, no prior research has explicitly investigated consumers' perceptions of the usefulness of this informational service provided by the BBB. As a result, while the BBB would like to provide appropriate company information that helps consumers make wise purchase decisions, there is a paucity of empirical data regarding consumers' evaluations of this service. This study aims to shed light on this issue by surveying consumers who recently sought company information from the BBB to obtain their evaluation of the strengths and weaknesses of this service. Specifically, the following four major research questions are addressed in this study :

- 1) What specific types of company information are consumers seeking when they contact the BBB?
 - 2) How useful do consumers perceive the information regarding company history and performance currently provided by the BBB to be?
 - 3) When making purchase decisions, do consumers find information provided by outside parties, such as the BBB, or opinions of their friends to be more useful?
 - 4) How do consumers believe this BBB informational service can be improved in the future to help them make better purchase decisions?
-

The methodology that was used to collect data to answer these research questions is explained next. Then the key findings from the data, followed by a discussion of the implications for consumer education, are then presented.

METHODOLOGY

This research was conducted with the cooperation and support of the Better Business Bureau office based in St. Louis, Missouri. This BBB office serves the entire metropolitan St. Louis region, spanning portions of two states and encompassing some 2.5 million people. The St. Louis BBB is considered a leading office in regard to accomplishing its mission. For example, although the St. Louis region ranks 17th in population, the St. Louis BBB ranks 14th in funding, 5th in number of consumer reports issued, and 3rd in number of complaints processed (Marable 1995).

Consumers may call the St. Louis BBB office and access company information through two options. If consumers have a touch-tone telephone, they can enter the company's business telephone number and hear a recorded message which conveys the information in the BBB's file for this particular company. If consumers do not have a touch-tone telephone or prefer not to use the automated response system, they can choose to speak directly with a BBB service representative who will read the information in the BBB's file for that specific company. Regardless of whether consumers use the automated system or speak with a BBB representative, they receive the following information:

- a) How long the company has been in business;
- b) How long the BBB has maintained a file for this company;
- c) A summary of the number of consumer complaints filed with the BBB regarding the company during the current calendar year and each of the three prior years; and
- d) The number of these complaints which were resolved, the number of these complaints

which were closed as "disputed" (i.e., the company did not accept the consumer's complaint as being valid), and the number of these complaints which were closed as "no response" (i.e., the company did not respond to the BBB's request for action on the consumer's complaint).

In addition, if a company has consistently been uncooperative with BBB requests for complaint resolution in the past, inquiring consumers will be informed of this fact when they call for information. For even more severe cases in which the BBB believes a company has generated an inordinately high number of consumer complaints which have been unresolved, the BBB will generate a customized information file that inquiring consumers will hear when they call for information. This customized information file will discuss the specific nature and pattern of complaints filed by consumers against the company, and possibly an explicit warning from the BBB to avoid doing business with that company. Of the over 3,000 companies with BBB information files in the St. Louis BBB office, fewer than 850 companies currently have these customized information files.

Also, for each company information file the BBB includes a standard reminder to consumers that they should consider a company's size and the length of time a company has been in business when using the BBB's information to compare companies.

It is important to note that, while the BBB's goal is to provide consumers with company information to improve their purchase decisions, the BBB does not explicitly endorse any particular companies. Therefore, consumers must evaluate the company information provided by the BBB and draw their own conclusions as to whether or not these are good companies with whom to do business.

Approximately 300 consumers calling the BBB office for information regarding local companies were contacted by BBB representatives within 1 hour of their initial call. A telephone survey was successfully completed with 216 of these consumers. These telephone interviews were conducted by BBB representatives who were specially trained in interviewing techniques for this

study. When contacted by a BBB interviewer, the consumers were asked to verify that they had in fact recently called the BBB for company information. The consumers were then asked if they would be willing to participate in a short interview over the telephone to answer some questions regarding the services provided by the BBB.

FINDINGS

Specific Company Information Sought by Consumers

Respondents were asked to indicate what types of specific information they were seeking when they contacted the BBB. As Table 1 shows, consumers were most interested in determining the number of prior complaints filed against the company and information regarding the company's reputation for honesty :

Table 1
Types of Information Sought by Consumers

Number of prior complaints:	171/216 (79.2%)
Company's reputation for honesty:	102/216 (47.2%)
Length of time in business:	40/216 (18.5%)
Resolution status of prior complaints:	30/216 (13.9%)
Quality of company's products or services:	27/216 (12.5%)
Company's use of misleading advertising:	4/216 (1.9%)
Company's use of deceptive selling tactics:	6/216 (2.8%)
Other types of information:	9/216 (4.2%)

Perceived Usefulness of BBB's Information

Next, respondents were asked to evaluate how useful they perceived the BBB's current reporting format for company information to be. Using a 1-10 scale (1 = not at all useful; 10 = very useful), the mean response was 8.45. Of the 216 respondents, over one-half (122) rated the BBB's current reporting format the maximum value of 10.

Comparative Usefulness of Information from Outside Parties vs. Opinions of Friends

Respondents were first asked if any of their friends or relatives had provided them with any information about this company. Only 43 of the 216 respondents (19.9%) reported that they had

received company evaluations from these personal sources. Next, respondents were asked which source (information provided by some outside party, such as the BBB, or the opinions of friends and relatives) they consider to be generally more useful when evaluating a particular business. As Table 2 shows, the respondents perceived information provided by outside parties, such as the BBB, to be more useful:

Table 2
Usefulness of Information from Outside Parties vs. Opinions of Friends

Outside party:	93/216 (43.1%)
Equal usefulness:	69/216 (31.9%)
Opinions of friends:	46/216 (21.3%)
Not certain:	8/216 (3.7%)

Consumers' Recommended Improvements in BBB Information

Finally, respondents were asked if there was any information beyond what the BBB currently provided that they would like to receive. Given the respondents' generally favorable evaluation of the BBB's current reporting format, it is not surprising that relatively few consumers suggested potential improvements. The improvement that was mentioned most often (15 respondents) was for the BBB to also report the specific types of complaints (e.g., misleading advertising, deceptive selling practices, poor quality products) lodged against companies, instead of just the number of complaints filed.

DISCUSSION

Overall, the findings from this study show that respondents generally perceived the BBB's current reporting format to be very useful. In particular, the BBB's provision of information regarding the number of prior complaints lodged against a company is highly valued by consumers. Apparently consumers believe that the number of complaints filed against a company in the past is a good measure of a company's general attitude toward customer satisfaction. Consumers may believe that this information regarding the total number of prior complaints gives them some

indication of the relative likelihood that they might also experience problems if they decided to do business with this company.

