

A STUDY IN BUSINESS-TO-BUSINESS COMPLAINING BEHAVIOR: YELLOW PAGES ADVERTISERS

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ABSTRACT

Complaining behavior between business suppliers and customers tends to emphasize somewhat different facets than the well-explored retail customer-to-business dynamic. In the telephone directory publishing business, advertiser-publisher relationships often persist over multiple, well-defined buying periods, and generally exist on a person-to-person basis at some level of intimacy. This leads to a multiplicity of purchases per period, with a variety of complaining modes both within and across purchase periods. Advertiser perceptions of this relationship, and their reporting of complaint episodes, are explored through an extensive point-in-time survey of advertisers. Additionally, by following the behaviors of a cohort of 86,000 Yellow Pages advertisers for the first seven years of their relationship with their publisher, this paper points out modifications needed to the classic consumer complaining models, and also quantifies some of the relationships indicated by those models. Among other results, we find evidence for the form in which the action of complaining alters triggers for complaining in subsequent years, and how patterns of complaints over time affect churn probabilities.

THE BUSINESS SITUATION

Telephone directory publishers in the United States produce books of telephone numbers, generally on an annual basis. In addition to (mostly) one-line number listings ("White Pages") these books produce revenue by selling advertising space in a "Yellow Pages" section. Area businesses which choose to advertise in the Yellow Pages can purchase a multiplicity and wide variety of items, from simple one-line

listings to page-size display ads. Each ad appears, of course, in a book which is generally published annually, and advertisers are contacted by telephone or a "premise" (an on-site) visit by sales representatives in an effort to persuade the advertiser to re-advertise for the ensuing year. Sales representatives are strongly motivated to increase revenue from each advertiser each year, and an interesting sales tactic is to offer one of a set of discount programs for a given advertisement, the discount rate of which decreases from one year to the next.

A small fraction of these advertising transactions result in formal complaints being lodged with the publisher. About two-thirds of these complaints are filed with a customer service representative, and about one-third are made to the advertiser's sales representative. The following table shows some of the major complaint types as reported by advertisers:

Type	Percent of Total
Billing Issue	19.1
Information in Ad Not Correct	16.1
General or Unspecified Errors	15.8
Ad Placement	6.5
Wrong Phone Number in Ad	6.0
Ad Placed in Wrong Heading	3.8
Cost of Ad/High Rates	2.5

This distribution of complaint type varied somewhat by the directory contact to whom the complaint was directed. Only 4.7% of all complaints made to sales representatives concern billing issues, while errors in the ad account for over 40% of all complaints. In contrast, complaints made to general customer service were 20.8% error-centered and over 25% billing-centered.

LITERATURE REVIEW

A variety of models of consumer complaining behavior have evolved in the literature. Some emphasize the different modes in which customers can complain, others delineate the customer affects (e.g. post-purchase dissatisfaction) lying at the source of complaining behavior, and still others have explored the factors (triggers) which mediate between affect and the act of complaining. There have been ever more extensive models describing and testing the relationships and temporal flow among these general areas.

Complaining behavior takes on several different types (see, e.g. Singh, 1988), which have often been placed in a two-dimensional matrix of behavior X involvement level:

	Voice	Private Action	Third Party Action
Involved	Complaint to Company	Negative Word-of-Mouth	Legal Action
Uninvolved	Complaint to 3 rd Party	Exit	Complain to consumer organization

Huefner and Hunt (1992) point out that exit can have the deeper affect and temporal variations of retaliation and grudgeholding. An important aspect of this latter behavior is its persistence over time.

In an early work, Day and Landon (1977) related complaining behavior to the individual characteristics of (1) propensity to complain and (2) individual knowledge, and to the situational variables of (3) opportunity to experience dissatisfaction and (4) opportunity to complain. As part of a more extensive model, Blodgett and Granbois (1992) further delineated the "triggers" that mediate between dissatisfaction and redress behavior. They include

- a. Stability attribution ("Is the cause of the dissatisfaction likely to be recurring?")
- b. Likelihood of success ("Will complaining do me any good?")

- c. Attitude toward complaining ("How generally willing am I to complain?")
- d. Store loyalty ("Do I intend to shop at this store in the future?")
- e. Controllability attribution ("Was this the store's fault?")
- f. Cost of complaining ("How hard is it to complain?")

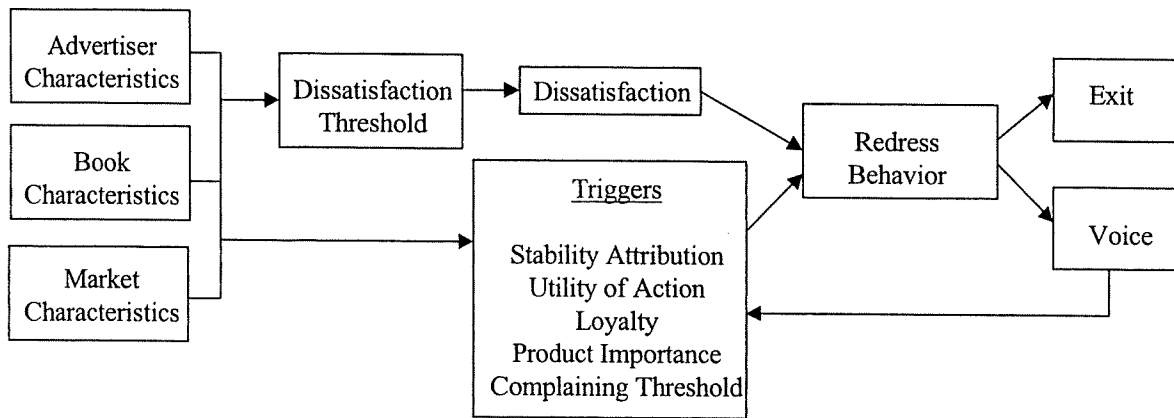
They also acknowledged Hirschman's (1970) contention that product importance is a likely determinant of complaining probability. Boote (1998) extends this list of triggers, including consumer characteristics (e.g. age) and the company/consumer relationship.

Wright and Larsen (1997) gave an example of complaining behavior where little or no personal dissatisfaction is required, even when the complaining takes on the extreme forms of retaliation and grudgeholding. They point to Kowalski's (1996) contention that customer's have both a dissatisfaction threshold and a complaining threshold, and that the act of complaining requires sufficient customer self-focus for him/her to have set these thresholds, as well as the knowledge to discern when both the dissatisfaction and complaining thresholds have been breached. These two thresholds need not be strongly related: a high dissatisfaction threshold and low complaining threshold would result in complaint not preceded by much dissatisfaction.

MODEL

The following conceptual model incorporates many of the features of the above models in describing how customer redress patterns are thought to be generated for Yellow Pages advertisers. An important characteristic of advertisers is the extent of their advertising and their resulting opportunity to experience the conditions that would generate redress behavior.

Figure



A feature of this model which we will emphasize is the feedback loop from Voice on one occasion back to the triggers of Exit/Voice on subsequent occasions. Our cohort of advertisers followed through many sales cycles will illuminate aspects of this loop.

DATA AND ANALYSIS

The data used in this analysis were compiled from two sources: (1) the Verizon Information Services internal customer database and (2) an advertiser satisfaction research study conducted in 2000. From the company database, we drew a cohort sample of roughly 86,000 Yellow Pages advertisers in order to observe complaint, purchase and churn behavior, along with covariates, for a period of seven years. Additionally, a stratified, random sample of 8,350 Yellow Pages advertisers were interviewed over the telephone in 2000 to obtain attitudinal measures of satisfaction with their Yellow Pages advertising purchase. The combination of observed behavioral and attitudinal data allow us to understand not only the complaint behavior that may ultimately give rise to churn, but also the underlying causes of the dissatisfaction which is the basis for complaining.

From the survey data come the following results.

Complaints are quite strongly associated with advertiser satisfaction and behavioral intentions, and this pattern depends on whether a sales representative was contacted in the complaint process. Satisfaction was measured on a ten-point scale (1=Not At All Satisfied and 10=Extremely Satisfied). The following table shows the percentages of satisfaction responses for the bottom-two and top-two box scores, depending on whether there was a complaint, and to whom the complaint was directed:

	No Complaint	Complaint to Customer Service	Complaint to Sales Rep.
Top Two Boxes	23.8%	9.0%	14.2%
Middle Six Boxes	61.4%	70.7%	66.0%
Bottom Two Boxes	4.8%	20.3%	19.8%

Complaints greatly increase the probability of a low satisfaction score, regardless of where the complaint is made. On the other hand, high satisfaction is least likely for those who complain to customer service, while a complaint to one's sales representative is somewhat less likely to produce high satisfaction. Presumably, the sales representative can find compensating ways to engender high satisfaction, even in the face of a

complaint.

Future advertising intentions are also affected by the complaint process, and here too the company representative at whom the complaint is directed plays a role. An advertiser could intend to maintain, increase, decrease or stop his or her future advertising. The following table shows the distribution of those responses based on the complaint direction:

	No Complaint	Complaint to Customer Service	Complaint to Sales Rep.
Increase Advertising	4.3%	3.9%	5.6%
Maintain at Current Level	69.2%	51.1%	51.4%
Reduce Advertising	15.6%	24.5%	30.8%
Stop Advertising	4.3%	13.3%	7.5%

The dual problems of advertisement reduction and stoppage are collectively increased for those with complaints. Advertisers complaining to a sales representative are more likely to merely reduce advertising than stop altogether, while the priorities are reversed for those complaining to customer service. It may be that sales reps can dissuade complete stoppage. It also may be that those companies important enough to command sales representatives may be reluctant to stop advertising altogether, but there is no evidence from these data that larger companies are less likely than others to stop. Therefore, it appears that the sales rep. does play a role in parlaying complaints into advertising reduction rather than termination.

These results are consistent with the basic features of the model described in the previous section: dissatisfaction is associated with complaining, and there appears to be a dissatisfaction threshold, as not all complaints spring from reported dissatisfaction. For each potentially dissatisfying incident the advertiser makes a complaint/exit decision, but the process of complaining feeds back into the triggers of exit/voice, so that complaint is associated with

intentions about future actions. The future consequences of current complaint are further considered below.

Analysis of the internal company database yielded the following insights.

The propensity of an advertiser to complain is a function of book, market and advertiser characteristics, as suggested by the leftmost boxes in the conceptual model. To identify these specific characteristics, a logistic regression was fit for a dichotomous variable indicating whether a complaint was made in 1996 (one of the first years complaints were regularly included in the database.) The coefficients, their standard errors and their significance levels are shown in the table below. Complaining is coded so a positive coefficient denotes an increase in complaining as the associated variable increases, and vice versa.

Variable	Coefficient (Standard Error)	Significance Level
Log(ITEMS)	0.0690 (0.0356)	0.0528
Log(Revenue)	0.0381 (0.0180)	0.0000
Age		
Age=4	0.4220 (0.0679)	0.0000
Age=5	0.2626 (0.0767)	0.0012
Age=6	0.2414 (0.0903)	0.0269
Age=7	0 (0.000)	NA
Discount Type		
Shallow Decrease	0.5326 (0.0873)	0.0000
Steep Decrease	0.3540 (0.0746)	0.0000
Constant	0.6088 (0.0711)	0.0000
No Discount	0 (0.0000)	NA
Market Penetration	-0.3201 (0.1545)	0.0383

The advertiser-specific variable log(ITEMS), the log of the number of directory items purchases, and Age (years since first ad) perform as the complaint triggers of the conceptual model would suggest. The greater the number of items, the more chances for the publisher to make a

complaint-worthy mistake, and hence the positive sign of this variable. On the other hand, as Age (and presumably loyalty) increases, the probability of complaining drops off monotonically. (Note that the complaint database was not available for the years 1993-5 and thus for the ages 1-3.)

It is interesting to note that both the number of items purchased, and the total revenue paid, are both positively associated with complaint. The positive sign of revenue may be an indication that the more complicated (and expensive) is each item, the more likely that a complaint-worthy mistake will be made. This finding is also consistent with the Hirschman notion that complaining increases as exit becomes less feasible. In this situation, high revenue suggests advertiser perception of Yellow Pages (YP) importance, under which condition exit becomes less feasible than does complaining. As an example, Joe the plumber invests heavily in YP advertising, knowing that it is his prime source of new business; if he has a problem with the YP publisher's service, YP cancellation is not a realistic possibility for him, but complaint certainly is.

In corroboration of this point, a more sophisticated model for the number of complaints was constructed using a decision tree. It extends the notion that complaining intensity (there measured as the number of complaints) is a function of both number of YP items, and also the number of YP books in which the advertiser appears.

The advertiser-book variable indicating the advertiser's discount program also plays a role in complaint activity. (When an advertiser is put on a discount program, either the discounted rate is constant from year to year, or the discount rate decreases either in a shallow or steep way. Each of these programs generates more complaints than no program. Interestingly, the steep discount decrease program yields fewer complaints than either the constant program or the shallow decrease. To become part of this type of discount program, the advertiser generally has a closer and continuing relationship with a salesperson, and that closeness may forestall many potential complaint-generating situations.

Finally, the market has a say in complaint rates: a book's higher market penetration is associated with a lower complaint rate. Generally, it is more useful for an advertiser to be in a high penetration book than a low penetration book.

Note how these variables are associated with the complaint trigger concepts of product importance and company loyalty. As Day and Landon (1977) suggested, complaints are also here associated with the opportunity to experience dissatisfaction. Book loyalty is indicated by the advertiser's Age (their continuous tenure with Directories) and also by market penetration (in the sense that high market penetration books tend to engender continued patronage.)

One of the most striking analytical results is the propensity of complainers to complain again. 1995 is the first year in which complaints are generally recorded. In 1996, as an example, about 6% of the customer base complained. The single best predictor of complaint in 1996 (among advertisers who had not churned and were thus available to complain) was the number of complaints in the previous year, 1995. The following series of tables, generated by decision tree data mining techniques, shows the proportion of 1996 complainers for three levels of 1995 complaints.

Observe that the probability of 1996 complaint is 5.16% for those advertisers who had not complained at all in 1995, but the probability rises to 23.85% if five or fewer 1995 complaints were made. If 6 or more complaints were made in 1995, the probability of a 1996 complaint rises still further, to 53.57%.

In terms of the model developed earlier, there are two main explanations for the propensity of complainers in one year to complain in the next year. One complaining trigger is the utility of the act of complaining which, given the nature of business-to-business complaints here, would likely be measured by the existence an advertisement credit resulting from the complaint. A second trigger is the breaching of the complaining threshold. The simple act of a prior complaint would lower this threshold by familiarizing the advertiser with the publisher's complaint process, and this would have little to do with the credit-

1996 complaint likelihood was still much larger than the overall complaint rate (6.4%). This chart also suggests that the form of the 1996 complaint tends to be like the 1995 behavior: a no-credit complaint in 1995 tends to lead to a 1996 complaint that is more likely than not to again not result in a credit. (Similarly for complaints resulting in credits.) These two points indicate that it is the act of complaining that begets more of the same in the next year. (We do not show here the very similar charts for later pairs of consecutive years.

We have seen that complaints have two different levels of severity. A complaint may warrant a credit (e.g. for a serious typo in the YP ad) or it may not. One may then ask if these two types of complaints, along with the "action" of no complaint, has an effect of churn in a later year. When one's year's complaining behavior is considered in isolation, there appears to be no effect. Table 1 shows 1996 churn proportions among advertisers alive in 1995 who participated in one of these three complaining types:

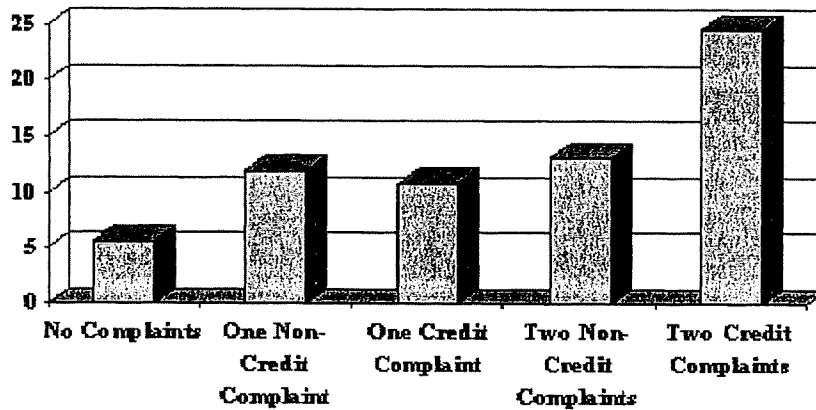
Table 1

1995 Complaint Behavior	Percent Churning in 1996 (Total number in complaint category)
No Complaint	19.4 (36,367)
Complaint-No Credit	20.5 (765)
Complaint-Credit	22.0 (391)

The nature of one's complaining behavior has no discernable effect on next-year churn rates. Over the course of one year, then, complaints and exit are apparently independent.

A different picture emerges when the complaining behavior of two consecutive years is related to churn in a third year. The following chart shows the 1997 churn rates for several combinations of 1995/96 complaint combinations:

Figure 3
1997 Churn Probabilites Based in 1995-6 Complaint Histories



The churn rate for just one complaint of either type is about 11%, roughly twice as high as the rate when there are no complaints for two consecutive years. The subsequent year churn rate, though, for those having two complaints serious enough to warrant credits, is near 25%, almost five-fold higher than the no complaint advertisers. Apparently, there is a price to be paid for two consecutive years of serious complaints.

THEORETICAL CONSEQUENCES

The analysis of our advertiser satisfaction survey and the complementary analysis of the panel data from internal records have yielded information about the theoretical complaining model we suggested in sections II. and III, although it is not possible with these secondary data sources to trace each of the model's features.

- a) First, dissatisfaction is associated with complaining behavior, some of which is recorded as a formal complaint and some of which is not.
- b) That complaining behavior in turn is linked to the advertiser's intention to reduce or cancel future advertising, although the relative likelihood of these actions depends on the person to whom the complaint was directed.
- c) Not all complaints, however, result in an unfavorable satisfaction rating; indeed about 10-15 percent of all complainers still give the highest possible overall satisfaction scores.
- d) Complaining in a given year changes the complaint triggers for subsequent years. This is true even when there is no financial reward (i.e. a credit) for complaining, so the trigger is related more to a lowering of the complaining threshold than a belief in the utility of complaining.
- e) A single year's complaint has little effect on advertiser exit, but complaints in consecutive years increase subsequent exit, especially when each complaint was

sufficiently severe to require a credit.