However, while this may be true to an extent, the BBB may wish to consider if these data regarding number of consumer complaints filed in the past should be weighted by the relative size of a company. That is, all other things being equal, it is reasonable to expect that larger companies with more customers will have more customer complaints than smaller companies with fewer customers in the same industry. For example, which company has a better customer service record-- a large auto dealer (sells 2,000 cars annually) with 5 complaints or a small auto dealer (sells 200 cars annually) with 2 complaints? The BBB does recognize this reporting problem and includes a standard disclaimer in each company's file that cautions consumers that the size of a company may impact the number of complaints which the BBB receives. However, it is doubtful that consumers have adequate information to personally determine the relative sizes of competitive companies in an industry and then weight accordingly the BBB information that they obtain. Thus, with the BBB's current emphasis on reporting only the absolute total number of consumer complaints filed against a company, larger companies face an inherent disadvantage as compared to their smaller competitors.

Another potential solution to this problem of only reporting the total number of complaints filed against a company is to also report a company's complaint resolution performance as compared to other companies in that specific industry. For instance, if the BBB's records show that 80% of all consumer complaints filed with the BBB against auto dealers are successfully resolved, then the BBB could report how a specific auto dealer performed as compared to this norm. With this approach, when consumers called for information regarding a particular auto dealer, they would receive data concerning the total number of complaints filed against that company, the percent of these complaints that were successfully resolved by that dealer, and the percent of complaints that are successfully resolved by all local auto dealers. It may be quite useful to consumers to learn that a particular auto dealer resolved 95% of its consumer complaints when the average among all

local auto dealers is 80%.

The potential improvement most often requested by respondents in this study was for the BBB to provide more details regarding the specific types of complaints filed against companies. The BBB could create a coding system in which each consumer complaint is classified into discrete categories (e.g., misleading advertising, deceptive selling practices, poor quality products). Further information could also be provided in the form of member-reported complaints. But this more elaborate system would also add to the complexity of the BBB's operations and increase their operating expense. Given the relatively small number of respondents who requested this additional information, it is doubtful at this point in time if the BBB would be wise to utilize its resources to provide this enhanced service for all of the companies in its files.

Finally, perhaps the biggest issue facing the BBB pertains to possible BBB endorsement of local companies. Following the number of complaints, the second most requested piece of information sought by the respondents pertained to a company's reputation for honesty. As currently structured, consumers who contact the BBB must analyze the information provided and draw their own conclusions regarding a company's reputation for honesty. Only in relatively rare and extreme circumstances will the BBB include in a company's file an explicit warning to consumers to avoid doing business with that company.

Rather than taking this cautious approach, could the BBB potentially offer to consumers its explicit endorsement of those companies with superior records and its warning to avoid those companies with comparatively poor records? The data in this study suggest that consumers would value the BBB's explicit endorsement or condemnation of specific companies. However, if the BBB did not move in this direction, there are clearly legal and operational issues that must be carefully considered. For instance, if the BBB did offer an explicit condemnation of a particular company, could the owners of that company take legal action against the BBB and charge it with unfairly harming its reputation? What standard (i.e., number of complaints) would the BBB have to set to reasonably "prove" that consumers should be warned to avoid a company? Conversely, what

standard must a company meet to deserve the BBB's endorsement? Also, from an operational point of view, because the BBB is funded from dues paid by local member companies, how would companies respond to this new reporting format? Almost certainly those companies that receive condemnations from the BBB will sever their BBB relationship if they are currently dues-paying BBB members. Moreover, how many companies that do not receive a BBB endorsement will no longer support the BBB because they perceive that the BBB is unfairly favoring their competitors who receive such an endorsement? This is clearly not an insignificant issue. If the BBB loses financial support from a large number of local businesses, its ability to pursue its fundamental purpose could be severely undermined.

CONCLUSION

This is the first study to analyze how effectively the BBB is fulfilling its mission to provide useful information to enable consumers to make better purchase decisions. Fortunately, it appears that the BBB's current program works reasonably well in that regard. Consumers perceive that the BBB is providing a valuable informational service that helps them to be better consumers in the marketplace. In fact, consumers place more value on this information than on the personal information they could potentially receive from their friends.

While there are some potential improvements that the BBB could consider for the future, each of these possibilities must be evaluated carefully against the increased financial and legal risks involved. As an organization that must rely on funding from member companies, the BBB must carefully balance its efforts to provide consumers with useful information and its responsibility to member companies to respect their legitimate business interests.

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COMPLAINING ABOUT THE ALLIANCE: EXTENDING KOWALSKI'S THEORY OF COMPLAINING THROUGH A HERMENEUTICAL ANALYSIS OF ONLINE COMPLAINING DATA

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ABSTRACT

In this article a complaining model recently proposed by Kowalski (1996) is reviewed, applied to a data set, and expanded to incorporate grudgeholding and retaliation. The data used in the discussion were taken from Cougar-Net, an online discussion group devoted to BYU sports. Comments in the data focus on a perceived snub of the BYU football team in the selection of bowl game participants following the 1996 college football season.

We Three Kings, Alliance by name
Get to pick who'll play in our games
Though we own it, we have blown it
Picking the wrong sixth name
Ohhhhhh. TV's luster made us skewed.
Brigham Young's the team we screwed.
Thirteen wins makes it a sin,
And in the end we may be sued.
(Sung to the tune of "We Three Kings,"
Lopresti 1996)

INTRODUCTION

Kowalski (1996) has broken new ground in her theoretical treatise on dissatisfaction and complaining behavior. Her examination of these phenomena moves beyond the traditional expectancy/disconfirmation model of dissatisfaction (Oliver 1980) and provides new insights into why people complain. This paper will examine and apply her model using naturally occurring data from an online discussion group whose members were incensed by the decision not to invite the number 5 ranked Brigham Young University football team to play in a 1996 football Alliance bowl game.