The combination of the last two points lays the foundation for the reduction of all complaints and special vigilance in later years when a complaint has been registered in a given year.

BUSINESS CONSEQUENCES

Responding to complaints is very expensive for Yellow Pages publishers, even without considering the administrative costs of operating a customer service center. Over half of all complaints result in the granting of a credit on the advertiser's bill, and this loss alone amounts to over \$10M per year in just one of this company's major divisions. Moreover, it was shown above that complaining is associated with a cancellation rate in excess in the baseline experienced during the normal course of business. Finally, although it is difficult to quantify in terms of revenue lost, complaints are associated with substantial increases in unfavorable satisfaction ratings and increased intentions of reducing or canceling future advertising.

The revenue loss associated with credit grants is over \$10M per year. The losses associated with customer cancellation are very large. We have shown above that the consequence of an advertiser's single complaint is to increase his/her cancellation probability by about 6 percentage points over the baseline churn rate. Roughly one-fifth of all complainers are complaining for (at least) a second time, and their cancellation probability is higher than the baseline by about 20 percentage points.

This excess cancellation results in an additional annual loss of over \$5M. Managerial action to lessen this loss is clearly worthwhile.

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THE IMPACT OF INSTRUCTION UNDERSTANDING ON SATISFACTION AND SWITCHING INTENTIONS

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ABSTRACT

This research examines the impact of customer understanding of service instructions on post-purchase outcomes. While prior research on product instructions has focused on design issues within the instruction communication, this research highlights the importance of providing instructions that are understood by customers. This research is based on a customer satisfaction survey of over one thousand established customers of a health insurance organization. Results show that customers who report high instruction understanding experience less difficulty using the service, have higher levels of satisfaction, are more likely to recommend the service to others, and report lower switching intentions. This research extends previous examinations of satisfaction and switching behaviors by suggesting that instructions serve as an important managerial antecedent. The primary managerial implication of the research is that managers should be aware of the important role that service instructions and handbooks can have on critical strategic metrics such as customer satisfaction, service recovery, and switching intentions. Therefore, service marketers should systematically monitor customer reactions to instructions, including instruction understanding.

INTRODUCTION

Much research has focused on effective product warnings (Stewart and Martin 1994; Cox, Wogalter, Stokes, and Tipton Murff 1997), mainly because failure to comply with some product warnings may lead to negative consequences such as fetal alcohol syndrome (Hankin, Sloan, and Sokol 1998), lung disease (Beltramini 1998), head injury (Lehto and Foley 1991), or explosion, shock, and fire (Wogalter, Barlow, and Murphy

1995). However, the more wide-ranging issue of effective instructions has received only limited research (Martin and Folkes 2002). Additionally, the limited research that does address product instructions does not consider service satisfaction outcomes, but rather investigates instruction design with the objective of producing instructions to enhance consumer instruction compliance. For example, research has examined the effects of increasing instruction vividness (Kelley, Gaidis, and Reingen 1989), including related pictorial icons (Young and Wogalter 1988), and including conceptual information about the product in the instruction (Martin and Folkes 2002) on instruction processing, comprehension, and compliance intentions.

While it is commonly accepted that the role of product or service instructions is to enhance the consumer usage experience and reduce potential harm to users, empirical evidence illustrating the impact of instructions on satisfaction outcomes is limited. Research focused on improving product instruction design, using laboratory experimental methods, has only tangentially considered satisfaction outcomes (e.g., Martin and Folkes 2002; Taylor and Bower 2003). The sparse amount of research directly considering the impact of instructions on critical outcome measures presents an opportunity for additional research given that consumer compliance with instructions often has implications for customer satisfaction, service recovery, product returns, manufacturer liability and product warranty coverage (cf. Martin and Folkes 2002; Morgan 1982; Stewart and Martin 1994). For instance, low compliance with instructions may lead to dissatisfactory service performance, making a costly service recovery attempt necessary (e.g., Tax, Brown, and Chandrashekar 1998). Also, research suggests that if a service failure results from low instruction compliance, consumers may nonetheless attribute

the failure to the service provider (cf. Griffin, Babin, and Attaway 1996).

Moreover, we are not aware of research that considers the role of instructions on satisfaction outcomes in a services setting. Such an investigation is needed, given the relative complexity of some services and the heavy reliance on customer participation in service settings (Bendapudi and Leone 2003; Bowen 1986; Solomon, Surprenant, Czepiel, and Gutman 1985; Zeithaml and Bitner 1996). Consequently, the objective of this research is to provide real-world empirical evidence of the impact of customer instruction understanding on strategic outcome metrics such as service difficulties, satisfaction, and switching intent. The results of this research indicate that consumers who understand service instructions experience fewer service difficulties, higher levels of service satisfaction, and generally lower switching intentions. A series of hypotheses is first developed, results are presented, and finally implications are discussed.

THEORY AND HYPOTHESES DEVELOPMENT

Difficulties Using the Service

The drama metaphor is often used to analyze and study service performances (Solomon, et al. 1985). As such, customers learn their appropriate role in the production of the service. The role a customer plays in the production of a service is contained in the service script, which broadly refers to the expected actions and roles that both customers and service providers expect (Solomon, et al. 1985). Adherence to the service script by both customers and service provider employees is critical to the ultimate successful production of the service and subsequent customer satisfaction (Kelley, Donnelly, and Skinner 1990; Solomon, et al. 1985; Zeithaml and Bitner 1996). In fact, in service firms, customers are sometimes referred to as "partial employees" since they often perform important tasks in the service production (Bowen 1986).

Customers may learn the service script from a

number of different sources including previous experience with the service provider, facility design, signage, and instructions or handbooks (Bowen 1986; Zeithaml and Bitner 1986). Instructions serve as an important, often detailed, document used to educate customers in their roles in the successful production of a complex service. Because instructions represent an important source of information for service scripts, we expect that customers who understand the instructions will experience fewer problems using the service. Therefore, we hypothesize that:

H1 Customers who understand the service instructions have fewer difficulties using the service when compared to customers who have problems understanding the instructions.

Satisfaction, Positive Word-of-Mouth, and Switching Intentions

Satisfaction is defined as a positive evaluation of a service provider resulting from comparisons of service performance to expectations over the course of all previous encounters with the provider (Anderson, Fornell, and Lehmann 1994; Fornell 1992). Extensive research on satisfaction during the last two decades has highlighted the important role that expectations plays in the satisfaction process (e.g., Bearden and Teel 1983; Oliver 1980; Yi 1991; Zeithaml, Berry and Parasurman 1993). When expectations are met or exceeded, customers report higher levels of satisfaction. Therefore, an important step in managing customer satisfaction is creating realistic expectations. Customers who possess realistic expectations of the service are more likely to be satisfied since the service performance will be compared with the expectations that are more consistent with the actual service, thereby decreasing the chance of negative disconfirmation.

One way of creating more accurate expectations of a service is through explicit promises using instructions or handbooks (Zeithaml, et al. 1993). Instructions educate consumers on the benefits of the service as well as document what customers can expect from a service provider. Thus, customers who understand

(misunderstand) the instructions should have more (less) realistic expectations about the service which should lead to increased (decreased) satisfaction levels. An understanding of the instructions should also impact satisfaction levels due to increased knowledge resulting from the service instructions. Previous research has found that customers with stronger knowledge of the service also report higher levels of perceived quality (de Ruyter and Bloemer 1997). Since perceived quality increases with knowledge, we would expect satisfaction levels to be higher with more knowledge since satisfaction and perceptions of service quality have been found to be strongly correlated (e.g., Taylor and Baker 1994; Cronin and Taylor 1992). Furthermore, satisfaction levels are expected to be higher for those customers who understand the instructions since, as discussed in Hypothesis 1, these customers are expected to have fewer problems using the service which would negatively impact satisfaction. Based on the previous discussion, we hypothesize that,

H2 Customer understanding of service instructions has a positive influence on customer satisfaction.

Customers who understand the instructions for a service have taken time to read and understand the material given to them by the service provider. This investment of time can be considered a sunk cost which decreases the likelihood of switching (Jones, Mothersbaugh, and Beatty 2002). Additionally, customers who have taken the time to read and understand the instructions are more likely to be involved with the service provider. Involved customers are more likely to be committed to a service provider (i.e., switch service providers less often) and more likely to engage in positive word-of-mouth (Keaveney and Parthasarathy 2001; Oliver and Bearden 1983; Richins and Root-Schaffer 1988). Therefore, we expect that customer understanding of the instruction will also influence positive word-of-mouth intentions and switching intentions. Stated formally, we predict that:

H3 Customer understanding of service

instructions has a positive influence on positive word-of-mouth intentions.

H4 Customer understanding of service instructions has a negative influence on the intention to switch service providers.

Finally, it is well established in the satisfaction literature that there exists a positive relationship between satisfaction and positive word-of-mouth and a negative relationship between satisfaction and switching intentions (for a review see Szymanski and Henard 2001; Yi 1991). Therefore, we offer the following replication hypotheses.

H5 Satisfaction has a positive influence on positive word-of-mouth intentions.

H6 Satisfaction has a negative influence on switching intentions.

METHOD

We tested our hypotheses by surveying actual customers of a large health insurance organization. Health insurance represents a complex service that relies heavily on customer understanding and adherence to instructions as well as on customers following proper service scripts. Therefore, we deemed health insurance as an appropriate industry to test our hypotheses relating to service instructions. In order to qualify for the survey, customers of this health insurance company had to be continuously enrolled with this company for at least one year. This requirement ensured that customers had the opportunity to become familiar with the service instructions. In addition, only one eligible member of the population from each household was included in the sample.

Survey packets were sent to a total of 3,991 households. Survey packets included a letter of introduction, postage-paid envelope, and a copy of the survey. A total of 1,127 usable surveys was returned for a 28.2 percent response rate. Approximately two-thirds of the sample (67.3 percent) was female. In terms of the age of respondents, 27.4 percent of the sample were

between 25 and 44, while 46 percent was 55 or older. The large majority (87.5 percent) of respondents was Caucasian.

Due to space constraints and adhering to the needs of the sponsoring organization, single item measures were used. While multiple item measures are usually preferred, satisfaction research often utilizes single item measures due to the high reliability associated with satisfaction (and related construct) measures (e.g., Bendapudi and Leone 2003). The measurement items were carefully worded to ensure item comprehension and the surveys were pre-tested with a small number of respondents to identify any problems with item wording or instructions.

To measure instruction understanding, respondents were asked to indicate (either yes or no) whether they had experienced any problems understanding the instructions presented in the member handbook. Of the total sample, 17.3 percent indicated they had problems understanding the instructions. A chi-square analysis indicated that there was no significant relationship ($p > 0.10$) between problems understanding the instructions and any of the demographic variables.

Difficulties using the service provider were measured across several areas where customers might encounter problems while using the services of a large health insurance organization. Respondents were asked using a dichotomous scale (either yes or no) to indicate whether they had problems getting a referral, getting emergency care, finding an eye doctor, and finding a dentist. In addition, respondents were asked, using a dichotomous yes or no scale, whether they had been denied medicine due to the refusal from the health insurance company to cover their costs.

Overall satisfaction was measured using a seven-point scale. Respondents were asked, "Overall, how satisfied are you with this *health insurance organization*?" A four-point scale was used to measure both positive word-of-mouth intentions and switching intentions. Word-of-mouth was measured by asking respondents "Would you suggest this *health insurance organization* to your family and friends if they needed care?" Switching intentions was measured

by asking respondents "Do you intend to switch to a different *health insurance organization* the next time you can?"

RESULTS

Results of the preliminary analysis showing means, standard deviations and construct correlations relating to satisfaction, word-of-mouth and switching intentions are reported in Table 1. As expected, results show a positive significant correlation between satisfaction and positive word-of-mouth. Also, negative significant correlations exist between satisfaction and switching intentions as well as between positive word-of-mouth and switching intentions.

Hypothesis 1 predicted that customers who understand the instructions for a service will report fewer difficulties using the service provider when compared to customers who have problems understanding the instructions. As previously discussed, customer difficulties using the service were measured across several areas including problems getting a referral, problems getting emergency care, problems finding an eye doctor, problems finding a dentist, and being denied medicine. The Z test statistic was used to determine if there were significant differences in the proportion of respondents having difficulties using the service for those reporting no problems understanding the instruction compared to those who did not report having problems. As shown in Table 2, Hypothesis 1 was supported. In all areas, customers who reported having no problem understanding the instructions reported significantly ($p < 0.05$) fewer problems than those customers who reported having problems understanding the instructions. In fact, customers who had problems understanding the instructions reported more than twice as many problems getting referrals, receiving emergency care, and finding an eye doctor when compared to those who did not have problems understanding the instructions.

Customer understanding of the instructions was treated as a dummy variable in the regression models where 0 represented customers who reported problems understanding the instructions

Table 1
Descriptive Statistics

Variable	Mean	Std. Dev.	Correlations		
			Satisfaction	Positive WOM	Switching Intentions
Satisfaction ^a	5.97	1.29	1.00		
Positive WOM ^b	3.61	0.58	0.66***	1.00	
Switching Intentions ^b	1.54	0.67	-0.43***	-0.49***	1.00

*** p < 0.001
^a Measured using a seven-point scale.
^b Measured using a four-point scale.

Table 2
Service Difficulties

Percent Reporting Problems With:	Problem Understanding Service Instruction Handbook	
	No	Yes
Getting Referrals	14.4	34.9***
Receiving Emergency Care	5.4	16.5***
Finding an Eye Doctor	18.4	40.8***
Finding a Dentist	37.3	56.0*
Denied Medicine	58.2	70.8*

* p < 0.05; ** p < 0.01; *** p < 0.001

Table 3
Regression Results

Independent Variables	Dependent Variable					
	Satisfaction ^a		Positive Word-of-Mouth ^b		Switching Intentions ^c	
	β	t	β	t	β	t
Instruction Understanding	0.22	7.54***	0.082	3.53***	-0.131	-4.69***
Satisfaction			0.637	27.55***	-0.406	-14.50***

*** p < 0.001
^a F = 56.85; p < 0.001; R² = 0.05
^b F = 428.64; p < 0.001; R² = 0.44
^c F = 137.52; p < 0.001; R² = 0.21

and 1 represented customers who did not report having problems understanding the instructions. Hypothesis 2 predicted that customer understanding positively influences satisfaction. As indicated in Table 3, customer understanding had a significant positive influence on satisfaction ($p < 0.001$), indicating that customers who reported understanding the instructions had higher satisfaction levels.

It was also predicted that customer understanding of service instructions would positively impact positive word-of-mouth intentions (Hypothesis 3) and negatively impact intentions to switch service providers (Hypothesis 4). Consistent with both hypotheses and as indicated in Table 3, customer understanding positively influenced positive word-of-mouth intentions ($p < 0.001$) and negatively influenced customer intentions to switch ($p < 0.001$). Therefore, customers who reported understanding the instructions were more likely to suggest this service provider to other customers and were less likely to switch service providers in the future.

Hypothesis 5 predicted a positive relationship between satisfaction and positive word-of-mouth intentions, while Hypothesis 6 predicted a negative relationship between satisfaction and intentions to switch service providers. As indicated in Table 3, both of these replication hypotheses were supported ($p < 0.001$).

DISCUSSION AND CONCLUSION

This research is based on a large survey of health insurance customers and illustrates the importance of usage instructions provided to customers within a services setting. As predicted, the results show that customers who reported understanding the service instructions experienced lower levels of difficulty using the service, had higher levels of customer satisfaction, were more likely to recommend the service to others, and had lower switching intentions than customers who reported some lack of understanding regarding the instructions. This research shows that the degree to which customers understand instructions has a significant impact on critical outcome variables of high managerial concern such as satisfaction,

positive word-of-mouth, and switching intentions.

Our findings extend previous research on a similar construct, consumer satisfaction with information (Spreng, MacKenzie, and Olshavsky 1996). Satisfaction with information reflects a "subjective satisfaction judgment of the information used in choosing a product" (Spreng et al. p. 18) and has been found to have a significant influence on overall satisfaction with a product experience. Our results extend this research by testing the influence of a specific type of information (i.e., instructions) not tested in the Spreng et al. (1996) study which measured overall satisfaction with specific product attribute information and focused primarily on information presented in advertising and personal selling. Additionally, our research investigates the influence of understanding this information on additional outcome variables (i.e., positive word-of-mouth and switching intentions). Finally, our study addresses the role of instruction understanding on current customers who have been with a service provider at least one year. Conversely, Spreng et al. (1996) focus exclusively on the role that information gathered during the search process plays in initial product satisfaction ratings. Therefore, our research extends previous theory on information and satisfaction by examining established customers as opposed to new customers making initial judgments.

This research also extends prior research on instructions by considering the impact of instructions in a real-world setting. This represents an important contribution, as the instructions research generally employs experimental methods resulting in tightly controlled internal validity, but somewhat contrived ecological validity. Indeed, many have argued the importance of conducting research based on real-world consumption experiences where external validity is high (Winer 1999; Wells 1993).

Although this research did not consider issues regarding service instruction construction, this research does illustrate the role of instruction understanding on critical outcome variables. These results contribute to previous research on satisfaction, switching intentions, and word-of-

mouth by suggesting that instructions serve as an important antecedent to each of these variables. Managers should be aware of the important role that service instructions or service handbooks can play in these strategic metrics. The results from this study also suggest that service providers may experience increased costs associated with customers not understanding the instructions. For example, service companies must dedicate time and resources to assist, either in person or by phone, those customers who have experienced difficulties using the service provider due to their lack of understanding of the instructions. Furthermore, the higher switching intentions will likely increase service providers' costs since service providers must invest in the recruitment of new customers. Therefore, service marketers should invest adequately in producing easy-to-understand instructions as well as encouraging customers to read the instructions. Service providers should also systematically monitor customer reactions to instructions to identify potential problems.

The source of customer misunderstanding of instructions may stem from a number of sources. For instance, the instructions may be ambiguous, inconsistent or even incomplete. Additionally, some customers may have marginal literacy skills and therefore may be unable to understand the instruction information (Kirsch, Jungeblut, Jenkins, and Kolstad 1993). Other customers may lack the motivation or not recognize the need to become familiar with service instructions. In any case, this research strongly supports the recommendations that have been made elsewhere that marketers extensively and rigorously pretest instructions across various customer segments (Stewart and Martin 1994; Martin and Folkes 2002; Morgan 1982).

Our research suggests several potential avenues for future research. For instance, future research might consider the temporal ordering of service use and instruction processing with the aim of identifying when problems with instructions are most likely to occur. Such a study might allow for the possibility that instructions are not considered until after a problem occurs, resulting in a different information processing

sequence. Similarly, future study might consider the amount of time the consumer spends with the instructions. In so doing, the research could perhaps investigate the tactic of providing two sets of instructions: a quick-start set of instructions requiring little time investment, as well as more in-depth instructions to be consulted in the event of a service problem. Experimental research, as opposed to survey research, could be used to address issues surrounding the temporal ordering of events as well as to overcome the weaknesses associated with a self-reported measure of understanding.

The results from this study should be interpreted in light of certain limitations. The hypotheses were tested using customers of a large health insurance organization. Since health insurance companies rely heavily on the member handbook, generalizing the results to other less complex service industries should be done with caution. Consequently, future research should examine the influence of instructions in other industries with varying reliance on instructions and service scripts. Future research should also investigate the impact of both service instruction and service quality on key outcome variables. The current study tested the hypotheses in a single service company where the service is somewhat standardized. In addition, service quality in such industries is fairly uniform across respondents and dependent on customers following the service script. Future research should investigate possible interactions between instruction understanding and service quality since customers are not likely to stay with a provider if understanding is high, yet service quality is low. Despite these limitations, we hope that this initial investigation demonstrating the importance of instructions will lead to additional research on this topic.

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AN EXPLORATORY INVESTIGATION INTO THE ANTECEDENTS OF SATISFACTION, BRAND ATTITUDE, AND LOYALTY WITHIN THE (B2B) eCRM INDUSTRY

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ABSTRACT

The following exploratory study considers a model explaining brand loyalty relative to the electronic Customer Relationship Management (hereafter referred to as eCRM) industry. The model focuses specifically on B2B relationships, and includes customer satisfaction, attitude, brand trust, affect, value, and resistance to change as model constructs. This model, exploratory in nature, begins to help sift out the relative direct and indirect influences of an increasingly complex number of known antecedents to customer loyalty. Particularly noteworthy is our failure to find a direct relationship between e-satisfaction and loyalty. Rather, we find that the e-satisfaction _ loyalty relationship appears mediated by brand attitudes in this study. We also report evidence that post-consumption affect appears more closely related to brand attitude than e-satisfaction. Service provider trust also emerges as an important antecedent to brand attitude and satisfaction in this exploratory study. Managerial and research implications of the tentative results reported herein are presented and discussed.

INTRODUCTION

Technology and the Internet are having a profound effect on marketing (Bitner, Brown, and Mueter 2000). One area particularly affected has been the automation of customer service, or eService. eService continues to grow as a major marketing emphasis, and has been defined by De Ruyter, Wetzels, and Kleijnen (2001, p. 186) as "...an interactive, content-centered and Internet-based customer service, driven by the customer and integrated with related organizational customer support processes and technologies with the goal of strengthening the customer-service provider relationship." Rust and Kannan (2002)

suggest that eService can best be considered as an overarching customer-centric concept that encompasses all members of marketing channels. Rust and Kannan (2002) further suggest that eService subsumes concepts such as customer/citizen relationship management (CRM), one-to-one marketing, and customer care, among others.

The setting for the current research involves the eCRM software applications/service industry. eCRM can be defined as ... "A Web-centric approach to synchronizing customer relationships across communication channels, business functions, and audiences" (Forrester Research 2001). The eCRM industry involves software and service providers who assist marketers in managing their customer relationships via technology (see [www.crmguru](http://www.crmguru.com) or www.ecrmguide.com/ for online introductions to this industry). eCRM software includes software related to e-mail management, knowledge base development, database management, and online IP chat capabilities (among others). Companies today are increasingly providing customer service with the help of eCRM technology, or eService (Barnes, Dunne, and Glynn 2000; Mueter, Ostrom, Roundtree, and Bitner 2000), reflecting the increasing emphasis on post-purchase (i.e., Relationship Marketing) considerations by service marketing firms across industries today.

However, moving to technology-mediated service provision via eCRM is not without problems for many marketers. Specifically, the emerging evidence suggests that online marketers are often receiving poor marks in terms of customer satisfaction. For example, the level of customer satisfaction online is generally lower in B2B than it is in B2C (Accenture 2001). Therefore, it is not surprising that in the US, online retailers lost approximately \$21 billion in 2001 due to poor online customer service

(Datamonitor 2001). In addition, consumer complaints about online retailers in the US more than doubled in 2000 (NACAA 2001). These patterns within the US eCRM industry appear consistent with European marketing experiences (Aberdeen 2001).

In fact, eCRM software/service providers themselves are not immune to this phenomenon. A recent vendor satisfaction study found (1) generally low customer satisfaction ratings across CRM vendors, and (2) no single organization has established themselves as a market leader in terms of relationship marketing practices (CRMGuru.com 2002). Taylor and Hunter (2002) report similar results in an academic study. Consequently, there are clear gaps in marketers' understanding of how best to use eCRM software/service in support of eService strategies. This suggests that the eCRM industry itself appears similarly victimized in its own customer relationships.

Therefore, it appears clear that marketing research designed to better understand how relationship marketing and eService theory and practice can best support eCRM implementation is both timely and useful. In fact, Bobbitt and Dabholkar (2001) have specifically called for greater academic research into the theoretical underpinnings of technology-based self service (also see Dabholkar 2000). We would also suggest that such considerations should also be sensitive to brand attitudes. A study by Accenture (2001) finds that a reputable brand is the single most important buyer preference by a wide margin followed by service, price and variety. Moreover, for 80 percent of the buyers in B2B, even price is less important in online buying decisions. *The purpose of this study is therefore to report an exploratory attempt to develop and empirically validate a basic model specific to eCRM product and service settings that includes measures of customer satisfaction, affect, resistance to change, trust, and brand attitudes in the formation of ultimate brand loyalty.* The underlying objective in this exploratory study is the consideration of more complex models of customer loyalty based on the emerging literature.

The remainder of the study is divided into four

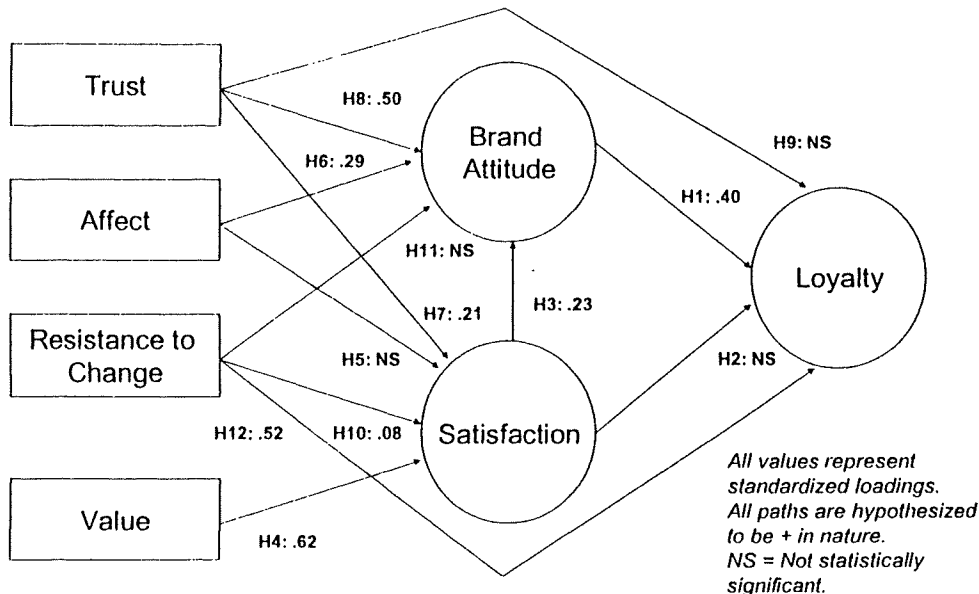
sections. First, the research model underlying the study is presented, and incorporates emerging knowledge from the CRM, services, and relationship marketing literatures. The proposed model seeks to account for many of the constructs and their interrelationships known to operate in the formation of brand loyalty in service settings. Second, the methods used to empirically test the proposed research model are presented and discussed. Third, the results of statistical analyses are articulated. Finally, conclusions and recommendations are offered for consideration by service marketers.

A MODEL FOR LOYALTY TO eCRM PRODUCTS AND SERVICES

The ultimate purpose of eCRM products and services is to help firms build better customer relationships and maximize a customer's lifetime value. Critical to this purpose is the effective implementation of e-service strategies. In fact, Kalakota and Robinson (2001, p. 171) state that within the context of eCRM ... "The timely delivery of excellent service is customer relationship management." So, what are the constructs and relationships that would be important in the development of an initial customer-centric, relationship-based model that reconciles relationship marketing and eService practices with eCRM products and services? Figure 1 presents the research model that underlies this exploratory research inquiry.

The research model builds upon existing knowledge by identifying four exogenous variables (trust, affect, resistance to change, and value) and three endogenous variables (loyalty, brand attitude, and satisfaction) to capture hypothesized direct and indirect influences in the formation of brand loyalty specific to the eCRM industry. One of the contributions of the current research is to simultaneously test these influences in a more comprehensive model using structural equation analysis. Many constructs could be considered as candidates for inclusion in this study. The constructs included in Figure 1 are not envisioned to represent all relative influences in the formation of customer loyalty in this setting.

Figure 1
The Research Model



Rather, this model represents a useful starting point for considerations in the rapidly emerging eCRM industry. Hence, we view this study as exploratory in nature.

Brand Loyalty

In this study we focus on loyalty as the ultimate endogenous construct for model prediction. The emerging evidence suggests that brand loyalty is generally considered desirable from a strategic marketing perspective (Bennett and Rundle-Teiele 2002; Chaudhuri 1999; Gwinner, Gremler, and Bitner 1998; Kumar 1999; Mittal and Lassar 1998; Reichfeld and Schefter 2000; Strauss and Friege 1999). This assertion is largely based on growing influence of the relationship marketing orientation on marketing theory and practice (Sheth and Parvitiyar 2000). Evidence is emerging that this orientation may prove particularly important with today's technology-mediated environment (Griffin 1996;

Reichheld and Schefter 2000). It is therefore not surprising that the importance of brands, and their ability to capture longer-term consumer judgments, is also growing in importance in service marketing environments (Berry 2000), and in online setting specifically (Davis, Buchanan-Oliver, and Brodie 2000). Consequently, we focus herein on loyalty and brand-related measures of the relevant constructs in our research model.

Oliver (1999b, p. 34) defines loyalty as "...a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same-brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviors." Oliver suggests that ultimate customer loyalty is a function of perceived product superiority, personal fortitude, social bonding, and their synergistic effects. Thus, Oliver considers both behavioral loyalty (i.e., purchase) and attitudinal loyalty (i.e., fortitude) components in his conceptualization of

the loyalty construct. The movement from purchase loyalty (e.g., repurchase intentions) toward more holistic conceptualizations of the loyalty construct is supported in the emerging literature (Baldinger and Rubinson 1996; Chadhuri and Holbrook 2001; Morgan 2000). Narayandas (1998) and White and Schneider (2000) propose laddering models that also appear consistent with this emerging orientation. Consequently, we treat customer loyalty in the current research as both behavioral and attitudinal in nature.

Brand Attitudes

Maio and Olson (2000) provide a concise history of the development of attitude theory in the social sciences, suggesting that the seminal theories of the attitude function share the following tenets: (1) the basic function of attitudes is to simplify knowledge about objects in the environment, and (2) attitudes can subsume a motivation to defend the self against internal conflict. Fazio (2000) suggests that the essence of attitudes involves summary evaluations of objects, i.e., individuals categorize objects along an evaluative dimension. Thus, by imposing an attitudinal evaluative structure on their social world, individuals can more easily cope with the demands of the social environment.

However, an unresolved issue is how brand attitudes specifically relate to customer loyalty or otherwise fit into marketing models of consumption as discussed herein. Baldinger and Rubinson (1996) argue for considering brand loyalty as the link between brand attitude and behavior. Chaudhuri (1999) presents evidence that customer loyalty mediates the brand attitudes – market share relationship. Dabholkar and Bagozzi (2002) suggest that attitude may play a unique and fundamental role in the formation of behavioral intentions related to technology. In these conceptualizations, brand loyalty is modeled as superordinate to brand attitude. Thus, based on this evidence, we present our first research hypothesis:

H1: Customer Loyalty is positively related to

Brand Attitude.

Customer e-Satisfaction

Satisfaction is generally defined as pleasurable fulfillment (Oliver 1997, 1999b). e-Satisfaction, defined herein as satisfaction based on technology-mediated marketing relationships, has not surprisingly become an area of growing interest in the marketing literature (Palvia and Palvia 1999; Schellhase, Hardock, and Ohlewein 2000; Szymanski and Hise 2000). (e)Satisfaction is unique from other closely related concepts such as quality, loyalty, and attitude (Oliver 1997). Satisfaction has been hypothesized in the literature to have a direct influence on customer loyalty (Mittal and Lassar 1998; Oliver 1997) and repurchase intentions/behaviors (Kumar 2002; Mittal and Kamakura 2001).

However, a recent practitioner study by Miller-Williams (2002) suggests that the relationship between satisfaction and loyalty in technology-mediated environments may not be so straightforward. In fact, these authors report a strong negative relationship between satisfaction and loyalty in their study. They suggest that the basis for these findings relates to the role of “value” in the formation of customer evaluations. We test the linkage between value, e-satisfaction, attitude, and loyalty in our research to better understand these relationships. This leads to our next two hypotheses:

H2: Customer Loyalty is positively related to e-Satisfaction.

H3: Brand Attitude is positively related to e-Satisfaction.

Value

As noted above, the value construct is also known to play an important role in models such as discussed herein. In spite of the attention devoted to this concept, the term “value” has proven to be a difficult concept to define for service marketers (Oliver 1999a). Cronin et al (1997) state that there is little disagreement on the conceptualization of

value in the marketing literature as Value = f(Service Quality/ Sacrifice). Such conceptualizations tend to focus on what is relatively perceived as “received” versus “given up” in a marketing exchange (see the following studies for examples supporting this conceptualization, including examples specific to IT settings: Albrecht 1995; Band 1991; Blackwell et al 1999; Brady and Cronin 2001; Carmon and Ariely 2000; Cronin, Brady, and Hult 2000; Gale 1994; Kumar 2002; Sawhney and Parikh 2001; Sharma, Krishnan, and Grewal 2001; Sweeney and Soutar 2001; Ulaga and Chacour 2001; Woodruff 1997; Woodruff and Gardial 1996; Ziethaml 1988).

However, such conceptualizations of “value” appear incomplete given Holbrook’s (1999) more holistic conceptualization/typology of the construct. Oliver (1999a) recently addresses this issue by suggesting that the traditional conceptualization of value referenced above has been largely constrained to the self-oriented, reactive, and extrinsic cell in Holbrook’s typology. Oliver (1999a) asserts that “value” is indeed a unique construct from satisfaction and quality and envisions these constructs as coexisting and influencing one another, as well as outcome variables such as loyalty, as consumers make consumption judgments across time. He suggests that such a conceptualization is not inconsistent with the traditional conceptualization of value above. Value is traditionally modeled as subordinate to the formation of satisfaction judgments. Recognizing the limits in traditional direct predictors of value, and consistent with the dominant conceptualization of the construct, we restrict our exploratory investigation in the current study to cost-based value. However, we discuss in our implications the need to better incorporate Holbrook’s typology into service eConsumption models. This leads to our next research hypothesis:

H4: e-Satisfaction is positively related to Value judgments.

Affect

Affect represents a construct that is known to relate to both satisfaction and brand attitudes (Kim, Lim, and Bhargava 1998; Machleit and Mantel 2001; Oliver 1997) as well as service encounter/recovery evaluations (Mattila and Enz 2002; Smith and Bolton 2002). Bagozzi, Gopinath, and Nyer (1999) provide a discussion of the role of affect versus emotions in marketing that helps frame the incorporation of affect into the current research. They define the term affect as an “...umbrella for a set of more specific mental processes, including emotions, moods, and possibly attitudes. In other words, affect can be considered a general category for mental feeling processes, rather than a particular psychological process per se.” They further distinguish emotions as “a mental state of readiness that arises from cognitive appraisals of events or thoughts, ...” (page 184). These authors assert that emotions are ubiquitous throughout marketing. They are known to influence information processing, mediate responses to persuasive appeals, measure the effects of marketing stimuli, enact goal-directing behaviors, and serve as ends and measures of consumer welfare. However, these authors further assert that an area neglected by marketers is the role of emotions in marketing exchanges and relationships. The current research attempts to fill this void by modeling affect as part of our research model. Ruth, Brunel, and Otnes (2002) call for the measurement of five basic emotions in studies such as the current research (i.e., happiness, love, fear, anger, and sadness) as well as the subordinate emotions of pride, gratitude, guilt, uneasiness, and embarrassment. The current research employs their recommended scale for affect. This leads to our next two hypotheses:

H5: e-Satisfaction is positively related to Affect.

H6: Brand Attitude is positively related Affect.

Trust

Trust also appears to be an important antecedent to loyalty. Fukuyama (1995, p. 26) defines trust as "...the expectation that arises within a community of regular, honest, and cooperative behavior, based on commonly shared norms, on the part of members of that community." Fukuyama argues that the technological revolution will make trust ever more important in understanding business behaviors (like marketing). Marketers have been interested in trust for some time, however, based on a more focused definition: "Trust is defined as a willingness to rely on an exchange partner in whom one has confidence" (Moorman, Zaltman, and Deshpande 1992, p. 315). These authors hypothesize that trust is an antecedent to commitment (also see Morgan and Hunt 1994).

However, specifically where trust might fit in models of loyalty remains unresolved. Hart and Johnson (1999) in fact argue for seeking "total trust" in a manner similar to TQM initiatives. As such, they see trust as mediating the satisfaction _ loyalty relationship. Singh and Sirdeshmukh (2000) present a model suggesting that trust is an antecedent to satisfaction (which in turn is subordinate to loyalty). This model of trust as an antecedent to loyalty is supported by the work of Chaudhuri and Holbrook (2001) in their model explaining brand loyalty (also see de Ruyter, Moorman, and Lemmink 2001). Sirdeshmukh, Singh, and Sabol (2002) most recently present evidence that value mediates the trust _ loyalty relationship. Investigations of how trust operates in technology-mediated environments have also recently emerged (Ceaparu et al 2002; De Ruyter, Wetzels, and Kleijnen 2001; Reichheld and Scheffer 2000; Urban, Sultan, and Qualls 2000). In the current research, we operationalize trust as confidence in the viability of the service provider based on the fact that a typical CRM implementation can cost upwards of \$100 million and take up to three years (Ebner et al 2002). The risks and costs are very high for organizations as CRM is often viewed as a mission critical strategic initiative. CRM service providers therefore must work closely over the long term with the IT staffs

of organizational clients to ensure product viability. This emerging evidence forms the basis for the following research hypotheses:

H7: e-Satisfaction is positively related to Trust.