KOWALSKI'S MODEL OF COMPLAINTS AND COMPLAINING

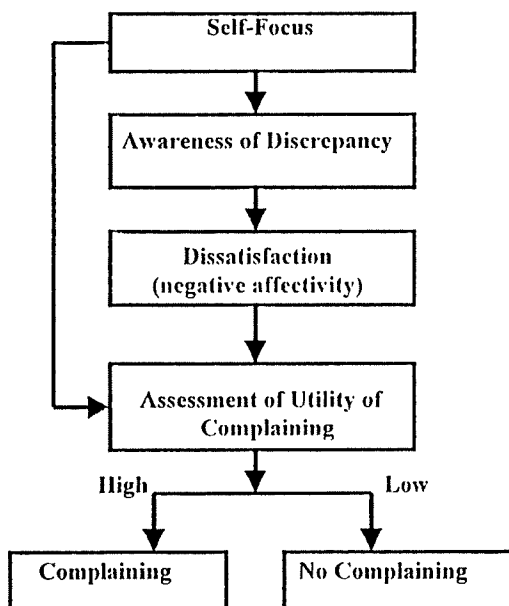
Kowalski (1996) has comprehensively

examined the functions, antecedents, and consequences of complaining behavior. Based on this research, she has developed a theoretical model of complaining (see Exhibit A). In her analysis, Kowalski rejects the conceptualization of complaining as an attitude of dissatisfaction resulting from disconfirmation of expectancies and as a behavior that expresses that attitude. While expectations and their disconfirmation sometimes play a role in complaining, Kowalski defines complaining more broadly as "an expression of dissatisfaction, whether subjectively experienced or not, for the purpose of venting emotions or achieving intrapsychic goals, interpersonal goals, or both" (p. 180). Dissatisfaction is a frequent but not a necessary prerequisite for complaining, for some people complain to achieve social and psychic goals even though they are not dissatisfied. For example, consumers may complain about a product with which they are completely satisfied if they believe the complaint will allow them to benefit in some way, e.g., to bond with other complainers or gain some concession from a retailer or manufacturer. In these cases, while the consumers' dissatisfaction threshold is high and dissatisfaction does not, therefore, precipitate a complaint, their complaining threshold is low, so they may complain even though they are not dissatisfied. It is apparent, then, that complaining may be the result of a breached dissatisfaction threshold, but only if a complaining threshold is also breached.

In Kowalski's model (Exhibit A), people engage in self-focused reflection, evaluating current events or behaviors against a standard they set for those behaviors or events. When the events or behaviors meet or exceed their standard, they experience positive affect (satisfaction). When events or behaviors do not meet their standards, they may experience negative affect (dissatisfaction). One strategy for reducing this negative affect is to complain. So far, this model is consistent with the expectancy/disconfirmation model of CS/D. However, Kowalski adds another

necessary step. Before alleviating the negative affect by complaining, people evaluate the perceived utility of complaining. How will they benefit by complaining? Might they actually be harmed? If they judge the utility of complaining to be negative, they may not complain. Thus, in addition to breaching the dissatisfaction threshold, a circumstance must also breach the complaining threshold if it is to result in a complaint. The importance of the complaining threshold is apparent from the model's alternative path to complaining. As previously mentioned, even when self-focused reflection produces no negative affect directed at some person, product, or organization, people may complain, if their complaining threshold is very low because they judge the social, psychic, or material utility of complaining to be positive.

Exhibit A
Kowalski's (1996) Model of Complaining



The remainder of this paper applies Kowalski's model to a particular set of complaining phenomena, responses to the college football Alliance's selection of teams for the 1996 Nokia Sugar, Fed-Ex Orange, and Tostitos Fiesta bowls. In making its selection, the Alliance chose not to

invite Brigham Young University (BYU) to participate despite its 13-1 record and number 5 national ranking in both major polls. Fans and media around the country reacted negatively to this "snub," complaining loudly and even boycotting Tostitos corn chips since the Tostitos Fiesta Bowl was the most likely destination for the BYU team. Along with applying Kowalski's model to these particular complaining phenomena, we show in this paper how the model can be extended to account for behaviors Kowalski did not take into account.

THE ALLIANCE SNUB

The Alliance Bowl Coalition was created to produce a consensus college football National Champion in the absence of a playoff. The National Champion has traditionally been determined by final standings in the CNN/USA Today Coaches' and the AP sportswriters' polls. These standings and the consequent championships have always been controversial if the number 1 and number 2 teams both end the season undefeated or with identical records. The Alliance Coalition was created to eliminate the controversy by producing a January 2nd bowl game pitting number 1 against number 2. The Alliance games include the Nokia Sugar, Fed-Ex Orange, and Tostitos Fiesta bowls. The Alliance bowl games are played on December 31, January 1, and January 2, and the championship game is rotated between the three participating bowls (Arnold 1996). In the January 2nd, 1997 contest, Florida defeated Florida State to win the national crown.

While the designated bowl game, the Sugar, did produce a national champion as expected, there was, nevertheless, great controversy surrounding the bowl games at the end of the 1996 football season. The Alliance has agreed to guarantee four of its spots to the champions of the Atlantic Coast, Big East, Big 12, and Southeastern conferences. The remaining two at-large berths were putatively open to all eligible I-A teams if they met the following requirements: at least eight wins (excluding victories in the Pigskin or Kickoff Classics), a top 12 or higher ranking in either of the major polls, and a ranking no lower than the lowest ranked conference champion which received an automatic bid (Arnold 1996). The Sugar Bowl,

which hosted the national championship game, selected top-ranked Florida State (ACC champion) and third ranked Florida (Southeastern champion) for the title game. The second and fourth ranked teams, Arizona State and Ohio State, were unavailable for the Alliance because, as the champions respectively of the Big 10 and Pac 10, they were obligated to participate in the Rose Bowl. With the two at-large spots still open, the Alliance selection committee generated considerable controversy when it skipped over fifth ranked, 13-1 BYU, taking instead sixth ranked, 10-2 Nebraska (which had lost its conference championship game the day before to unranked Texas) for the Fed-Ex Orange Bowl and seventh ranked, 9-2 Penn State for the Tostitos Fiesta Bowl. BYU fans and coaches were especially unhappy, but a number of sportswriters also criticized the decision. The Alliance's action led directly to a boycott of Frito Lay's Tostitos brand corn chips and to bonfire burning of Tostitos chips that made national headlines.