H8: Brand Attitude is positively related to Trust.

H9: Customer Loyalty is positively related to Trust.

Resistance to Change

The final variable in our research model involves resistance to change. The extant literature generally accepts that commitment is central to relationship marketing (Morgan and Hunt 1994). Gilliland and Bello (2002) propose a model that attempts to link commitment to trust and loyalty by envisioning trust as an antecedent to calculative commitment and loyalty commitment. Pritchard, Havits, and Howard (1999, p. 334) define commitment as "...the emotional or psychological attachment to a brand." These authors extend considerations of commitment by arguing that resistance to change is the root tendency of commitment as well as the primary evidence of commitment, and that resistance to change is a key antecedent to loyalty. We therefore include resistance to change in our model via the following hypotheses:

H10: e-Satisfaction is positively related to resistance to change.

H11: Brand Attitude is positively related to resistance to change.

H12: Customer Loyalty is positively related to resistance to change.

METHODS

In this section we discuss the methods employed in the current research. We will discuss

the specifics of data collection, including a description of our population of interest, sampling frame, data collection strategy, the measures used to operationalize the constructs in our research model, and the methods employed to empirically assess the proposed research model and hypotheses presented in Figure 1.

Data Collection

The population of interest for this study involved organizations that currently use eCRM software. We were provided an e-mail list of approximately 8000 international senior IT managers from organizations with a history of purchasing eCRM software in the past from the company sponsoring the industry study. This list was purported to be current and was based on industrial equipment purchases within the last calendar year. The list involved work e-mail addresses. The list was sorted to identify and delete any duplicate names and e-mail addresses. The data set was collected by an independent professional third party using CRM software.

Potential respondents were sent an unsolicited e-mail identifying the nature of the study and affording them an opportunity to opt out of the online survey. Those who did not opt out were then automatically sent a follow-up e-mail in five business days that directed them to a web page with a link to the online web form. Respondents were queried on an introductory web page to ensure that they were familiar with their existing eCRM provider. Consequently, only those individuals familiar with their existing eCRM provider were instructed to complete the online survey instrument. The only appeal to complete the survey was an argument related to assisting college students in the pursuit of their studies in an undergraduate marketing research class.

Measures Used in the Study

The measures used in the current research can be found in Appendix A. These measures are based on the literature, and discussions with the relevant managers within the participating eCRM organization. All of the constructs were measured

at the global level of analysis. Readers should also be aware that we used a limited number of measures for each construct based on concerns by the sponsoring organization's managers related to response rates.

Loehlin (1998) notes that many social science models, such as the one presented herein, are models dealing with manifest variables (i.e., linear composites of observed variables) as opposed to latent variables. Path and structural equation models come in both forms and the current research is best characterized as involving manifest variables. He states that in applied situations, such as characterized by the current research, manifest variable methods retain much of their preeminence.

Statistical Methods to be Employed in the Study

A number of statistical techniques were employed in the study, most of which are available through the SPSS statistical software package. For example, descriptive measures and frequency analyses were conducted to determine distributional properties of the scales used in the study. The research hypotheses were then tested using structural equation analyses via LISREL 8.53. The next section presents the study results.

RESULTS

The following section is divided into several discussions. First, we describe our obtained sample to ensure adequate representativeness of the population of interest. Second, we report mean scores and standard errors for our model constructs. Third, we report reliability and validity scores for our obtained measures. We also address the issue of power to minimize concerns for the presence of Type I or Type II errors associated with our results. Finally, we report the results of our hypotheses tests based on structural equation analysis.

Obtained Sample

We received back 244 usable surveys, which

is not entirely unexpected given Sheenan's (2001) study suggesting that response rates to e-mail inquiries in general are dropping drastically. In addition, recent postings on the Marketing Research Roundtable listserv (www.marketresearchinfo.com) identify researchers reporting response rates as low as 1%-2%. We also received 185 auto replies from our initial wave of e-mails alone. In addition, the principal researcher was notified by 88 people that they did not consider themselves appropriate members of the population of interest. It therefore remains unknown how many target audience members were appropriately contacted. Consequently, we were unable to calculate a valid response rate.

That said, we did receive back 244 valid responses from members of the population of interest. We argue that the absence of a known response rate does not alleviate the contribution of our obtained results *when interpreted in the light of exploratory insights*. We recognize that nonresponse errors are important and can render meaningless confidence intervals computed by usual statistical formulas (Churchill and Iacobucci 2002). However, we suggest that a careful review of the obtained results in this case can help minimize these concerns, which are largely related to sample representativeness. Specifically, we first compared our obtained sample to the demographics of the known population of interest (an issue of representativeness). Second, we investigated whether the entire range of possible responses to the survey items are captured in our sample (an issue of variability). Third, we computed the standard errors for the means scores for our measures to see if they are inflated. Fourth, we assessed the reliability and validity of our measures for purposes of use in structural equation analysis. Finally, we considered whether or not we have sufficient sample size to ensure the necessary statistical power to minimize concerns of Type I and Type II errors associated with our results. We ultimately argue that replication is the ultimate test of the efficacy of reported exploratory results that possess sufficient statistical power and an unknown amount of nonresponse error.

An analysis of individual and organizational characteristics of the study respondents

demonstrates that the obtained sample captures a wide cross-section of our desired population. Most respondents were male, college-educated, and saw themselves as consistent with our description of the target audience. In addition, we received back responses from decision makers from all major organizational types and groups. We discussed the obtained sample at length with experienced decision makers from two companies in the eCRM space and they concluded that the obtained sample appears representative of the population of interest.

Mean Scores, Correlations, and Standard Errors

Table 1 presents the results of our frequency analyses of our measured constructs assuming a representative sample. The results suggest (1) that the mean scores are consistent with those generally reported in this industry (CRM Guru 2002), (2) the standard error scores are within acceptable ranges, and (3) the 95% confidence intervals are relatively narrow. In addition, there is some measure of nonnormality in the data, which is not unexpected in satisfaction-related research streams (Peterson and Wilson 1992). We subsequently normalized the data for hypothesis testing using PRELIS.

Table 2 presents a correlation of the averaged measures for our constructs. Readers will note that some intercorrelation is apparent between these closely related variables, however, such intercorrelations are commonly encountered in service research related to the involved constructs. Regression diagnostics suggested that multicollinearity is not at issue given these intercorrelations. We next moved to a consideration of the reliability and validity of our measures, as well as discussion of whether sufficient power is apparent in our study to minimize concerns of Type I and Type II errors.

Reliability, Validity, and Power

Hair et al. (1998) suggest two steps for assessing reliability with measures used in structural equation analyses. First, we investigated

Table 1
Frequency Statistics
N= 244

<i>Variable</i>	<i>Mean</i>	<i>Std Error of Mean</i>	<i>Std Dev</i>	<i>Skew</i>	<i>Kurtosis</i>	<i>Lower Bound of 95% Confidence Interval</i>	<i>Upper Bound of 95% Confidence Interval</i>
<i>Sat1</i>	4.45	0.13	2.08	0.006	-0.7	4.1952	4.7048
<i>Sat2</i>	5.44	0.14	2.23	-0.44	-0.6	5.1656	5.7144
<i>Sat3</i>	5	0.14	2.22	-0.15	-0.8	4.7256	5.2744
<i>Sat4</i>	5.72	0.14	2.24	-0.61	-0.5	5.4456	5.9944
<i>Sat5</i>	5.66	0.14	2.19	-0.48	-0.52	5.3856	5.9344
<i>Value1</i>	5.51	0.12	1.91	-0.17	-0.4	5.2748	5.7452
<i>Value2</i>	5.71	0.11	1.78	-0.52	0.21	5.4944	5.9256
<i>Value3</i>	5.86	0.12	1.89	-0.53	-0.27	5.6248	6.0952
<i>Value4</i>	5.69	0.13	2	-0.55	-0.31	5.4352	5.9448
<i>Brand affect1</i>	5.44	0.13	1.87	-0.36	-0.32	5.1852	5.6948
<i>Brand affect2</i>	5.12	0.13	1.82	-0.28	-0.18	4.8652	5.3748
<i>Brand affect3</i>	4.73	0.13	1.85	-0.18	-0.28	4.4752	4.9848
<i>Brand att1</i>	5.61	0.14	2.01	-0.48	-0.56	5.3356	5.8844
<i>Brand att2</i>	5.64	0.14	1.94	-0.46	-0.36	5.3656	5.9144
<i>Brand att3</i>	5.6	0.14	1.9	-0.47	-0.55	5.3256	5.8744
<i>Brand att4</i>	5.9	0.12	1.65	-0.64	0.648	5.6648	6.1352
<i>Sp trust1</i>	6.1	0.14	1.9	-0.63	-0.05	5.8256	6.3744
<i>Sp trust2</i>	6.15	0.14	1.92	-0.82	0.234	5.8756	6.4244
<i>Sp trust3</i>	6.26	0.13	1.85	-0.81	0.463	6.0052	6.5148
<i>Sp trust4</i>	5.99	0.13	1.85	-0.61	0.132	5.7352	6.2448
<i>O loyal1</i>	5.44	0.12	1.87	-0.45	.245	5.2058	5.6742
<i>O loyal2</i>	5.08	0.11	1.76	-0.31	.116	4.8615	5.3025
<i>O loyal3</i>	5.23	0.13	1.97	-0.29	.126	4.9878	5.4802
<i>O loyal4</i>	5.40	0.12	1.90	-0.38	.307	5.1641	5.6399
<i>Rtc1</i>	5.08	0.16	2.21	-0.08	-0.91	4.7664	5.3936
<i>Rtc2</i>	5.85	0.14	1.96	-0.37	-0.56	5.5756	6.1244
<i>Rtc3</i>	4.82	0.17	2.29	-0	-1	4.4868	5.1532
<i>Rtc4</i>	5.83	0.18	2.39	-0.47	-0.9	5.4772	6.1828

Table 2
Correlation Matrix

	<i>Loyalty</i>	<i>Trust</i>	<i>Attitude</i>	<i>Affect</i>	<i>Value</i>	<i>Satisfaction</i>
<i>Loyalty</i>	1					
<i>Trust</i>	.718	1				
<i>Attitude</i>	.754	.901	1			
<i>Affect</i>	.671	.759	.835	1		
<i>Value</i>	.602	.676	.747	.660	1	
<i>Satisfaction</i>	.651	.740	.795	.708	.890	1

Table 3
Reliability and Validity

<i>Construct</i>	<i>Reliability</i>	<i>Validity/Variance Extracted</i>
<i>Loyalty</i>	.834	.560
<i>Trust</i>	.927	
<i>Attitude</i>	.953	.944
<i>Affect</i>	.948	
<i>Value</i>	.937	
<i>Satisfaction</i>	.935	.915
<i>Resistance to Change</i>	.822	

whether all variables used for analyses were significantly related to their specified constructs, which we found to be true. Second, these authors assert that reliability estimates and variance extracted measures should be calculated for each construct in Figure 1. Table 3 presents these results and demonstrates that in all cases our construct measures exceeded a reliability standard of $>.7$. Thus, we are confident in the reliability of our measures.

We next assessed the validity of our measures. Given that the measures derived from previous studies, there appears to be a measure of face and content validity. Raines-Eudy (2000) states that the calculated shared variance scores in Table 3 are sufficient evidence for construct validity (i.e., the calculated variance-extracted scores exceeded the 50% recommended criteria for all model endogenous constructs). Thus, we are confident in the validity of our dependent measures as well. Readers will note that we did not calculate variance extracted scores for the model's exogenous variables. This is because we used a data parceling methodology in analysis that is addressed in the presentation of the SEM results in the next section.

The final issue before turning to the results of our analysis using SEM involves the issue of power. Power has at its core the minimization of errors in statistical inference (Murphy and Myers 1998). Hu and Bentler (1999) address the issue of power when using structural equation analysis and conclude that using a combination of fit indices can serve to control for the occurrence of Type I

and Type II errors in hypothesis testing. Our sample size is consistent with their recommendations, we therefore use Hu and Bentler's recommended fit indices in interpreting our analyses (RMSEA of close to .06; CFI close to .95; and a value close to .08 for SRMR). The next section presents the results of our hypothesis tests.

Results of Hypothesis Tests

It is apparent from the preceding literature review that the constructs investigated in this study are highly interrelated. We therefore chose a strategy of parceling our exogenous variables for subsequent analysis using SEM. Bandalos and Finney (2001) note that the use of item parcels has become a common practice in structural equation modeling in recent years. These authors suggest that reasons for using item parcels include (1) parsimony, (2) increased reliability of the measures, (2) more continuous and normally distributed item distributions, (3) that it benefits factor analysis with small samples, (4) is less idiosyncratic indicator variance, and (5) parceled solutions typically result in better model fit than solutions at the item level of analysis. They identify the limitations of item parceling as well, including (1) information about individual items is lost, (2) items being parceled must be reasonably unidimensional, (3) parameter estimates and factor scores derived from parceled analyses will be dependent on the particular items being parceled together, and (4) the possibility of obscuring the true factor structure of the items and obtaining

Table 4
Results from Hypothesis Testing

<i>Endogenous Variable</i>	<i>Equation¹</i>	<i>R²</i>	<i>Reduced R²</i>
<i>Loyalty</i>	NS*Satisfaction + .40*Attitude + NS*Trust + .52*RTC	.80	.78
<i>Satisfaction</i>	.62*Value + NS* Affect + .21*Trust + .042*RTC	.79	.79
<i>Attitude</i>	.23*Satisfaction + .29*Affect + .50*Trust + NS*RTC	.92	.91

1 = All reported values represent standardized weights
 NS = Not statistically significant a p =.05
 RTC = Resistance to Change

Table 5
Results of Hypothesis Testing

<i>Hypothesized Relationship</i>	<i>Confirmed in Our Study?</i>	<i>t-Value</i>	<i>Standard Error</i>
H1: Attitude → Loyalty	Yes	2.86	0.14
H2: Satisfaction → Loyalty	No	0.58	0.079
H3: Satisfaction → Attitude	Yes	5.84	0.039
H4: Value → Satisfaction	Yes	11.10	0.056
H5: Affect → Satisfaction	No	1.67	0.053
H6: Affect → Attitude	Yes	7.94	0.037
H7: Trust → Satisfaction	Yes	3.78	0.056
H8: Trust → Attitude	Yes	12.54	0.040
H9: Trust → Loyalty	No	0.27	0.11
H10: Resistance to Change → Satisfaction	No	1.96	0.042
H11: Resistance to Change → Attitude	No	1.32	0.029
H12: Resistance to Change → Loyalty	Yes	9.11	0.057

biased estimates of other model parameters.

These authors argue that item parcels are widely and uncritically used in social science research. They conclude by recommending that researchers use item parceling under the following conditions: (1) the unidimensionality of the potential item parcels has been established in previous research, (2) parcels should be formed within each unidimensional factor, (3) being reasonably sure that any secondary factors may not influence other model constructs, and (4) reporting detailed explanations of how and why parceling is being conducted as part of the statistical analyses. Recognizing their cautions, we implemented their reporting recommendations.

We parceled the exogenous items in our model based on the argument that the respective global indicators represent a unidimensional index based on the domain sampling theory. We confirmed each construct's unidimensionality using SEM. We then assessed their contribution to our multi-item endogenous variable to test our hypotheses.

Analysis of our research model yielded the following indices: $\chi^2 = 182.83$, $df=105$, $RMSEA=0.055$, $CFI=.99$, $NFI = 0.99$, $IFI = 0.99$, $GFI = 0.92$, and $SRMR =0.025$. Hu and Bentler (1999) argue that these results support the argument that the model fits the data statistically. Thus, we conclude that the research model presented in Figure 1 appears supported by the

sample obtained in this study. Readers will note that we have included both the structural and reduced-form R^2 's in our results. The reason we have done so is based on Joreskog's (1999) argument that traditional R^2 values may not be appropriate when using SEM analyses. Rather, the reduced form R^2 can be interpreted as the relative variance of a dependent variable explained or accounted for by all explanatory variables jointly.

The results suggest that overall loyalty in this sample is a function of brand attitude and resistance to change. Customer satisfaction is influenced by value judgments and service provider trust. Brand attitude is a function of satisfaction, affect, and trust. Thus, customer satisfaction is found in this study to have an indirect affect on loyalty, through brand attitude. Again, we encourage readers to consider these results tentative pending replication across alternative research settings. The next section discusses the research and managerial implications of the reported results.

RESEARCH AND MANAGERIAL IMPLICATIONS

Table 5 summarizes the results of our hypothesis tests, as well the t-values and standard errors associated with each tested path. The purpose of this study was to develop and test a complex customer loyalty model for the eCRM eService industry. Consistent with much of the literature above, our results first suggest that all of the identified constructs help explain brand loyalty, although some of these influences appear indirect. For example, we find that brand attitude and resistance to change directly influence brand loyalty. However, unlike the Miller-Williams (2002) study, we find a nonsignificant relationship between e-satisfaction and loyalty, not a negative relationship as they found in their study. E-satisfaction appears to operate through the mediating influence of brand attitude in our sample and research setting. Chaudhuri and Holbrook (2001) present a model of loyalty that suggests that purchase and attitudinal loyalty are both functions of brand affect and brand trust. We find evidence of these relationships can be indirect

as well and mediated through e-satisfaction and brand attitude.

There are a number of issues that derive from this study that will interest marketing academicians and practitioners alike. We begin by considering future research implications. Much work remains to be done in developing a better understanding of the relative domains and interrelationships between loyalty, attitude, and e-satisfaction, all of which likely operate at multiple levels of analysis. The role of affect in such models also appears worthy of further investigation. We find that affect appears to relate more to brand attitude than e-satisfaction in our study. Rather, e-satisfaction appears driven by perceived value, trust, and resistance to change to a lesser degree in our study. This finding could reflect our global measures, and future research using more comprehensive measures of affect versus emotion will contribute to our understanding. Trust appears to influence both e-satisfaction and brand attitude. We do not find a direct relationship between trust and loyalty in our study. One potential explanation is that we focused in the current research on service provider trust. Future research should consider more comprehensive measures of trust, as well as consider differentiating brand trust from service provider trust.

One particularly intriguing avenue of future research that will contribute to a better understanding of the relative domains and of constructs such as loyalty, e-satisfaction, attitude and affect involves emerging attitude research. Perugini and Bagozzi (2001) present an attitude model based on consumption goals that could form the foundation for a better understanding of these constructs. Their theory suggests that goal related behavioral intentions are formed based on desires as a mediator of traditional antecedents to intention formation (e.g., affect, Attitude_{Act}, self efficacy, and perceived control). We believe that a study that simultaneously considers the relative influences of the disconfirmation model and Perugini and Bagozzi (2001)'s attitude based model on the formation of customer loyalty would be particularly illuminating and may help us to further understand the direct and indirect

influences considered herein.

We have asserted throughout this manuscript the exploratory nature of our research. Future research might further investigate whether the relationships identified in the current study generalize to other technology-mediated settings (i.e., whether or not the observed relationships are (1) replicable, and (2) vary across research settings such as different industries, demographic groups, and competitive settings).

Another question that emerges from this study concerns the relative complexity of satisfaction-based service models. This study reports results explaining the vast majority of explained variance in customer loyalty. Assuming that these results bear scrutiny; will the addition or more constructs add useful information, particularly for service marketing practitioners? Where do all of the interesting and important constructs apparent in service marketing research fit into models such as discussed in this study (e.g., perceived risk, brand equity, justice, quality, and involvement just to name a few)? Will it become increasingly harder to develop models that include all relevant constructs given our existing measurement limitations and respondents' ability to differentiate ever more subtle distinctions between marketing-related constructs, as well as their willingness to provide data?

Is customer loyalty the strategic end-all for explanatory models explaining marketing relationships with service organizations? In other words, is loyalty the appropriate ultimate expression of service marketing relationships? Our suspicion is that in the end, efforts to explain "value" along the global lines envisioned by Holbrook (1999) or Sheth (Sheth and Newman 1991; Sheth, Newman, and Gross 1991) may prove most efficacious, particularly if we consider moving beyond a sole focus on economic considerations and short-term profit orientations.

Managerially, the tentative results reported herein suggest that a singular focus on greater e-satisfaction scores from eCRM customers may provide an incomplete strategy in support of competitive differentiation. Our results suggest that positive brand attitudes and minimizing resistance to change may be better mechanisms for

influencing long-term relationship marketing outcomes in this particular industry. We encourage replication of this work in future considerations of customer loyalty in eCRM settings.

Limitations of the Current Research

We are increasingly alarmed by the threat of nonresponse to marketing research invitations, particularly in a technology-mediated world. We have candidly shared our experience in the hope that attention can be drawn to this issue. Every indication is that people are becoming less enthusiastic with participating in survey-based marketing research studies. We call upon appropriate marketing organizations (e.g., AMA, JAMS, etc.) to work together to develop a discipline-wide integrated marketing strategy to educate people as to the importance of marketing research to the general well being of our world. We believe that failure to do so will likely lead to dire consequences in the near future.

Finally, the use of structural equation modeling (SEM) itself is not without criticism. McDonald and Ho (2002) present a discussion of the principles and practices currently used in reporting results of SEM. These authors identify a number of issues that complicate the interpretation of reported SEM results. For example, they suggest that, "... the possibility of unspecified omitted common causes is the Achilles heel of SEM" (p. 67). They discuss the problems associated with confidently asserting model identifiability. They bemoan the problems associated with the requirement in SEM for multivariate normality and missing data. They provide an enlightening discussion with the problems associated with interpreting goodness-of-fit indices. They ultimately suggest the reporting of correlation matrices and standard errors underlying SEM results (among other considerations when possible). We have endeavored to be sensitive to these arguments by reporting both our correlation matrix, standard errors associated with each hypothesized relationship, and numerous SEM fit indices beyond those suggested by Hu and Bentler (1999).

We look forward to marketers and other social scientists grappling with these important and complex issues in future studies.

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Appendix A The Measures Used in the Research

The Construct/Source for Measures	<i>The Measures (9 point Likert-Type Scales Unless Otherwise Noted) Variable Name in Parentheses</i>
Value (Srideshmukh, Singh, and Sabol 2002)	(Value1) For the prices you pay for using your current CRM systems integrator, would you say using your current CRM service provider is a ... (Very Poor Deal → Very Good Deal) (Value 2) For the time you have spent using your current CRM systems integrator, would you say that using your current CRM service provider is ... (Highly Unreasonable → Highly Reasonable) (Value 3) For the effort involved with using your current CRM systems integrator, would you say that using them is ... (Not at All Worthwhile → Very Worthwhile) (Value 4) How would you rate your overall experience with your current CRM systems integrator ... (Extremely Poor Value → Very Good Value)
Brand Affect (Chaudhuri and Holbrook 2001)	(Brand_affect1) I feel good when I use my current CRM systems integrator. (Brand_affect2) My current CRM systems integrator brand makes me happy. (Brand_affect3) My current CRM systems integrator gives me pleasure.
Service Provider Trust (Srideshmukh, Singh, and Sabol 2002)	I feel that my current CRM systems integrator is: (Sp_trust1) Very Undependable → Very Dependable (Sp_trust2) Very Incompetent → Very Competent (Sp_trust3) Of Very Low Integrity → Of Very High Integrity (Sp_trust4) Very Unresponsive to Customers → Very Responsive to Customers
Resistance to Change (Pritchard, Havitz, and Howard 2001)	(Ric1) My preference to use my current CRM systems integrator would not willingly change. (Ric2) It would be difficult to change my beliefs about my CRM systems integrator. (Ric3) Even if others recommended another CRM systems integrator, I would not change my preference for my current CRM service provider. (Ric4) To change my preference from my current CRM systems integrator would require major rethinking.
Overall Brand Attitude (Keller 1998)	(Brand_att1) My attitude toward my current CRM systems integrator is best characterized as: (Very Unfavorable → Very Favorable) (Brand_att2) I like my current CRM systems integrator: (Not At All → A Great Deal) (Brand_att3) My current CRM systems integrator satisfies your needs: (Not At All → Totally) (Brand_att4) My current CRM systems integrator is: (The Worst Brand for Me → The Very Best Brand for Me)
Satisfaction (Oliver 1997)	(Sat1) My current CRM system integrator exceeds my highest expectations. (Sat2) My current CRM system integrator is among the best I could have bought. (Sat3) My current CRM system integrator is exactly what I need. (Sat4) I am satisfied with my decision to use my current CRM system integrator. (Sat5) I am sure that it is the right thing to do to use my current CRM system integrator.
Loyalty (Pritchard, Havitz, and Howard 1999; Oliver 1997)	(Attitudinal_loyalty1) I am committed to buying my current provider of CRM integration. (Attitudinal_loyalty2) I am generally willing to wait for new CRM services from my current CRM systems integrator. (Behavioral_loyalty1) I will buy from my current CRM systems integrator the next time I buy CRM integration services. (Behavioral_loyalty2) I plan to do more business with our current CRM systems integrator in the foreseeable future.

JUSTICE-BASED SERVICE RECOVERY EXPECTATIONS: MEASUREMENT AND ANTECEDENTS

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ABSTRACT

This study attempts to empirically test an alternative conceptualization that directly integrates perceived justice within the expectancy-disconfirmation framework. While our model acknowledges injustice as an important psychological motivator of redress seeking after service failures, we hypothesize that different components of injustice, namely distributive, procedural, and interactional justice, can be meaningfully integrated within the expectancy-disconfirmation model. We examine the measurement properties of our conceptualization based on a field experiment with a sample of 875 respondents. We found that consumers form normative recovery expectations distinctly in terms of distributive justice and procedural/interactional justice. These justice-based recovery expectations are also negatively related to recovery disconfirmation as hypothesized. The results support our attempt to directly incorporate perceived justice within the expectancy-disconfirmation framework. We also explore potential antecedents to consumer recovery expectations and found that each of the two justice components draws from distinct antecedents. All three tested antecedents – magnitude of service failure, switching cost, and length of the customer-organization relationship – are found to have either a direct or an interactive effect on expectations of distributive justice and procedural/interactional justice.

INTRODUCTION

Much of today's world economy is dominated by services. Even manufacturing firms that, in the past, have largely depended on product differentiation for their competitive advantage now recognize the vital role that services play in

the current and future success of their businesses. While firms continue to improve their services, service failure is inevitable in all service contexts even for firms with world-class service systems (Zeithaml and Bitner 2003). Service failures could be costly because they could lead to negative word-of-mouth (Liu, Sudharshan and Hamer 2000) and customer defection (Maxham 2001). To alleviate the negative consequences of service failures and retain their customers, firms must understand what customers expect when service failures occur, and implement effective service recovery strategies.

A prerequisite for developing effective service recovery strategies is an understanding of customers' psychological processes in the evaluation of a service failure and the subsequent service recovery effort. In the service recovery literature, equity (or perceived justice) theory emerges as the dominant thought, with disconfirmation often considered a supplementary or control variable (Oliver and Swan 1989; Smith and Bolton 2002; Smith, Bolton and Wagner 1999). Researchers have found that various aspects of perceived justice are salient antecedents to customer recovery satisfaction (Smith et al. 1999; Tax, Brown and Chandrashekar 1998). Recovery disconfirmation, resulted from a comparison of recovery performance to "predictive" recovery expectations, is also found to have a significant, albeit smaller, effect on post-recovery satisfaction (Andreassen 2000; McCollough, Berry and Yadav 2000). These studies that have examined joint influences of disconfirmation and equity perceptions on recovery satisfaction have treated equity and disconfirmation as separate processes of service recovery evaluation. However, Oliver and Swan (1989) have put forth an alternative hypothesis regarding the connection between the equity and disconfirmation comparison processes for future

testing. They suggest that equity could be directly integrated within the more general expectancy-disconfirmation process. Singh and Widing (1991) also provide conceptual supports for a service recovery evaluation process that models post-recovery satisfaction as a function of "normative" expectations of recovery response, perceived recovery performance, and recovery disconfirmation (resulted from a comparison of perceived recovery performance to normative recovery expectations). To date, this alternative hypothesis of an integrative-effect model of equity and disconfirmation still awaits empirical confirmation.

Following Oliver and Swan (1989) and Singh and Widing (1991), our study takes an integrative approach by incorporating equity within the expectancy-disconfirmation process. Specifically, we measure both recovery expectations and perceived performance in terms of perceived justice and treat these equity-based measures as constructs in the expectancy-disconfirmation framework. Using a field experiment with 875 subjects, we assess the measurement properties of this integrative-effect model and ascertain the antecedents to consumer "normative" recovery expectations. Our paper aims to contribute in three areas: (1) to empirically examine the measurement properties of an equity-based expectancy-disconfirmation framework in service recovery evaluation, (2) to test hypotheses regarding potential antecedents to consumer "normative" recovery expectations, and (3) to provide implications on the development of effective recovery strategies.

We begin by discussing briefly some key issues in both the equity and expectancy-disconfirmation frameworks when applying to service recovery and the conceptual background for their integration. This is followed by the presentation of our hypotheses. Then, our methodology that involves the use of a mixed-design experiment is described, followed by a discussion of the data analyses and results. Finally, we conclude with implications of the findings and suggest some directions for future research.

CONCEPTUAL FRAMEWORKS

Equity Theory

Since first introduced into the marketing literature, equity theory has been applied to customer satisfaction research. The concept of equity concerns a fairness, rightness, or deservedness judgment that individuals make in reference to what one or others receive (Oliver 1997, p.194). Generally, the theory suggests that in an exchange if customers feel equitably treated and their input to the exchange is in balance with the output of the exchange, then they will be satisfied (Goodwin and Ross 1992; Oliver 1997). Further, the theory suggests that customers are concerned not only with the perceived fairness of the *outcome* they receive, but also with the perceived fairness of the *process* used to deliver the outcome (Conlon and Murray 1996; Palmer, Beggs and Keown-McMullan 2000). These two concerns are referred to as *distributive* and *procedural* justice, respectively. Some studies also separate out the inter-personal aspect of procedural justice, referred to as *interactional* justice, which emphasizes the manner in which the process is executed and information is communicated to the customer by the service provider (Seiders and Berry 1998; Smith et al. 1999; Tax et al. 1998).

Past research finds equity theory to be especially valuable in explaining recovery satisfaction (Smith et al. 1999; Tax et al. 1998). Given that consumers often perceive an inequity following a service failure, their needs for justice are often provoked and they are more likely to engage in equity evaluation in the redress stage (Hoffman and Kelley 2000; Maxham 2001). It is also argued that because consumers confront a specific service staff rather than an anonymous firm in most service scenarios, the notion of equity, which is based on a comparison between self and others, is more salient in service rather than product failure situations (Blodgett, Hill and Tax 1997; Goodwin and Ross 1989; Seiders and Berry 1998). Yet the application of equity theory to service recovery evaluation has, thus far, been limited to the examination of a direct effect of

perceived justice on satisfaction or loyalty.

Expectancy-Disconfirmation Paradigm

The expectancy-disconfirmation paradigm is the most commonly used framework to model customer satisfaction/dissatisfaction (CS/D) evaluation. This framework postulates that consumers would compare the perceived performance of a product or service against their prior expectations (Oliver and DeSarbo 1988; Rust and Oliver 1994; Tse, Nicosia and Wilton 1990). Whether the comparison outcome could be perceived as worse than expected (a negative disconfirmation), better than expected (a positive disconfirmation) or just as expected (a zero disconfirmation or, simply, a confirmation), will directly drive the satisfaction evaluation (Oliver 1980, 1981). While most customer satisfaction studies have adopted the confirmation/disconfirmation paradigm, expectations or more precisely predictive expectations are not the only comparison standard considered (Tse and Wilton 1988; Yi 1990). Other proposed standards of comparison include comparison levels derived from consumers' past experience and other consumers' experience with similar products (LaTour and Peat 1980; Swan and Martin 1981), equity (Fisk and Young 1985; Oliver and Swan 1989), experience-based norms (Woodruff, Cadotte, and Jenkins 1983; Cadotte, Woodruff, and Jenkins 1987), and value-percept (Westbrook and Reilly 1983). See Yi (1990) for an excellent review of the different standards of comparison.

For quite some time, researchers (Oliver and DeSarbo 1988; Tse et al. 1990) have proposed to extend the expectancy-disconfirmation paradigm to service recovery evaluation. Withstanding the challenge to develop context-specific measures (Fournier and Mick 1999), a few attempts (Gilly and Gelb 1982; Resnik and Harmon 1983) were made to examine the construct of recovery expectations and how well recovery efforts match with consumer expectations. Singh and Widing (1991) also proposed a theoretical model that extends the disconfirmation of (normative) expectations paradigm to consumer complaint response evaluation process. However, none of

these studies have considered the concept of perceived justice explicitly.

A number of recent studies have also investigated the joint influences of disconfirmation and equity on customer satisfaction with service recovery (Andreassen 2000; McCollough et al. 2000; Smith and Bolton 2002; Smith et al. 1999). However, these studies have modeled equity and disconfirmation as distinct and complementary effects affecting service recovery evaluation. They find that disconfirmation complements perceived justice in the prediction of service recovery satisfaction, but its effect is the smaller of the two determinants.

Alternatively, Oliver and Swan (1989) have suggested an *integrative* approach that incorporates equity theory within the general disconfirmation paradigm by formalizing equity as expectations and subject it to later disconfirmation. This alternative conceptualization is similar to Singh and Widing's (1991) theoretical framework, which models post-recovery satisfaction as a function of "normative" expectations of recovery response, perceived recovery performance, and recovery disconfirmation. Neither Oliver and Swan's alternative conceptualization nor Singh and Widing's theoretical model has ever been empirically tested.

Proposed Model of Justice-Based Recovery Expectations

Following Oliver and Swan (1989) and Singh and Widing (1991), we propose to integrate equity within the expectancy-disconfirmation framework in the form of justice-based "normative" recovery expectations. As proposed in the equity literature, we model consumers' expectations as comprised of distributive, procedural, and interactional justice needs. These expectations are conceptualized as *should* expectations. A *should* expectation is different from a *will* expectation in that the former represents a normative standard while the latter is predictive in nature. For example, after having experienced a three-hour delay in a flight, a customer believes that the airline should provide her with a compensation of

\$200 (a *should* expectation) because she has missed her connecting flight and will have to spend a night at a hotel. However, she thinks the airline will likely give her 100 frequent-flyer points (a *will* expectation) based on a similar prior experience she had with this airline. Although *should* expectations are unduly receiving less attention than *will* expectations (Cadotte et al. 1987; Fournier and Mick 1999), several researchers (Swan and Trawick 1979; Westbrook and Reilly 1983; Woodruff, Cadotte and Jenkins 1983; Zeithaml, Berry and Parasuraman 1993) argued that CS/D is more likely to be determined by how well performance fulfills needs, wants, or desires of consumers, rather than how performance compares with pre-purchase predictions.

Further, the notion of *should* expectations also appeals to researchers who share our interest in complaint handling (Gilly and Gelb 1982; Resnik and Harmon 1983; Singh and Widing 1991). When lodging a complaint, consumers express their "desired" response and evaluate firms' actual recovery response as "appropriate" or not (Gilly and Gelb 1982; McCollough et al. 2000; Resnik and Harmon 1983). Both the notions of "desired" and "appropriate" relate to the referent state of *should* expectations. Past studies also find that *will* recovery expectations, which represent consumer-perceived likelihood of what may be gained from the firm's recovery effort, determine whether a dissatisfied consumer will complain (Blodgett, Granbois and Walters 1993; Oliver 1981). *Should* expectations concerning the desired recovery performance that meets consumers' needs/wants are, on the other hand, more likely to serve as "benchmarks" for later disconfirmation and satisfaction judgement (Gilly and Gelb 1982; Singh and Widing 1991). Correspondingly, we model recovery disconfirmation as a function of these justice-based "normative" recovery expectations and perceived recovery performance. As discussed, these justice-based measures consist of the distributive, procedural, and interactional dimensions.