METHODOLOGY

Data

The data for this study come from the Cougar-Net discussion group. Cougar-Net is an e-mail discussion group devoted to BYU sports run by David Kenison and Newell Wright (Kenison and Wright 1997). Cougar-Net consists of several hundred fans of BYU sports from around the world who use the discussion list as a discussion venue and source of information. Any member of the list can post messages to the majordomo listserv, which then echoes a copy of the post to each member of the discussion list. Posts are archived for future reference and are open to public inspection from the Cougar-Net home page on the World Wide Web <<http://www.zilker.net/~ender/c-net.html>>. The data for this study were several thousand messages submitted to Cougar-Net between the dates of November 25, 1996 and January 6, 1997 and during the week of March 3-7, 1997. These messages ranged in length from a few lines to several pages. Many of them referred to, summarized, and/or posted the electronic addresses of online news focused on the BYU snub and the resulting complaints from fans

and sportswriters alike. These articles published in other media were also used as data in this study.

Both authors were and are participants on Cougar-Net, one actively and one passively. In mid-December, the first author recognized that the whole scenario would make an interesting study in consumer complaining behavior. Several list members had mentioned that they had written letters of protest to bowl sponsors. The first author asked them to send him copies of their protest letters (Wright 1996). In March, 1997 he again solicited comment from list members on their feelings about the snub (Wright 1997). These two messages represent the only attempts by the authors to influence the discussion.

The use of textual data generated by an online community has several methodological and epistemological advantages. First, the data represent a first-hand, contemporaneous record of list participants' complaints. In this respect, these data differ from most other data used in complaining research. Alicke et al. (1992) have pointed out that most of the limited empirical work on complaining behavior has relied on people's retrospective reports of dissatisfaction. These studies, they suggest, are therefore suspect because retrospective accounts of complaining generally do not accurately reflect what people actually do when they complain. The data used in this study are not subject to this criticism because the messages preserved in the Cougar-Net archives are the actual complaints voiced by Cougar-Net participants. Second, unlike interview data that must be transcribed--a textualization process that inevitably results in some loss of meaning--these data are available in an entirely unmediated form. The authors themselves expressed their feelings in a text, presumably, to the limits of their abilities, capitalizing on the strengths and compensating for the weaknesses of textual communication. The researchers had no occasion to make the usual judgment calls that are involved in a textualization process. Finally, the data used in this study are canonical, i.e., open to public inspection (Larsen and Wright, 1997). Thus, the conclusions proposed in this research can be assessed, verified, and/or challenged by anyone with computer access to the World Wide Web. Readers need not rely upon the authority of the authors. To make access to these messages easier, all messages and online

articles referenced in this article are hyperlinked on a World Wide Web page located at <<http://cob.jmu.edu/wrightnd/complain.htm>>. All messages, cited and uncited, are preserved in the Cougar-Net archives, located at <gopher://zilker.net:70/11/pub/ender> and <http://cob.jmu.edu/wrightnd/c-net_archives.htm>.

Data Analysis

The method of analysis in this study was interpretive (Hudson and Ozanne 1988) and hermeneutical. Hermeneutical analysis views society as a "text" (Ricoeur 1981; Scholes 1982) and analyzes cultural artifacts, in this case online messages and articles, as an embodiment of cultural values and beliefs (see Hirschman [1990] for an application). The conclusions in this study were formulated through iterative readings of the text. These readings produced evolving categories that expanded and contracted, were solidified and modified as the research progressed. Several readings were necessary to adequately identify and extensively exemplify specific themes, weaving from those themes a coherent composite interpretation.

RESULTS

Expectations

The expectations of Cougar-Net participants that BYU might receive a berth in an Alliance bowl surfaced on November 30, 1996 when Notre Dame lost to the University of Southern California 27-20 in overtime. Shortly thereafter, speculation began that BYU would land a berth in the Fiesta Bowl to play Penn State if they beat Wyoming in the Western Athletic Conference (WAC) championship game on December 7. A *New York Daily News* writer, Dick Weiss, predicted that BYU would get a "surprise invite after Irish loss" (Weiss 1996). The MSNBC web site also projected BYU as a front runner for one of the Alliance bowls (MSNBC 1996) as did *USA Today* (*USA Today* 1996). These and other comments in the press following the Notre Dame loss were consistent with sentiments already expressed on Cougar-Net and reinforced expectations of an

Alliance bid. Cougar-Net participants began to closely and optimistically analyze BYU's chances of receiving a bid.

BYU still has the big game against Wyoming next week that they must win on national television, but their chances for an Alliance bowl bid are improving. With Notre Dame's loss to lowly USC and Tennessee's lackluster 14-7 win over Vanderbilt, an impressive BYU win over Wyoming would really improve their chances at playing in the Fiesta Bowl. The WAC Championship game will be nationally televised and was heavily advertised along with ABC's entire championship lineup next week during all the ABC games today. I think there will be lots of attention on the game and an impressive BYU team could really make a name for themselves and seriously boost their shot at the Fiesta Bowl. I also agree with an earlier post that BYU is probably better off if Florida and Nebraska win their respective championship games as expected since, if they lose a close one, they will get the at-large berth rather than BYU since Texas and Alabama would not get an Alliance berth without winning the championship. An upset of Florida or Nebraska simply means more competition with BYU for the at-large berths. (Marx 1996a)

This initial optimism notwithstanding, it soon became clear that even if BYU beat Wyoming in the WAC championship game, the Alliance selection committee did not want them to participate in an Alliance bowl. Rumors started circulating on Cougar-Net, often reinforced by media speculation, that the Alliance at-large bids would go to other schools. One participant to Cougar-Net wrote:

Today's *Arizona Republic* ran a front page story in the sports section by staff writer Jeff Metcalfe captioned "Fiesta may feature Penn St., Colorado."

The article suggests that the Notre Dame loss "opens the door for Colorado, coached by Tempe native Rick Neuheisel, to play in the Fiesta for the third time in five years." It

continued with several quotes from Neuheisel lobbying for an invitation: "Is there a better at-large team than Colorado? We're going to play exciting for somebody and I'm not sure we can't beat any team we play."

Little mention was made of BYU, other than the observation that it is the "other strong Fiesta candidate" but that it is a team "still fighting for respect against teams from the Big Ten (Penn State) and Big 12 (Colorado)." The article also briefly notes BYU's loss was to "No. 12 Washington" and adds that "no wins were over teams now in the top 25." (Platt 1996)

The Fiesta Bowl itself was trying to downplay BYU's chances of getting a berth:

The Des[eret] News quoted a Fiesta Bowl director who said: "As we've said all along, there isn't much difference in the quality of #5 and #10"—seemingly to justify taking a lower ranked team. (G. Sanders 1996)

As the week wore on, it became increasingly clear to Cougar-Net participants that even if BYU were to beat Wyoming in the championship game, the Fiesta bowl would not select them. Hence, some participants tried to soften the blow by suggesting that the alternative, a berth in the Cotton Bowl, would not be so bad.