HYPOTHESES

Normative Recovery Expectations, Perceived Recovery Performance, and Disconfirmation

Our primary goal is to assess the role of equity-based recovery expectations in the service recovery evaluation process. Given the evidence that expectations of complaining consumers are often not met (Gilly and Gelb 1982), a closer look at recovery expectations seems highly warranted in the complaining behavior literature. Since prior studies have established the different dimensions of perceived justice (e.g., Blodgett et al. 1997; Smith and Bolton 2002; Smith et al. 1999), we also expect consumers to form normative expectations on the three dimensions of distributive justice, procedural justice, and interactional justice. Hence, we expect:

H1: Consumers form normative recovery expectations in terms of perceived justice (i.e., distributive justice, procedural justice, and interactional justice).

In line with previous research applying the expectancy-disconfirmation paradigm with *should* expectations, we expect a contrast effect of normative recovery expectations on disconfirmation. That is, the higher the normative expectations or equity needs, the more difficult it is for the recovery effort to generate a positive disconfirmation. This contrast effect can be attributed to the fact that customers have an initial dissatisfaction due to the service failure. Given the same level of expectations, a higher perceived recovery performance should be more likely to produce a positive disconfirmation. Previous research also provides plenty of support for a positive effect of disconfirmation on satisfaction, which in turn affects loyalty-based behavioral intentions positively. Therefore, we hypothesize:

H2a: Normative recovery expectations of equity have a negative relationship with recovery disconfirmation.

H2b: Perceived recovery performance of equity has a positive relationship with recovery disconfirmation.

Research that examines effects of different components of perceived justice finds that distributive justice has more influence on immediate cognitive evaluation than other types of justice (Mattila 2001; Smith et al. 1999). This may be caused by the fact that distributive justice ("what I receive is fair or not") is the primary motivator and hence most instantaneously processed in the service recovery context than is procedural justice. It is consistent with social psychology research, which suggests that it is easier for customers to access information on outcomes than on procedures or interactions (Leventhal 1980). Evidence from content analysis also shows that complaining consumers often describe distributive justice-related issues such as compensation as their top concern (Goodwin and Ross 1989; Tax et al. 1998). We hypothesize that the differential effects of distributive justice (vs. procedural justice or interactional justice) apply to the relationships between recovery disconfirmation and both recovery expectations and performance.

H3: The relationship between distributive justice (expectations and performance) and recovery disconfirmation is stronger than that of procedural justice or interactional justice in redress seeking behavior.

Antecedents to Consumer Expectations of Perceived Justice

Because normative recovery expectations have not been examined in the literature, direct supports for the development of specific hypotheses regarding potential antecedents to normative recovery expectations are very limited. Nevertheless, we believe it is useful to ascertain factors that potentially affect the formation of normative recovery expectations. We note that support for hypotheses presented in this section should be considered largely indirect in nature.

We have selected to examine (1) magnitude of

the service failure, (2) switching cost, and (3) customer-organization relationship as potential antecedents based on findings from previous research on perceived justice in service recovery evaluations (e.g., Hoffman and Kelley 2000; Smith et al. 1999; Tax et al. 1998).

Magnitude of service failure has been examined as a key characteristic of service failure context in a number of recent studies (see Smith and Bolton 1998, 2002; Smith et al. 1999). In general, we observe that most complaints are lodged only when customers experience what they perceived to be a serious problem; once these customers have complained, they expect action (Tax and Brown 1998). Therefore, customers who have experienced more severe service failures might have higher expectations regarding service recovery. Smith et al. (1999) also argue that customers' requirements on different levels of recovery will depend on the severity of the failure. Particularly, the magnitude of the failure will determine the level of recovery required to restore perceived justice. They find that recovery actions in terms of compensation and speed of recovery have a greater impact on perceptions of distributive and procedural justice, respectively, when magnitude of failure is low than when magnitude of failure is high. It could be that customers have lower expectations of distributive and procedural justice (therefore, more easily met) when the magnitude of failure is lower. In sum, we hypothesize that:

H4: Customers have higher normative recovery expectations of *perceived justice* when magnitude of failure is high than when magnitude of failure is low.

Switching cost could be a potential antecedent to recovery expectations because it could affect customer loyalty or retention (Bowen and Lawler 1992; Hurley 1998) in services. After having experienced a service failure, a customer is less likely to defect if the cost of switching to alternative providers is high. Customers with high switching cost are less likely to defect because poor service may be less alienating to them or they may be more easily satisfied with a firm's

recovery strategy (Hoffman and Kelley 2000). Therefore, we expect:

H5: Customers have lower normative recovery expectations of *perceived justice* when their switching cost is high than when their switching cost is low.

Examining customer-organization relationship as a potential antecedent to recovery expectations is of interest to service recovery researchers because stronger (or longer) versus weaker (or shorter) relationships are qualitatively different and they have differential moderating effects on the relationship between service recovery and trust (Tax et al.1998). It is reasonable to expect that customers who visit a restaurant regularly and continuously do it because of their prior positive experience with the restaurant. Tax, Brown and Chandrashekar (1998) hypothesize and confirm that a prior positive experience could mitigate the negative effects of a poor service recovery effort on trust. We infer from this finding that regular or longer-term customers are more tolerant of a poor service recovery effort because they might have lower recovery expectations. On the other hand, a number of studies suggest that clients in long-term relationships begin to have higher expectations for service providers (Boulding, Kalra, Staelin and Zeithaml 1993; Moorman, Zaltman and Deshpandé 1992) and those expectations will be increased and adjusted higher from one failure to the next (Maxham and Netemeyer 2002). In sum, the above studies provide arguments and results to support the effect of relationship on normative recovery expectations of perceived justice. However, a conclusion regarding the direction of the effect could not be made until further empirical tests are conducted. Therefore, we hypothesize that:

H6: The strength or length of customers' relationship with an organization will have an impact on their normative recovery expectations of *perceived justice*.

Table 1
Demographic Characteristics of Respondents

<u>Demographic Variable</u>	<u>Percentage Distribution</u>
Gender	%
Male	49.60
Female	50.40
Age	
18-24	19.20
25-30	21.40
31-40	25.90
41-50	20.60
51 or above	12.90
Marital Status	
Single	47.50
Married	52.50
Occupation	
Professionals	15.40
Managerial/Executive	10.90
White Collar	33.40
Technical	12.40
Students	6.20
Home duties	7.00
Retired/Unemployed	7.30
Others	7.40
Education	
Below High School	12.30
High School Graduate	41.70
College	17.60
Graduate level or above	28.40
Personal Monthly Income	
Below HK\$10,000	34.70
\$10,000 - HK\$19,999	38.60
\$20,000 - HK\$29,999	15.80
\$30,000 - HK\$50,000	8.70
Above HK\$50,000	2.20

Note: Sample size = 875

METHODOLOGY

Sampling and Data Collection Method

We employed a mixed-design experiment by conducting a survey using convenience sampling at diverse locations. Respondents were recruited on a university campus, at residence houses, and in business and shopping areas in order to provide a sample of customers with diverse demographics and service experiences. Table 1 provides a summary of the characteristics of the sample. The total sample has 912 respondents; missing data reduced the analysis sample to 875 respondents.

Respondents were asked to evaluate written failure/recovery scenarios set in the context of a restaurant that they visited most often. Although this approach involves a trade-off between control and generalizability, a scenario method is useful to explore complex concepts that are not easily operationalized in a real world setting (Eroglu 1987). The use of scenarios has been practiced extensively in previous satisfaction and service recovery research (e.g. Bitner 1990; McCollough et al. 2000; Smith and Bolton 1998, 2002; Smith et al. 1999). Since the survey is conducted across multiple restaurants, the results could be generalized across companies in the restaurant industry with added external validity.

Experimental Design

The mixed-design experiment involved a 2 x 2 x 2 between-subject design, in which type of failure (outcome versus process), magnitude of failure (high versus low) and importance of the purchase (important versus less important) were manipulated. An important purchase is operationalized as a dinner party that the subject was responsible for organizing while a less important purchase is described as a usual dinner with only the respondent himself/herself. Descriptions of the eight failure scenarios are presented in Appendix A. Similarly, the recovery response (from the restaurant) also involved a 2 x 2 x 2 between-subject design. In this design, three service recovery attributes (compensation, response speed, apology) were manipulated. Compensation was varied at two levels (high or low), expressed as percentage discounts on the next visit. Response speed was manipulated at two levels (within 24 hours or more than 1 month), as was apology (present or absent). The recovery response scenarios are described in Appendix B. The eight service failure scenarios and eight recovery response scenarios provide sixty-four treatment cells. Each subject was exposed to one of the treatments, with treatments completely randomized across subjects.

Data for this study were collected using a two-part survey. In Part I, subjects began by naming a restaurant that they visited most often. Next, they

answered a series of closed-end questions about their experience with the restaurant (length of patronage, frequency of visits, etc.), followed by questions regarding their pre-failure satisfaction with and loyalty to the restaurant. Subjects were then presented with a hypothetical encounter at the restaurant in which a service failure occurred. Following a series of questions regarding their evaluations of the service failure (including manipulation checks), subjects were asked for their propensity to complain and/or exit and their normative recovery expectations. Starting in Part II of the survey, a scenario of service recovery was randomly presented to each subject and followed by a set of questions (including manipulation checks) for evaluating the service recovery (perceived justice, disconfirmation, etc.). Finally, they rated the post-recovery satisfaction and behavioral intentions toward the restaurant, and provided demographic information.

Measurement of Key Constructs

Since a key objective of this study is to empirically examine an integration of perceived justice within the expectancy-disconfirmation framework in service recovery evaluation, both normative recovery expectations and perceived recovery performance are measured in terms of perceived justice. Items to measure normative recovery expectations are developed by consulting the literature on perceived justice and normative expectations. We included multiple items to represent all three dimensions of perceived justice (namely distributive, procedural, and interactional) as described in the literature. However, recent research on perceived justice seems to suggest that the conceptualizations of interactional justice and procedural justice can be integrated. Perceptions of procedural justice are found to be influenced by factors that go beyond the formal procedures used to resolve disputes or allocate rewards (Bies 1987; Greenberg 1990). In particular, it has been demonstrated that judgments of procedural justice are influenced by the interpersonal treatment people receive from decision-makers, and the adequacy with which formal decision-making procedures are explained (Tyler and Bies 1990).

Table 2
Operationalization of Constructs and Measurement Model Results

Construct	Items	Factor Loading	Composite Reliability			
		Standardized	Construct			
Recovery Expectations:						
▪ Distributive Justice (EDJ)	The restaurant should provide a monetary compensation to me.	0.799	0.751			
	The restaurant should provide a written letter of apology to me.	0.752				
▪ Procedural/Interactional Justice (EPJ)	The restaurant should be courteous and sincere when responding to my complaint.	0.850	0.851			
	The restaurant should correct its mistake quickly.	0.802				
	The restaurant should promise to put the proper effort into investigating the problem.	0.744				
	The restaurant should take care of my complaint immediately.	0.664				
Recovery Performance:						
▪ Distributive Justice (PDJ)	The compensation I received was appropriate.	0.861	0.841			
	In resolving the problem, the restaurant gave me what I needed.	0.842				
▪ Procedural/Interactional Justice (PPJ)	The restaurant seemed very concerned about my problem.	0.848	0.759			
	The employees didn't put the proper effort into handling my complaint. (R)	0.612				
	The employees' communications with me were appropriate	0.607				
	The restaurant handled my complaint in thoughtful manner.	0.601				
Recovery Disconfirmation (DISC)	The length of time taken to resolve my problem was longer than necessary. (R)	0.408				
	How would you rate the restaurant's response to your complaint as compared to your expectations?					
Goodness-of-Fit Statistics:						
$\chi^2 = 214.841$	df = 68	P = .000	GFI = .965	CFI = .970	TLI = .960	RMSEA = .050
	EDJ	EPJ	PDJ	PPJ	DISC	
1. EDJ	1.000					
2. EPJ	0.249 ^a	1.000				
4. PDJ	-0.159 ^a	-0.071 ^b	1.000			
5. PPJ	-0.127 ^a	-0.099 ^a	0.660 ^a	1.000		
6. DISC	-0.189 ^a	-0.120 ^a	0.651 ^a	0.676 ^a	1.000	
Mean ^c	3.999	5.827	4.318	3.999	4.046	
S.D.	1.344	0.869	1.381	0.998	1.434	

^a p<0.01(2-tailed).

^b p<0.05 (2-tailed), Sample size = 875

^c Measures averaged by the number of scale items.

This issue of whether procedural justice and interactional justice should be integrated will be addressed empirically in the confirmatory factor analysis and measurement model estimation. Recovery disconfirmation is measured by asking the respondent to rate the restaurant's response to his/her complaint as compared to expectations. Descriptions of the final scale items (after item pruning) used to represent key constructs in this study are presented in Table 2.

As mentioned, potential antecedents to consumer normative recovery expectations examined in this study include: (1) magnitude of the service failure, (2) switching cost, and (3) customer-organization relationship. Magnitude of the service failure is one of the service failure factors manipulated in the mixed-design experiment. Switching cost is a 5-item measure

capturing the customer's time, effort, and cognitive costs associated with switching to another restaurant. Customer-organization relationship is measured by the length of the relationship (1 item).

Data Analysis

The analysis began with the estimation of a measurement model consisting of justice-based recovery expectations (3 factors) and performance (3 factors), and recovery disconfirmation (using AMOS 4.0). Scale items with low factor loadings were pruned and the constructs were tested for unidimensionality and convergent and discriminant validity. Goodness of fit measures and squared multiple correlations were used to identify the final set of items representing

constructs in the justice-based expectancy-disconfirmation model of service recovery evaluation. Finally, we conduct Multivariate ANCOVA to explore potential antecedents to normative recovery expectations of perceived justice.

RESULTS

Measurement Model

The final measurement model results including standardized item loadings and construct composite reliabilities are presented in Table 2. Even though the overall χ^2 test of the model was statistically significant ($\chi^2 = 214.841$, $df = 68$), the measurement model fits the data satisfactorily. All standardized loadings are significant at $p < 0.001$ and the composite reliabilities for all constructs were well-above the usual 0.60 desirable value (Bagozzi and Yi 1988) supporting the reliability of the measures. The goodness-of-fit measures (goodness-of-fit index [GFI] = 0.965, comparative fit index [CFI] = 0.970, Tucker-Lewis index [TLI] = 0.960) all exceeded Bollen's (1989) 0.90 criterion and the RMSEA value (= 0.050) is well below the 0.08 cutoff. Further, the average extracted variance of each construct (except recovery performance of procedural/interactional justice) exceeded the 0.50 standard suggested by Fornell and Larcker (1981). Thus, these measures display adequate convergent validity.

Our initial measurement model consists of three factors of recovery expectations and recovery performance, respectively. However, in the confirmatory factor analysis and measurement model estimation, we found that the procedural and interactional justice components of recovery expectations as well as recovery performance cannot be validly distinguished from each other empirically (correlations between the two components equal to 0.821 and 0.855 for recovery expectations and recovery performance, respectively). Because interactional justice is often considered a sub-element of the more global construct of procedural justice (Greenberg 1990; McCollough et al. 2000) and the binary

classification of perceived justice into distributive and procedural justice is generally accepted (e.g., Conlon and Murray 1996; Greenberg 1990), we decide to combine the procedural and interactional components of recovery expectations as well as recovery performance into single factors in our subsequent analysis.

We conducted additional confirmatory factor analyses to assess the discriminant validity of the construct of recovery expectations. We estimated 1 one-factor model, 3 two-factor models, and 1 three-factor model. The results of these analyses suggest that the selected two-factor model (as shown in Table 2) fits the data better than the one-factor model, the three-factor model, and all other two-factor models. Thus, H1 which hypothesizes that consumers form normative recovery expectations in terms of perceived justice (i.e., distributive justice and procedural/interactional justice) is supported.

To assess the nomological validity of the recovery expectations construct within the expectancy-disconfirmation framework, we examined the correlations between recovery disconfirmation and the factors of recovery expectations and performance. As shown in the correlation table (Table 2), both factors of recovery expectations are negatively correlated with recovery disconfirmation (both significant at $p < 0.01$); thus, H2a is supported. Further, both factors of recovery performance are positively correlated with recovery disconfirmation (all significant at $p < 0.01$) as hypothesized in H2b. Finally, the coefficient of the correlation between recovery disconfirmation and recovery expectations of distributive justice is larger than that of procedural/interactional justice (-0.189 vs. -0.120). However, the correlation between recovery disconfirmation and recovery performance of distributive justice is smaller than that of procedural/interactional justice (0.651 vs. 0.676). Therefore, H3 is only partially supported.

In sum, the above results provide support for our effort and suggest that integrating perceived justice within the expectancy-disconfirmation framework is a valid alternative conceptualization to modeling the disconfirmation and perceived justice effects separately in service recovery

Figure 1a
Main Effect of Magnitude of Failure on Expectations of Distributive Justice

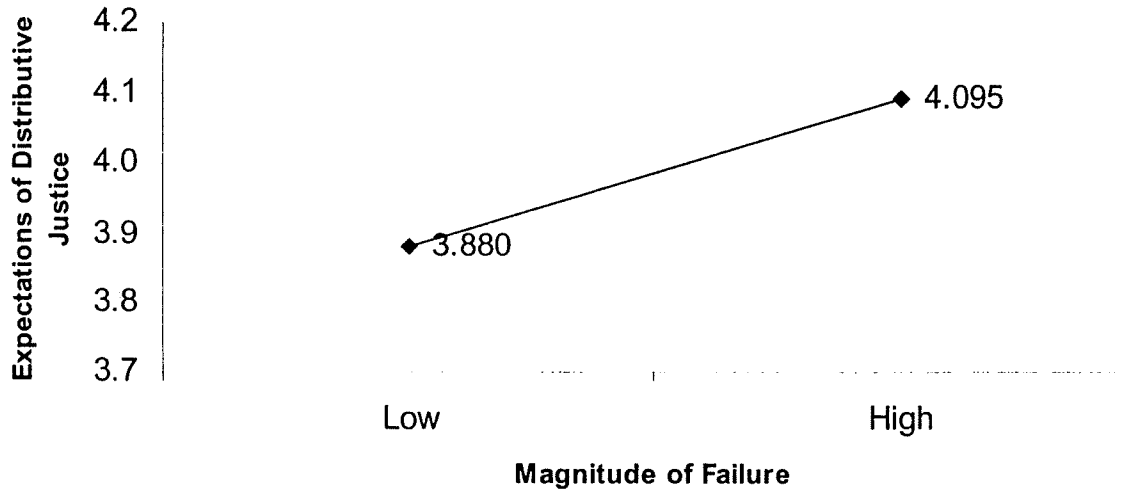
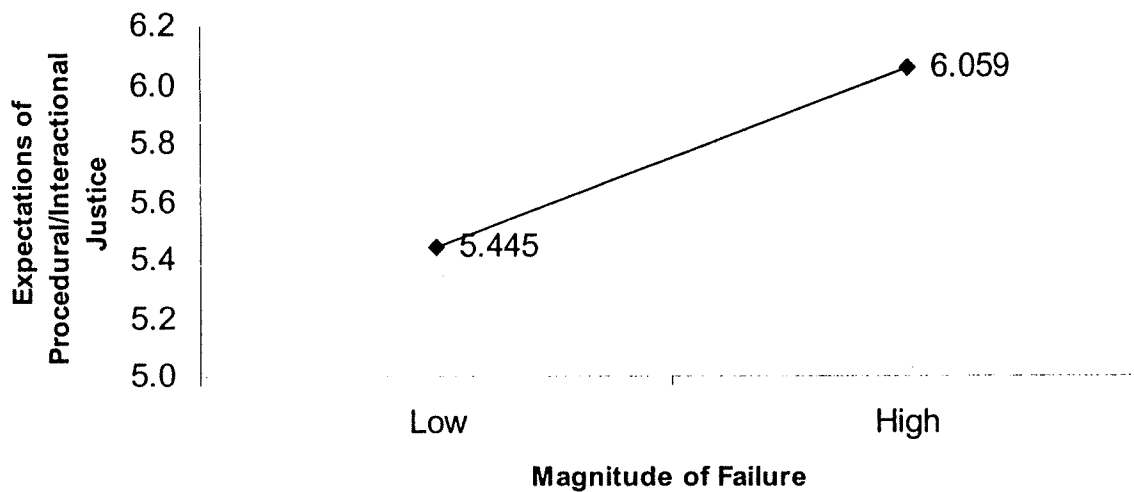


Figure 1b
Main Effect of Magnitude of Failure on Expectations of Procedural/Interactional Justice



evaluation.