As has been eluded to the last few months and has become more apparent thanks to some upsets (Notre Dame) is that the Fiesta Bowl just doesn't want BYU. To them, BYU would not help the future marketability of the bowl [sponsors].

If we don't get the deserved invite to the Fiesta Bowl, let's root for a good matchup between us and KSU [Kansas State University] in the Cotton. The Cotton Bowl is a little less snobbish and I think would welcome us. (Maxwell 1996)

While not all participants agreed (e.g., Thornton 1996a; Thornton 1996b; Thornton 1996c), many participants realized they were

being set up for a big disappointment.

Let's not get our hopes up too high for an alliance bowl... For me, I am figuring on BYU not making the alliance so that the letdown isn't so bad. (Denny 1996)

In anticipation of being denied a slot should they win the WAC championship, the 16 WAC university presidents and Karl Benson, WAC commissioner, got together for a conference call on December 6 to discuss all options, including going to court, to insure a spot in the alliance bowl for the teams (EPtrsen 1996). A Cougar-Net participant posted the following message on this topic:

This article is in today's *San Diego Union Tribune*...

"The Kansas City Star is reporting in today's editions that the [Colorado] Buffaloes now seem to be in line for a Fiesta Bowl invitation unless Florida or Nebraska stumbles tomorrow in conference championship games.

"A second big twelve team in the alliance would almost certainly infuriate the Western Athletic Conference, whose officials have complained bitterly and threatened suit over their lack of an automatic bid.

"Should Brigham Young, 12-1 and ranked sixth, win the WAC title game tomorrow against Wyoming and not be invited, the howls would be deafening." (RonE10 1996)

Nebraska muddied the Alliance selection process (Rosetta 1996) when it lost to Texas in the Big 12 championship game. BYU, in turn, defeated Wyoming to win the WAC championship in a very close contest that went into overtime. In the wake of these developments, most recognized that BYU should be chosen for an Alliance slot, but probably would not be. As one sportswriter put it, BYU played for "the right, however slim but damn well deserved, to play one more time for \$8.5 million [the Alliance bowl payout]" (Rosetta 1996). Even though BYU was 13-1 at this point and a contender for the national championship, most expected the team to be passed over by the

Alliance. A few hours before the actual Alliance selection, Dustin Marx, a regular Cougar-Net contributor, posted a correct prediction of the picks the Alliance selection committee would actually make:

The *Rocky Mountain News* features several articles today on BYU, the Cougars' bowl hopes, and the bowl outlook...

The *Rocky Mountain News* predicts that BYU (13-1) will play Kansas State (9-2) in the Cotton Bowl. They predict the Sugar to feature Florida State (11-0) against Florida (11-1) again and the Orange to feature Nebraska (10-2) versus Virginia Tech (10-1). Their prediction for the Fiesta Bowl is Penn State (10-2) against Texas (8-4). (Marx 1996b)

What was widely expected happened: the Alliance snubbed BYU. Cougar-Net participants were torn between frustration and anticipation of the bid BYU did receive, to the Cotton Bowl.

We have been snubbed. I think I am more frustrated than angry at this point. I tried not to get my hopes up along with many of you. It is a let down, but BRING ON THE COTTON!

If you didn't see the announcement the bowls stack up like this:

Sugar Bowl:	#1 Florida State #3 Florida
Fiesta Bowl:	#7 Penn State #20 Texas
Orange Bowl:	#6 Nebraska #12 Virginia Tech (Campbell 1996)

Equity, Fairness and Justice

The expectancy/disconfirmation model predicts that dissatisfaction occurs when expectations exceed actual performance (Oliver 1980). In the case of the Alliance decision not to invite BYU to a bowl game, most Cougar-Net participants

expected that the team would be snubbed. Their expectations were met. Yet, as we shall see, there was, nevertheless, an ensuing chorus of complaints from the disgruntled fans and media. This disgruntlement occurred, in part, because the fans' and media's expectations about what *should* happen were not consistent with their expectations about what *would* happen. While their expectations about what would happen were not violated, their expectations about what should happen were. The fans and media were, therefore, dismayed and disgusted because they believed basic canons of fairness, equity, and justice had been violated in the decision not to select BYU as one of the two at-large Alliance teams. Even sportswriters who doubted the ability of the BYU team believed they had a just claim to an Alliance invitation.

Writer Bob Kravitz [of the *Rocky Mountain News*] writes that *the Alliance will have to accept BYU if they want anyone in the nation to think that they have even an iota of integrity*. He says that although he likes to see neighbor Wyoming win, he was glad to see BYU cause a serious problem for the Alliance. He thinks that BYU would get badly beaten in an Alliance game, but feels they still have earned the right to play in one. (emphasis added; Marx 1996b)

Several fans expressed sentiments after the Alliance decision that were similar to those expressed by Kravitz before it had been made.

Is it fair? I just don't get it. What do we have to do to get some respect? (JGowen9756 1996)

Well, the Alliance obviously didn't care about fairness and integrity, as we all expected. BYU was hardly discussed on the announcement show. I'm sure CBS said to keep it down.

And you wonder why the "rich get richer"?? Two Big 12 teams?? So, is that \$17 million for ONE CONFERENCE???

I hope the WAC suit causes havoc within the

NCAA!!! And I will NEVER eat Tostitos again! <grin> Time to call the Fiesta Bowl number to inform them I am canceling my visit, and to give them detailed instructions on where they can put their bowl!!! (Harris 1996)

This sense of injustice was reinforced by hints in the media of crass commercial calculation and religious bigotry. Fowler (1996) pointed out that though BYU fans would attend the game, they would not spend money on alcohol because it is proscribed by the Mormon faith. Adams (1996) suggested the snub was a clear case of religious bigotry:

BYU is a religious institution. Its preference is the Church of Jesus Christ of Latter-day Saints, which doesn't condone drinking alcohol. New Orleans would rather the Sugar Bowl invite third-world terrorists than Mormons... Speaking for the Orange Bowl, executive director Keith Tribble said this about Nebraska: "You can't do any better than that, 10 wins." Actually, as BYU's 13-1 record will attest, you can do a lot better than 10 wins. Perhaps Tribble should have said: "You can't do any better than that, 10 wins and no Mormons." (Adams 1996)

Boycott

Participants on Cougar-Net were outraged following the widely expected announcement of the snub. Many, pointing again to BYU's 13-1 record and number five national ranking, expressed disgust that teams with lesser records had been taken over by BYU (e.g., 8-4, 20th ranked Texas). They also focused upon an ESPN fan poll taken before the decision was made in which 73% of 14,274 fans agreed that BYU deserved an Alliance spot (ESPN 1996; see also Thornton 1996c). They posted articles and the URL's for articles from newspapers around the country that criticized the Alliance for the snub (e.g., Cleveland 1996, Holtz 1996, Poole 1996) and most participants began referring to the Alliance as the a-lie-ance, after a *Houston Chronicle* news story by John Lopez (Nicholas 1996). Gradually, many Cougar-Net participants began to coalesce around a

proposal to write letters of protest to the bowl sponsors. (Several of these protest letters are contained in Exhibit B.) They also began to echo Allen Harris' (1996) proposal that Tostitos corn chips should be boycotted since the Tostitos Fiesta Bowl was, in the participants' view, especially culpable in the snub. Some urged that the broadcast of the Alliance bowls also be boycotted.

I suggest that everyone call Frito Lay. I just did and they say that they had nothing to do with the selection process. They are the sponsor and it is their money on the line. A boycott by BYU fans of Frito Lay products will get their attention. I pointed out to the operator that if a business sponsors an event, then they better be concerned about the decisions of those operating the event. (Haddow 1996)

The support of the boycott was not universal. In particular, one PepsiCo employee, who had a small vested interest in raising the complaining and retaliation thresholds of consumers, argued that the boycott was both illogical and sure to be ineffectual:

I am a diehard BYU fan and a PepsiCo, Inc. [owner of Frito Lay] employee and believe me, PepsiCo could care less about LDS football fans boycotting Frito Lay products. Pepsi had no control over the selection. If you're going to boycott Frito-Lay, why stop there? You might as well also boycott all PepsiCo beverage products (Mug Root Beer, Slice, All Sport, Mountain Dew, etc.) and all of the restaurants they own - Pizza Hut, KFC, Taco Bell, etc. (Billyjack 1997)

However illogical and ineffectual the boycott and other protests were likely to be, they seemed to have psychic utility for Cougar-Net participants and other BYU sports fans. So, to facilitate complaining, Thornton (1996b) posted the addresses, e-mail addresses, and phone numbers of the sponsors and the CBS television network on which the Fiesta Bowl would be broadcast. And off the net, other fans organized another protest.

Exhibit B (cont.)

Shame on you guys for being a part of the Alliance bowl fiasco. The Alliance is a joke, or should I say a conspiracy. How the Fiesta Bowl could choose Penn St. over BYU who was ranked higher in both polls is totally unjustifiable. It is clear, the Unholy Alliance isn't about pitting the best teams against one another, it's just the pits. It's about the haves keeping the have nots out of their exclusive domain. It's about insuring that the big bucks stay within an elite little group. It's about restraining trade and unfair competition. 73% of those responding to an ESPN Sportszone poll said that BYU deserved to be in an Alliance bowl. What does that tell you about the integrity of the bowl selection process used by the Alliance.

I hope the NCAA steps in and fixes this bowl fiasco. You certainly have asked for it. I also hope BYU and the WAC conference have the guts to file an antitrust suit against the Alliance Bowl Committees and the conferences involved. They deserve it.

But most of all, I hope in the future your company shows some integrity and exerts some pressure on these bowl committees to do what they are supposed to be doing -- choosing the highest ranked teams available to play one another.

In the meantime, all I can do is stop buying Tostitos to voice my outrage, which I intend to do (Dayton 1996).

Some students are sponsoring a bonfire to roast Tostitos and Frito-Lay chips. The "bowl burning" will be tonight at 7:00 p.m. at 3950 N. Canyon Rd. In Provo. All are encouraged to bring their chips to chuck in the fire. (This was announced on the front page of the *Daily Universe* [BYU student newspaper]). (Ahlander 1996a)

Cougar-Net participants noted that the chip burning might, ironically, increase Tostitos sales and, as one noted retrospectively, provide PepsiCo/Frito-Lay with free advertising.

Ironically, that much publicized tortilla chip burning party in Provo last December only served to provide PepsiCo/Frito-Lay with FREE media coverage and thus, FREE advertising. Thank-you BYU students. (Billyjack 1997)

In fact, however, the chip burning did not directly increase Tostitos sales because chips for the burning were solicited door to door from those who had already purchased them before the Alliance announcement. Whether the news coverage was positive or negative for Tostitos sales remains unclear. But the outrage of the BYU fans was mirrored to some degree in the national press which covered the chip burning when it occurred, despite a mediocre fan turnout (Ahlander 1996b). Along with the local paper and the *Salt Lake Tribune* (Miller 1996), the Associated Press (1996) and *USA Today* (Marx 1996c) covered the chip burning story.

The proselytizing that was apparent in the

solicitation of Tostitos to burn was also apparent in discussions of the TV boycott.

Why don't we just all do the obvious thing? I know it may be hard for some of you (like me, who could spend the entire Saturday watching college football), but let's just NOT WATCH the Fiesta Bowl AT ALL. Tell everyone, friends, neighbors, and that huge audience we had for the BYU-Wyoming game to just turn it off. Let's get the Fiesta Bowl t.v. audience at an all time low. Try not to watch the Orange or Sugar Bowl much either. Maybe we can really disappoint them. I know with just our small cougar group here, we won't be able to do it, so encourage EVERYONE you know to not watch the Fiesta Bowl. Also, call ABC (aren't they the ones showing it?), the Fiesta Bowl, Frito-Lay, etc. And tell them you're not going to watch the game. I say we make these guys feel as guilty as possible. (Chandler 1996)

But though some with missionary zeal proselytized friends and neighbors to join the boycotts in hopes that they would have a negative short-term impact on the business of the offending organizations, others merely took pleasure from the prospect that, because disgust was so widespread, there might be negative long term consequences for the Alliance. And they seemed to experience some catharsis (Kowalski 1996) as they vented their frustrations to others of like mind:

Is it me being stuck in Britain and (somewhat)

Exhibit B

Dear Frito-Lay,

Some years ago, I worked for Ford Aerospace, a wholly owned subsidiary of Ford Motor Company. On one occasion, a senior executive told a meeting which I was attending that his marching orders from the parent company were simple and straightforward: Don't do anything that besmirches the company name and impacts Ford's ability to sell cars. I suspect that most companies have similar concerns about their image and the general public.