Antecedents to Consumer Expectations of Perceived Justice

Now that we have confirmed the important

role of normative recovery expectations (expressed in terms of perceived justice) in service recovery evaluation, a logical next question is what are the antecedents to consumer expectations of perceived justice? We conducted multivariate ANCOVA with the two factors of recovery

Figure 1c
Main Effect of Switching Cost on Expectations of Procedural/Interactional Justice

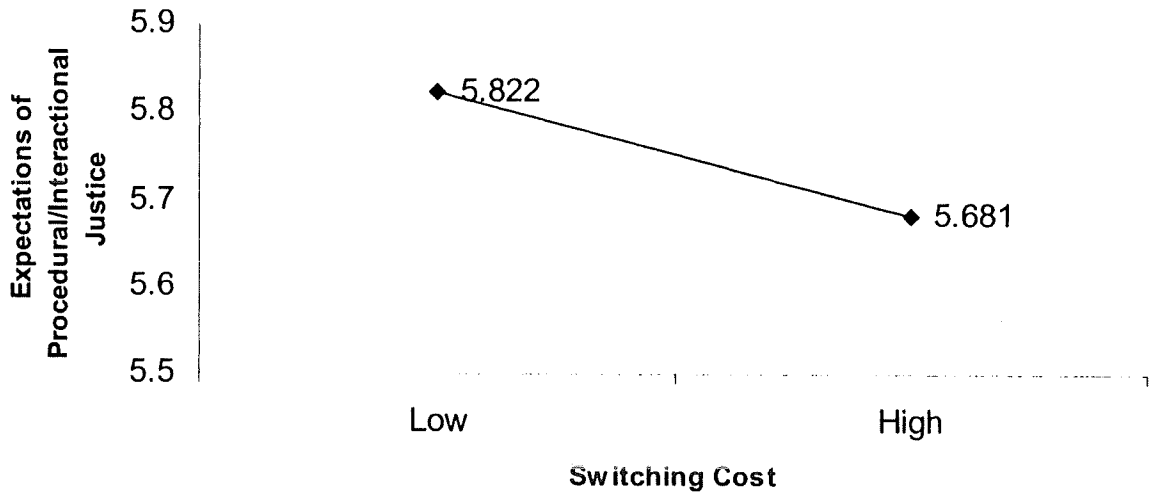
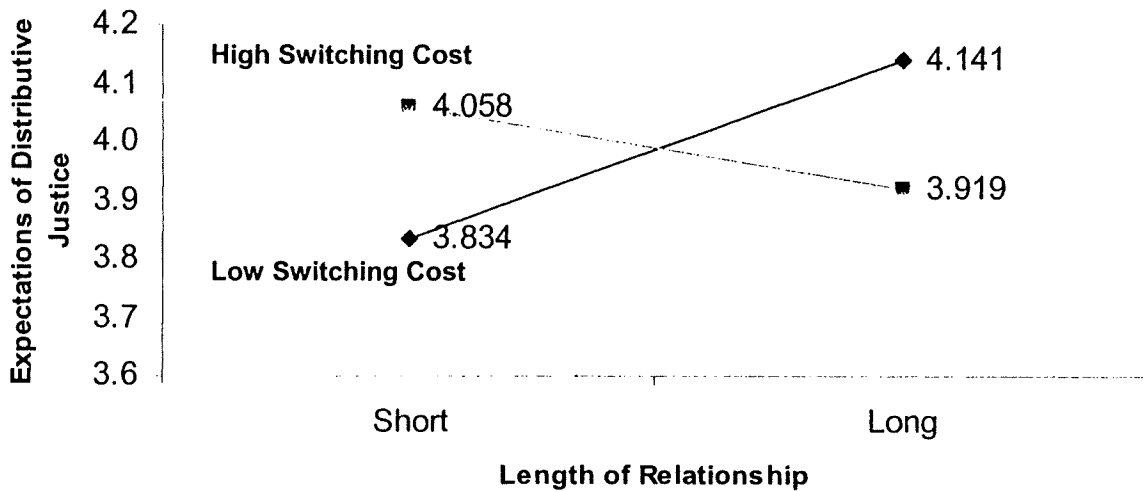


Figure 1d
Interaction Effect of Length of Relationship x Switching Cost on Expectations of Distributive Justice

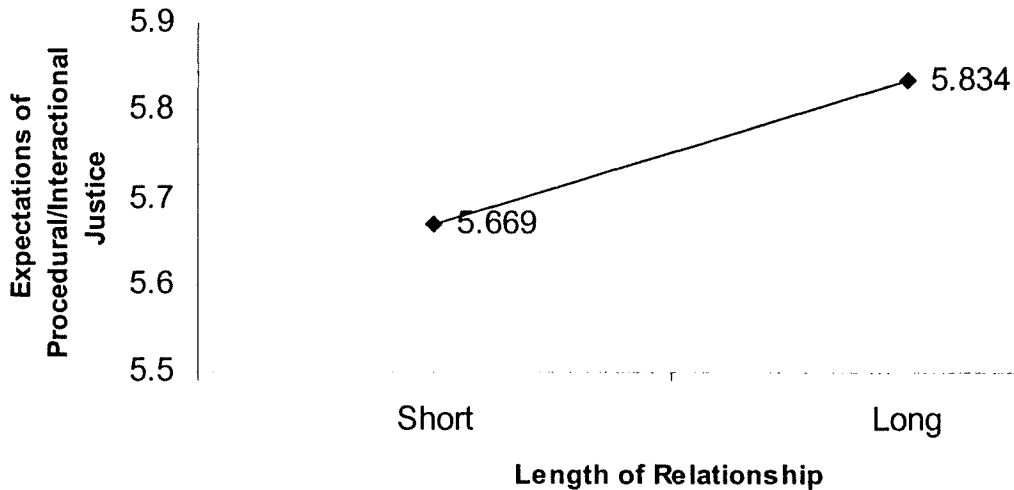


expectations as dependent variables, magnitude of service failure, switching cost, and length of relationship as independent variables, and gender, age, and education level as covariates to identify potential antecedents to consumer expectations of

perceived justice. We used two-tailed significant tests for all main and interaction effects.

The results reveal a significant main effect of magnitude of failure on expectations of both distributive justice ($F(1, 865) = 4.857, p < 0.05$)

Figure 1e
Main Effect of Length of Relationship on Expectations of Procedural/Interactional Justice



and procedural/interactional justice ($F(1, 865) = 107.201, p < 0.001$), a significant main effect of switching cost on expectations of procedural/interactional justice ($F(1, 865) = 5.679, p < 0.05$), a significant interaction effect of length of relationship \times switching cost on expectations of distributive justice ($F(1, 865) = 5.742, p < 0.05$), and a significant main effect of length of relationship on expectations of procedural/interactional justice ($F(1, 865) = 7.784, p < 0.01$). Figures 1a, 1b, 1c, 1d and 1e show the results of the above significant effects graphically.

Recovery expectations of both distributive justice (Figure 1a) and procedural/interactional justice (Figure 1b) are higher when customers experienced a more severe service failure (high magnitude) than when customers experienced a less severe service failure. Thus, H4 which hypothesizes that customers have higher recovery expectations of *perceived justice* when magnitude of failure is high than when magnitude of failure is low is supported. As shown in Figure 1c, customers are found to have lower recovery expectations of procedural/interactional justice when switching cost is high than when switching cost is low. Therefore, H5 is supported for procedural/interactional justice. Finally, recovery

expectations of distributive justice are higher when customers have a longer length of relationship than when customers have a shorter length of relationship with the restaurant, only if switching cost is low (Figure 1d). Customers are also found to have higher expectations of procedural/interactional justice when they have a longer length of relationship with the restaurant (Figure 1e). Together, these last two findings provide support for H6, which hypothesizes that the length of customers' relationship with an organization will have an impact on their normative recovery expectations of perceived justice. The direction of the effect seems to be consistent with the argument that clients in long-term relationships begin to have higher expectations for service providers (Boulding et al. 1993; Moorman et al. 1992).

DISCUSSION AND IMPLICATIONS

The main purposes of this paper are (1) to empirically examine the measurement properties of an equity-based expectancy-disconfirmation framework in service recovery evaluation, and (2) to test hypotheses regarding potential antecedents to consumer "normative" recovery expectations.

We formalize both recovery expectations and performance in terms of distributive, procedural, and interactional justice, and examine their relationships with recovery disconfirmation. An important merit of this conceptualization is that it enables us to apply the established expectancy-disconfirmation framework to understand the process of service recovery evaluation. Expectations are considered as a critical construct in satisfaction research (Gilly and Gelb 1982; Kelley and Davis 1994), but relatively little work is devoted to understanding its role in service recovery evaluation, not to say, from an equity perspective.

The results of this study validate previous findings that when service failures occur, customers are likely to engage in equity or justice-based evaluation processes. More importantly, our results demonstrate that customers form justice-based normative recovery expectations and use them as reference standards in evaluating recovery performance of the service provider. These results suggest that it is appropriate to model equity evaluations within the expectancy-disconfirmation framework. An implication for future research is that integrating equity within the expectancy-disconfirmation framework is a valid alternative conceptualization to modeling the disconfirmation and equity effects separately in service recovery evaluation. Failure to include the influence of these normative recovery expectations may lead to inappropriate conclusions and limit the explanatory power of any equity-based models of service recovery. In managing relationships with customers, service firms should also consider learning more about customers' needs/wants after service failures before they formulate appropriate recovery strategies.

Our results show that recovery expectations of distributive justice are more strongly related to the recovery disconfirmation judgment than that of procedural/interactional justice. This result is consistent with previous findings that customers are focusing on distributive gains after a service failure (Smith and Bolton 2002), therefore, recovery efforts must consider improving the outcome from the customer's perspective.

Nevertheless, service organizations must still pay close attention to the process by which the recovery strategies are executed in addition to the outcome itself.

Our finding that the levels of consumer expectations of both distributive justice and procedural/interactional justice are proportional to the magnitude of service failure provides insights into how firms should structure their compensation and speed when responding to service failures. It implies that compensation and speed of response should be commensurate with the severity of the service failure. While firms could over-compensate customers in less severe failures to get a positive disconfirmation, under-compensating customers in more severe failures could lead to a double deviation/failure effect.

The positive effect of switching cost on customer loyalty has been discussed in previous research. Our study extends the dampening effect of switching cost to the formation of recovery expectations in terms of procedural/interactional justice. Customers who realize that they have more choices because of low switching cost are more demanding on the recovery, especially on procedural/interactional justice. This result implies that firms should pay particular attention to courtesy and promptness when responding to complaints filed by non-captive customers.

As suggested in our results, customers who have a longer length of relationship with a firm tend to have higher expectations of distributive justice (when switching cost is low) and procedural/interactional justice. It supports the finding of recent research (e.g., Grayson and Ambler 1999; Moorman et al. 1992) regarding a potential dark side of long-term relationships with customers. Because arguments supporting an opposite effect could be advanced and there are benefits associated with developing good relationships with customers, more research is definitely needed to ascertain this effect.

This study could be improved and its scope could be extended in a number of ways. First, our study has focused on a single service industry – restaurants. Our results should be validated on different service industries, preferably along the transactional-relational continuum. Second, our

model only examines the cognitive process of service recovery evaluation; future study could explore the role of emotions in the service recovery evaluation process. Third, given the importance of recovery expectations in the evaluation of service recovery, a better understanding, beyond what have been provided in this study, of how recovery expectations are formed is definitely needed. For example, different segments of consumers (e.g., age, personality, etc.) may have different expectations and norms of recovery responsiveness in similar failure situations. Exploration of situational factors such as the group versus individual consumption as potential antecedents to recovery expectations could be fruitful. Finally, we have examined recovery responses in terms of compensation, speed, and apology. To provide more useful guidelines for the development of effective recovery strategy, future research could explore customers' responses to a variety of recovery practices (e.g., immediate compensation versus compensation tied to repatronage).

In summary, the results of this study confirm the important role of normative equity-based expectations in service recovery evaluation. To institute effective programs of service recovery, managers need to know what customers expect in order to be satisfied. They should strive to offer high recovery performance that meets or exceeds customer expectations. The results also offer organizations with guidelines for understanding customer expectations with service recovery. They can use these guidelines to enhance the ability of their employees to recognize customer expectations, customize recovery responses, and manage the overall process of recovery; thus, maximizing returns in terms of satisfaction and favorable behavioral intentions.

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Appendix A Service Failure Scenarios

Eight service failure scenarios were created as combinations from varying (1) high vs. low importance of purchase, (2) outcome vs. process failure, (2) high vs. low failure

magnitude.

High importance:

You were responsible for organizing a dinner party and went to the restaurant with a group of people to celebrate a special occasion last night.

Low importance:

You went to the restaurant as usual last night.

Outcome failure and High magnitude:

When you placed an order of your favorite dish, the waiter informed you that the restaurant was out of your choice of entrée. You had to order something else. When the waiter brought your entree at the table, the food was cold, unfresh, and poorly cooked. After you left the restaurant, you found you were overcharged in your total bill.

Outcome failure and Low magnitude:

When the waiter brought the entrées of your group at the table, the food was cold, unfresh, and poorly cooked.

Process failure and High magnitude:

You waited for a very long while before you were seated though you had made a reservation. The waiter came to bring the water/tea to you/your group and take your/your group's order 30 minutes after you/your group was seated. It took an hour for the waiter to bring the food at your table. Besides, the waiter ignored your requests (e.g., refilling your water/tea) and did not respond to your questions throughout the course of your dinner.

Process failure and Low magnitude:

The waiter ignored your requests (e.g., refilling your water/tea) and did not respond to your questions throughout the course of your dinner.

Appendix B Service Recovery Scenarios

Eight service recovery scenarios were created as combinations from varying (1) prompt vs. delayed response, (2) high vs. low compensation, (2) yes vs. no apology.

Prompt response:

The restaurant responded to your complaint within 24 hours.

Delayed response:

The restaurant responded to your complaint after 1 month.

High compensation:

You received a coupon good for a 50% discount on your total bill on your next visit to the restaurant.

Low compensation:

You received a coupon good for 5% discount on your total bill on your next visit to the restaurant.

Apology:

You received a sincere apology from the management of the restaurant.

No apology:

You did not receive an apology from the restaurant.

BEHAVIORAL INTENTIONS IN SATISFACTION RESEARCH REVISITED

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ABSTRACT

Intentions are usually included as dependent variables in satisfaction models, but satisfaction researchers have paid little attention to the discussion in psychology and philosophy in which different intention constructs are distinguished. In this paper, we examine – empirically and conceptually – the satisfaction–intention link with respect to three different intention constructs. The main result is that satisfaction is not equally correlated with these three intentions, and it suggests that satisfaction researchers should be concerned with the particular intention constructs they use: the selection of one particular intention indicator over another will generate different conclusions about the role of satisfaction as a determinant of intentions. Since behavioral data are seldom collected by satisfaction researchers (intentions are often used as a proxy for behavior), different conclusions about the satisfaction–intention link are also likely to affect conclusions about customer behavior.

INTRODUCTION

Despite a frequently made assumption that customer satisfaction is affecting customer behavior, empirical studies of satisfaction's consequences seldom include data on behavioral outcomes. Instead, focus is on behavioral intentions. Repatronizing intentions, repurchasing intentions, and word-of-mouth intentions are examples of intentions often appearing as dependent variables in satisfaction research. There are reasons, however, to believe that satisfaction researchers have not paid enough attention to intentions. One particular deficiency is dealt with in this paper: satisfaction researchers have ignored the existence of different theoretical intention constructs. Yet scholars outside the field of customer satisfaction show that different types of intentions are not always strongly correlated with

each other (Sheeran and Orbell, 1998) and that they produce different strength in associations with other variables (Fishbein and Stasson, 1990; Netemeyer and Burton, 1990; Norman and Smith, 1995; Sheppard et al, 1988; Warshaw and Davis, 1985). Moreover, at a conceptual level, scholars in psychology (e.g., Sheppard et al, 1988; Warshaw and Davis, 1985) and philosophy (e.g., Audi, 1973; Kenny, 1966) argue that several different intention constructs exist. To date, satisfaction research has not been informed by this development, since satisfaction researchers seem to merely select one particular operationalization of intentions without much explicit consideration.