Unfortunately, I believe that Frito-Lay has run afoul of that axiom, based on the recent conduct of the Tostitos Fiesta Bowl Committee and the way in which it and the other Bowl Alliance committees have mishandled the selection process for teams to compete therein. Although I am an alumnus of BYU, I would like to think that I would be equally dismayed by recent events, regardless of the team involved. I find it most distasteful to see the Fiesta bowl committee profess concern for selecting the highest ranked teams possible, only to change the "rules" when the team involved is not a member of an athletic conference associated with the Alliance. The fact that the BYU/Wyoming WAC Championship game had higher TV ratings than the Big-12 and SEC games only adds a surreal touch to the entire farcical situation.

Having said that, I must emphasize that Frito-Lay had, to my knowledge, no direct input in the Fiesta Bowl committee's decision. However, by sponsoring it, you provide the vital financial backing that makes it possible. Consequently, I regret to inform you that the existing Tostitos in our house will be the last that we purchase for the foreseeable future. The same applies to other Frito-Lay products.

This entire affair brings to mind the expression "the way for bad men to triumph is for good men to do nothing." In my case, I am replacing "bad men" with "morally bankrupt bowl committees" and "good men" with "consumers of products made by the sponsoring corporations," respectively (McKeen 1996b).

I just wanted to let you know that as a BYU fan, I was disappointed that the Fiesta Bowl decided not to choose the highest ranked teams but instead chose teams based on other factors. The actions by the Fiesta Bowl Committee are viewed as unfair not only by BYU fans, but what appears to be a majority of sports writers, and fans across the nation. I like and use your products but feel that the actions of the Fiesta Bowl taint your otherwise fine company. (Guest 1996)

Here is my letter to Fed Ex. (Note, I sent a very similar letter to the Orange bowl, Frito Lay, CBS sports and whoever else's email address I could find.)

Dear Fed Ex,

Previously, I was under the impression that #5 BYU was passed over for a Fed Ex, Orange Bowl bid because #6 Nebraska might bring higher Television Ratings. However, the following data does indicate this is true.

USA Today reports the overnight ratings as follows:

Texas-Nebraska	6.2
BYU-Wyoming	7.3
Florida-Alabama (Prime-time game)	6.9
Army - Navy	5.9

If BYU brings the highest TV ratings and if BYU(13-1) has a better record than Nebraska (10-2) and if BYU (#5) is ranked higher than Nebraska (#6) by both the press and the coaches, why then did BYU get passed over by the Fed Ex's Orange Bowl???

I don't understand Fed Ex Orange Bowl's logic at all. I feel the only reason Nebraska got invited to the Orange bowl was old fashion politics. (Obviously, television ratings and college football rankings had nothing to do with it.)

The Orange Bowl and the Bowl Alliance seem to have nothing to do with fairness. Instead it seems to include Big 12 teams at the expense of all other football conferences in the country. (The rich get richer the poor get poorer.)

My friends and I will not be watching the Fed Ex Orange Bowl this year because I feel the Fed Ex Orange Bowl made a bad decision in selecting Nebraska as one of its at large bids. Nebraska lost its last game of the season to unranked Texas team. Nebraska makes this year's Fed Ex Orange Bowl boring.

My friends and I will not be watching Nebraska and the Fed Ex Orange Bowl this year. And we seriously question Fed Ex's poor judgment in this matter.

Sincerely, Anonymous [The writer of this letter wishes to remain anonymous. The first author has a copy of this letter.]

out of touch, or is there a sense of disgust with this entire morass that is building and approaching critical mass? Between what everyone is sharing here and the ground swell on r.s.f.c. [a sports net with fans from many schools], that appears to be the case. Or am I seeing the world through excessively blue glasses?

Having said that, I don't think for a moment that it will change the bowl setup for this year. What's done is done. It will, however, exert added pressure to change things . . . not to mention provide a bit of schadenfreude as bowl officials stammer, get defensive and reach for one flimsy excuse after another.

For me, the most satisfying thing is knowing that, unlike 1984 [the year in which BYU won the national football championship], we're not facing the world quite so alone. Thanks to all of you for sharing the quotes, newspaper articles, ratings numbers and corporate addresses. (McKeen 1996a)

In any event, some of the anticipated long-term consequences of the snub seem to have been more negative for the Alliance than the short term effects of the proposed boycott. Along with engaging in personal acts of retaliation, many fans urged an institutional response to the perceived injustice of the snub. They argued that BYU and the WAC should carry out their threat to initiate legal action against the Alliance if it did not select BYU.

At 13-1 and #5 they deserved to be in the Alliance. I'm throwing out my Tostitos... Leaving BYU out is an absolute crime. Sue them BYU! (Elliott 1996; see also Deter 1996; Holtz 1996)

Fan complaints were ultimately reflected in the actions of several U.S. senators (from Utah, Wyoming, and Kentucky) who called for the Justice Department and the Federal Trade Commission to initiate an anti-trust action against the alliance.

Citing Brigham Young's exclusion from a

major bowl game last season, Kentucky Republican Mitch McConnell is asking the Justice Department and the Federal Trade Commission to investigate whether the College Bowl Alliance violates antitrust laws.

"The opportunity to compete in top postseason bowls should be based on merit instead of membership in some exclusive club," McConnell said. "There could be a pretty clear antitrust violation here, with exclusive teams in collusion with the bowls to shut out everybody else."

McConnell has raised this issue before, in 1993 when his home state Louisville team was 7-1 and had no chance of playing in a major bowl. He was satisfied when the bowl coalition later streamlined itself and became the Bowl Alliance, and included a rule that any team with eight victories or a ranking above an Alliance conference champion could be invited to an Alliance bowl.

But McConnell feels that Brigham Young's plight is evidence that *de facto* exclusion still goes on (White 1997).

DISCUSSION

Kowalski's theory of complaining provides a conceptual structure with which to analyze the Cougar-Net messages regarding the Alliance snub. It explains how social motives or negative affect not associated with the specific situation may result in complaining even when expectations are met. It also explains why some dissatisfied fans decided not to complain: while their dissatisfaction threshold was sufficiently low that they were frustrated, their complaining threshold was high because they didn't expect the complaints to do any good. These are the fans who seem to be most motivated to engage in retaliation and grudgeholding, behaviors on which Kowalski's model is silent. Thus, while it addresses phenomena that cannot be accounted for by expectancy/dissatisfaction models, Kowalski's model is also unable to account for important behaviors that are closely linked with complaining, behaviors that may often be of even greater concern to organizations than complaining.

An example of these more destructive behaviors was exemplified in the Cougar-Net data.

One frustrated participant discovered a web site devoted to causing PepsiCo pain because of their corporate presence in Burma. He recommended that Cougar-Net participants damage PepsiCo by engaging in tactics recommended on this website.

Pepsi boycotters across America are starting to call Pepsi's 800 number after 7:00 p.m. eastern time. They just walk up to a pay phone, dial 1-800-433-COLA and walk away, leaving the phone off the hook. No Pepsi operators are on line, so Pepsi pays for several minutes of a phone call... This is something happening spontaneously across the country. While boycott organizers are not telling people to do this, it is beneficial to get the word out far and wide that this is happening so Pepsi will find out why its phone bills have gone up. (J. Sanders 1996)

This is a clear example of consumer retaliation (Huefner and Hunt 1994). As Huefner and Hunt (1994) have pointed out, consumers often take matters into their own hands if they believe they have been unjustly treated and have not received adequate redress of grievances when they complained or have not bothered to complain because they believed it would be ineffective (high complaining threshold). They may retaliate, "get even," "settle the score." The anti-Tostitos proselytizing, the boycotts, law suits, and anti-trust actions mentioned above would all be examples of retaliation (Huefner and Hunt 1994).

As Kowalski correctly observes, when the dissatisfaction threshold is low but the complaining threshold is high, the consumer does not complain. But as Huefner and Hunt (1992) have argued, the story does not end there. Consumers may go beyond traditional voice and exit strategies (Hirschman 1970) and engage in grudgeholding, a form of "extreme exit." Grudgeholding "carries a heavy emotional loading, and it persists over long periods of time" (Huefner and Hunt, 1992, p. 228). And while three months may not qualify as a long period of time, there is evidence that many Cougar-Net participants may have experienced an enduring behavior change and may hold a grudge against the Alliance and its sponsors. Several Cougar-Net participants indicated that they will continue to boycott PepsiCo products until the

bowl situation is resolved to their satisfaction.

I have no interest in who wins the Snub Bowl. I am boycotting it. No Frito Lay in my house!!! (Humphreys 1996)

Two months later, the same participant wrote:

In answer to your questions:

- 1) did I watch any of the a-lie-ance bowls—no
- 2) if PepsiCo doesn't care if I boycott, fine. I feel better for doing it and I am getting used to Coke and Dr. Pepper.
- 3) if PepsiCo provides the money, they also accept responsibility. It's their name on the product. (Humphreys 1997)

Other participants were equally determined to boycott various subsidiaries of PepsiCo.

My wife buys them (she could care less about sports and quit listening to my ramblings a few years back) but I won't eat them. Something like you can lead a horse to water but you can't make him drink. Probably a silly snub, but I do what I can. I promise to eat bags full if they repent! (STAKERJL 1997)

We also have not eaten any Tostitos. I suspect that we may slip up someday but for now I still have strong feelings for the a-lie-ance and their ilk. Maybe the NCAA will finally take things in hand and correct... who am I kidding? Let's hope that they have learned their lesson. (Whitmer 1997)

In response to a query by the first author, one participant wrote:

> Now that it is two months after the Cotton Bowl, I am curious to know how you all still feel about being snubbed by the A-lie-ance.

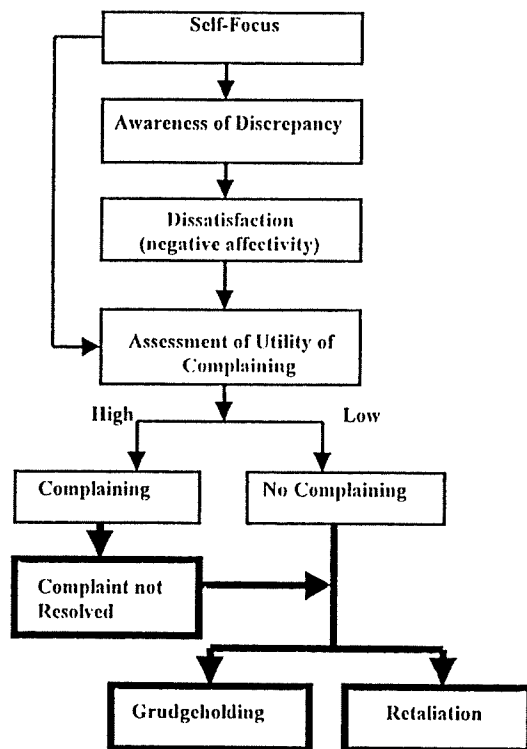
Still basking in the afterglow of the win, no longer concerned about the A-lie-ance's shaft, only their continuing attempts at mischief.

> Are any of you eating Tostitos yet?

Only the packages we already had purchased before the snub. Otherwise, the McKeen house is a Frito-Lay free zone — and will remain so for the foreseeable future.

BTW, when my wife picked out her Christmas present (a cellular phone), I gently told her that I was also creating a Nokia free zone [Nokia, sponsor of the Sugar Bowl, manufactures cellular phones]. Their loss was Philips' gain. (McKeen 1997)

Exhibit C
Extension of Kowalski's (1996) Model of
Complaining Behavior
(Extensions marked by darker lines)



The Cougar-Net data suggest that Kowalski's model needs to be expanded to incorporate grudgeholding and retaliation. When the dissatisfaction threshold is low and the complaining threshold is high, consumers will not complain (as Kowalski's model indicates). But as Hunt and Hunt (1990) and Hunt et al. (1988) have

demonstrated, the lack of complaining is often associated with grudgeholding and/or as Huefner and Hunt (1994) have shown, with retaliation. Even consumers who *do* complain often engage in grudgeholding and retaliation behaviors, as the data have shown. In Exhibit C, the Kowalski model is revised to incorporate the additional outcomes.

LIMITATIONS

While the data used in this research are not retrospective, are textualized by the informants themselves, and are a kind of natural canon (thus obviating data weaknesses cited by Alicke et al. [1992] and by Larsen and Wright [1997]), they do have certain limitations. They may not represent the beliefs and opinions of all Cougar-Net participants, as there are many "lurkers" who, like the second author, read the messages but do not actively participate in the discussions. The data also reflect the opinions of a fairly small subset of BYU fans, a subset which is probably more involved and, given their use of the Internet, more male, educated, and wealthy than other fans (Vassos 1996).

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