Attention to different intention constructs, however, has not been completely absent from satisfaction research; Söderlund (2002, 2003) shows that satisfaction is affecting different intention constructs with unequal strength. Basically, Söderlund (2002) examined one specific satisfaction construct (current satisfaction with an object) and its impact on three different intention constructs, and Söderlund (2003) examined two satisfaction constructs (current satisfaction with an object and anticipated satisfaction with an object) and their effects on two intention constructs. The present paper should be seen as an attempt to replicate and extend this research. First, the present approach involves a different stimulus sampling method than those used by Söderlund (2002, 2003); in those two cases, all respondents were customers to the same firm, an airline, but in the present case several different firms served as stimulus objects. Second, neither Söderlund (2002) nor Söderlund (2003) used an act-oriented satisfaction construct, but it is included here. The main reason is that research on evaluations, particularly attitude research (cf. Ajzen and Madden, 1986), suggests that evaluations of an act are particularly useful in predicting intentions (to carry out an act) compared to evaluations of objects. Third, in relation to Söderlund (2002) and Söderlund

(2003), a different explanation of why satisfaction is not equally correlated with different intention constructs is explored in the present paper.

The study, then, is based on the assumption that the strength of the satisfaction–intention correlation is different for different types of intentions, and our purpose is to examine the assumption in conceptual and empirical terms. This examination, we believe, has important implications for both academicians and practitioners, particularly for those who equate intentions with customer loyalty – if different intention constructs result in different strength in the satisfaction–intention link, the mere selection of one intention indicator over another will generate different conclusions about the role of satisfaction as a determinant of loyalty.

THEORETICAL FRAMEWORK

The theoretical framework comprises three parts. First, we begin by introducing what we argue are three different intention constructs. Second, we present evidence that suggests that the strength of the link between (1) an evaluative judgment (such as a general attitude or a satisfaction judgment) and (2) an intention is contingent on the level of correspondence between the two constructs. Moreover, we introduce one particular correspondence element, sense of ownership, that we believe will contribute to an examination of the satisfaction-intention association. Third, we argue that satisfaction and the three intention constructs are located at different positions on a sense of ownership continuum, and that this is likely to produce different levels of association between satisfaction and the three intention constructs.

Intentions: Connections with the Future

An intention materializes when an individual makes a proposition that connects himself/herself with a future behavioral act. Generally, a proposition of this type has the form “I – connection – future act”, and it is usually conceived of as evaluation-free (this distinguishes an intention from, for example, an attitude).

Moreover, we view intentions as basic units in a network of propositions that emerge when individuals engage in future-oriented cognitive activities such as mental simulation, planning, imagination, and ruminations (a network of this type also includes the individual’s perceptions of other people’s intentions). The conceptual boundaries between these cognitive activities are far from clear, but they seem to share one basic function: they are windows on the future that help people perform tasks efficiently. Consequently, and with respect to intentions, we expect that they are continuously made with regard to many different acts. This is reflected in the marketing literature; propositions about the future which are explicitly labeled intentions by marketing scholars cover several acts in the marketplace. Search for product information, purchasing a product for the first time, repurchases, word-of-mouth, complaints, and contributing money are some examples. As already indicated, however, satisfaction researchers (and many other marketing scholars) do not distinguish between different intention *constructs*. Yet an individual may connect himself/herself with his/her future behavior in different ways. In the following, three such ways are examined. They share one characteristic: each construct has been explicitly referred to as intention in the literature.

Intentions-as-expectations (IE). One frequently used intention construct is *behavioral expectations*. It refers to the individual’s assessment of the subjective probability that he or she will perform a particular behavior in the future. Typically, this is measured with questionnaire items such as “The likelihood that I would do A is...”, “The probability that I will do B is...”, “Rate the probability that you will do C”, and “How likely are you to do D?”; the respondent is thus asked to estimate the probability that he or she will perform the act (cf. Gruber, 1970; Juster, 1966). This is perhaps the reason why behavioral expectations are sometimes labeled self-predictions (cf. Courneya and McAuley, 1993; Fishbein and Stasson, 1990, Gollwitzer, 1993). We refer to intention of this type as intentions-as-expectations (IE). In satisfaction-related research,

IE seems to be the most popular of the three constructs discussed in this section. It appears, for example, in Brady et al (2002), Cronin et al (2000), Danaher and Haddrell (1996), Gotlieb et al (1994), LaBarbera and Mazursky (1983), Lemon et al (2002), Mittal et al (1999), Mittal and Kamakura (2001), Oliver (1980), Oliver et al (1997), Patterson et al (1997), and Patterson and Spreng (1997).

Intentions-as-plans (IP). Another intention construct comes perhaps closer to the everyday notion of intention. It refers to the individual's *planned choice* to carry out a particular behavior in the future. An intention in this sense involves choosing or deciding to carry out the act (Conner et al, 1999; Malle and Knobe, 1997). It has also been argued that such intentions capture motivational factors that influence behavior; "they are indicators of how hard people are willing to try, of how much effort they are planning to exert, in order to perform the behavior" (Ajzen 1991, p. 181). Similarly, Bandura (1986) views intentions as "the determination to perform certain activities or to bring about a certain future state of affairs", and Howard (1989, p. 35) stresses "plan" in his intention definition. In typical applications, measurement items are "I am planning to...", "I intend to...", "Do you intend to...", "I will choose...", "I am going to choose...", and "I will select..." Here, we refer to intention of this type as intentions-as-plans (IP). Examples of satisfaction researchers who have used intention in this sense are Mittal et al (1998) and Taylor and Baker (1994). It can be noted that IP represent a potentially more homogenous group of intentions than IE and IW (cf. below), in the sense that an individual may not view his/her propositions about intending, choosing, selecting and planning as identical. However, since a clear typology in this area is yet to be developed, we will subsume them under the same general label (i.e., intentions-as-plans) in the present paper.

Intentions-as-wants (IW). An additional intention construct is a conceptualization in terms of *wants*. It has been referred to as an intention construct by Fishbein and Stasson (1990) and

Norman and Smith (1995). This construct is found in several formal models of intentionality and in the "folk concept" of intentionality (Malle and Knobe, 1997). And, wants also appear in Heider (1958) who stresses that intention is often taken as the equivalent of wish or wanting. Moreover, wants closely resembles Gollwitzer's (1993) notion of goal intentions that specify a desired end state. Measures of this type of connection with the future usually take the form of Likert-type statements such as "I want to..." In the present paper, we label them intentions-as-wants (IW). It can be noted that in relation to IE and IP, IW is the least frequently used intention construct in marketing research. And, in some models in which it does appear, either as wants or in terms of a similar construct, desires, it is conceived of as an antecedent to intention, not an intention construct per se. For example, Perugini and Bagozzi (2001) argue that desires provide the motivational impetus for intentions (in their case, and with our terminology: intentions-as-plans) and thus that desires represent an independent variable that affects intentions (a similar argument appears in Bagozzi and Edwards, 1998). Nevertheless, and given that wants serve to connect the individual with his/her future acts, we refer to them as an intention construct in this paper.

Effects of Evaluations on Intentions

Thus, so far three types of intentions have been identified, and in the following sections we examine the potential of satisfaction for affecting them with unequal strength. In order to make contact with previous research (basically attitude research) in which it is shown that an evaluation (of an act) is unequally correlated with different types of intentions to carry out this act, we are assuming here that satisfaction is one particular type of evaluation. The general evaluative nature of the satisfaction construct is stressed by, for example, Anderson and Sullivan (1990), Garbarino and Johnson (1999), and Hunt (1977). Moreover, several authors suggest that satisfaction is an emotional response (Babin and Griffin, 1998; Gotlieb et al, 1994; Hausknecht, 1990), and, given that emotions can take on values ranging from

feeling bad to feeling good, emotions and thus satisfaction represent evaluations. We argue, then, that satisfaction shares an evaluative component with the traditional attitude construct. If satisfaction *is* an attitude, or a particular type of attitude, however, remains unclear, even though authors have referred to satisfaction as an “attitude-like judgment” (Fournier and Mick, 1999) and “similar to attitude” (Churchill and Surprenant, 1982). Yet for our purposes here, we deal with both attitudes and satisfaction as subjective evaluations.

Previous Research. Only a handful of studies have examined the potential for differences in the attitude–intention associations’ strength given different intention constructs – but the studies that indeed deal with this topic generally indicate that differences exist. For example, it has been shown that attitudes are more strongly associated with IW than with IE (Fishbein and Stasson, 1990; Norman and Smith, 1995). Furthermore, Sheppard et al (1988) and Netemeyer and Burton (1990) found that attitudes were better predictors of IP than of IE. Given that satisfaction is one specific type of evaluation, this pattern suggests that we would expect the satisfaction–intention association to become increasingly stronger as we move from IE to IP and then further on to IW. This is also what Söderlund (2002) and Söderlund (2003) found in his exploratory studies of the satisfaction–intentions link. Why, then, do such differences exist? In the following, we will pursue an explanation attempt with the notion of correspondence as the point of departure. First, we briefly restate the importance of correspondence for obtaining strong associations between variables in the attitude–intention–behavior chain. Second, we extend this line of reasoning with a correspondence element – sense of ownership – that we believe has been overlooked in traditional views of correspondence.

The Importance of Correspondence. Basically, it is argued that the level of correspondence between the predictor and the criterion variable (e.g., an attitude and an intention) must be high if strong correlations are to

materialize. It has also been argued that there are four elements that define any predictor and criterion – target, action, context, and time – and that a high level of correspondence (and thus a high empirical correlation) requires equivalence in all four elements (Ajzen and Fishbein, 1977; Fishbein and Middlestadt, 1995). Some empirical studies – in which the researchers have allowed for variation in correspondence in terms of target, action, context, or time – show that correspondence in those terms does indeed affect the ability of the predictor variable to be related to the criterion variable (cf. Conner et al, 1999).

Several authors have applied an implicit correspondence perspective – in terms of *other* elements than target, action, context, and time – on the strength of associations between selected entities in the attitude–intention–behavior chain. Examples of such elements, particularly with respect to the link between intentions and behavior, are degree of formation (Bagozzi and Yi, 1989) and volition (Sheppard et al, 1988). For example, it has been shown that IE perform better than IP in predicting behavior, and Sheppard et al (1988) argue that one reason is that behavior is often affected by uncontrollable factors that IE take account for better than IP (since IE allow more room for low-volition factors than IP).

Sense of Ownership. In an attempt to offer fuel for more research on correspondence elements, we propose an extension of the list of elements by building the present explanation on *sense of ownership* (which we believe will capture additional aspects compared to degree of formation and volition). This variable, sometimes referred to as psychological ownership, is derived from research on ownership and possessions. In this research tradition, it is observed that (a) ownership is a subjective variable, (b) ownership is a continuum rather than a dichotomy, and (c) subjects do not only perceive that they own physical possessions, but also mental entities such as beliefs, ideas, attitudes, memories, and emotions (cf. Abelson, 1986; Dittmar, 1991; Pierce et al, 1991; Pierce et al, 2001; Rudmin and Berry, 1987; Rudmin, 1994a; Rudmin, 1994b). Our main premise here is informed by this

research tradition, in the sense that we argue that differences in sense of ownership with respect to satisfaction and the three intention constructs can explain why satisfaction is not equally strongly associated with the intention constructs. It is the content of this premise that we turn to in the following.

Satisfaction and its Link to the Three Intention Constructs

With regard to satisfaction, we make two assumptions. First, satisfaction refers to an evaluative judgment made by customers who have personal experience with an object. That is to say, in order to arrive at a satisfaction judgment, the customer must have *consumed* the product in question. This means that the satisfaction judgment is likely to occupy a special place in the customer's mind compared to evaluations of products that the customer has heard about through such channels as word-of-mouth, advertising, and newspaper articles, but not yet consumed. This assumption is consistent with the view that the customer's personal experience represents a particularly salient base for judgments (Hoch and Deighton, 1989). Second, satisfaction has an emotional content (Babin and Griffin, 1998; Gotlieb et al, 1994; Hausknecht, 1990). Indeed, some authors argue that satisfaction *is* one among several emotions (Bagozzi et al, 1999). As such, it is characterized by partiality; it expresses a personal perspective (Ben-Ze'ev, 2000). Another emotion characteristic is its tendency to be associated with physiological reactions (Ben-Ze'ev, 2000). This makes an emotion qualitatively different from, say, the judgment that one brand has higher quality than another and the belief that one particular car is blue and not yellow, in the sense that the emotional state is likely to have a higher level of self-association. Therefore, we expect that an emotional state is not only "own" (i.e., subjective) but also "owned" (i.e., perceived to be possessed). In other words, *my* satisfaction, derived from *my* personal experience, and real to me, can be "mine" in the same sense that my car or my clothes are mine. In fact, we believe that *my* satisfaction, thus something referencing an event

that has indeed taken place, is likely to produce a higher sense of ownership than any type of intention (since all intention types, by definition, reference a future event that is yet to take place). The consequence, we believe, can be seen in all existing empirical examinations of the satisfaction-intention link, in the sense that satisfaction is never explaining all variation in the selected intention measure. Nevertheless, we assume that the three different theoretical intention constructs introduced above are subject to *variation* in sense of ownership. In order to explore this assumption, we use a model developed by Pierce et al (2001). This model contains three main factors that determine the sense of ownership of an object (control of the object, intimate knowledge of the object, and self-investment in the object), and it is assumed that the higher the scores on each of these three factors for one particular object, the stronger the individual perceives that s/he owns the object. Of these three determinants of sense of ownership, control is perhaps the most widely discussed to date (cf. Belk, 1988; Furby, 1978).

Consider, then, the case of IE. The individual who is forming IE judgments (e.g., "How *likely* am I to return to the Hilton hotel in Porto for my next vacation?") needs to take into account a variety of factors beyond himself/herself. For example, in a vacation context, and if the individual is considering spending his/her vacation with the family, s/he needs to assess the likelihood that family members want to go back to the same hotel. This individual must also estimate the chances of obtaining a room at the hotel given that many other people, who s/he does not know, and whose plans are even less known, desire to stay at the same hotel. The IE judgment, then, involves substantial attention to external factors that are likely to be uncontrollable, and we believe that this results in a perception that the IE judgment is associated with a relatively low level of control. Given many external factors to take into account, we also expect that a relatively low level of knowledge is involved in the IE judgment. And again given many external factors, we expect that the IE judgment is associated with a relatively low level of self-investment. Interestingly, in

Rudmin's (1994a) open-ended attempt to identify, in empirical terms, what people believe that they own, estimations of probabilities regarding future behavior did not surface at all as a possession.

With regard to IP, the judgment task becomes slightly different. In forming such judgments (e.g., "To what extent do I *plan* to return to the Hilton hotel in Porto for my next vacation?"), focus is transferred to factors that affect the individual's conscious choice. Several of the factors from the IE task, including external factors, such as other persons' wills, are likely to remain in the assessment. But we expect that at least some of those factors are eliminated – and that more room is allowed for self-related factors. For example, when I assess the extent to which I plan to do X, I am likely to look relatively less closely at my non-cognitive habits and the uncontrollable parts of my environment – and more at "myself". This view is consistent with, for example, Azjen's (1991, p. 181) notion of intentions-as-plans; they are "indicators of how hard people are willing to try, of how much effort they are planning to exert, in order to perform the behavior." Moreover, it is not difficult to change one's plans. In fact, planning can easily – at will – take different routes without much effort. Therefore, we expect a relatively closer connection with the individual's volition and thus control in the IP case compared to the IE case. We also expect a relatively higher association with knowledge, since the individual is assumed to know more about his/her plans than external factors such as other persons plans. In addition, we expect that forming IP judgments involves more self-investment than forming IE judgments, since planning involves elements of activity in which the individual himself/herself is the agent (i.e., when I plan my future, I also make some kind of choice).

Moving further on to IW, the cognitive task (e.g., "To what extent do I *want* to return to the Hilton in Porto?") changes again. Compared to IE and IP, the number of external factors to consider is likely to decrease, since to "merely" want something is subject to few external restrictions. Thus, we are assuming that a relatively high level of control is involved in wanting things to happen in the future. Moreover, since my wants have a

closer self-connection than the wants of people in the environment, and a closer self-connection than many external factors needed for a probability estimation, we assumed that the level of knowledge is relatively high in the formation of IW judgments. We also expect that what the individual wants matters more than what he or she expects will happen and what he or she plans to do, and thus that a relatively high level of self-investment is involved in the IW task. In addition, we assume that the individual is more attached to his/her wants compared to his/her expectations and plans, and given that attachment goes hand in hand with sense of ownership (cf. Carmon et al, 2003), we assume a relatively high sense of ownership in the case of IW. The relative frequency in empirical studies of the "items" people believe that they own also suggests that wants and desires are conceived of in terms of ownership to a larger extent than estimation of probabilities and plans (cf. Rudmin, 1994a). Moreover, it has been shown that "want" has a higher semantic proximity to the verb own than has "plan" (Rudmin, 1994b).

Thus, given that the strength of the attitude–intention association is affected by the correspondence between attitude and intention, that both attitude and satisfaction are evaluative judgments, that satisfaction is an entity with a relatively high sense of ownership, and that IE, IP, and IW are located at different points on the same sense of ownership continuum, we assume that the satisfaction–intention association becomes increasingly stronger as we move from IE to IP and then to IW. We turn now to our attempt to examine this assumption in empirical terms.

METHOD

Research Design

We selected one specific consumption act, having lunch at one particular restaurant, as the source of satisfaction and intentions responses, and the data were collected with a questionnaire. The respondent was instructed to select one particular lunch restaurant that he or she had been visiting during the past month, and s/he was asked

to answer the subsequent satisfaction and intention questions with this particular restaurant in mind. We included an open-ended item in the beginning of the questionnaire to capture the name of the selected restaurant, and our examination of the names revealed that very few respondents selected the same restaurant as any other respondent. This, then, means that stimulus heterogeneity was encouraged by our approach. The research design was an attempt to respond to an argument made by psychologists about stimulus sampling; it can be argued that if all respondents are exposed to the same stimulus, and only one stimulus, effective sample size may be reduced to $n = 1$ regardless of the number of respondents – which in turn threatens validity (cf. Wells and Windschitl, 1999).

The respondents ($n = 101$) were participants in seminars on customer satisfaction. Thus, we used a convenience sampling procedure. We distributed the questionnaires to the participants at the beginning of the seminar, we supervised the completion task, and we controlled the environment in the sense that no talking amongst participants was permitted. Moreover, responses to all questionnaire items were explicitly encouraged. This reduced non-response behavior to a minimum. In order to obtain variation in the satisfaction and intentions scores, four different groups of participants – who participated in seminars at different geographical locations – were included in the study (in the analysis, however, they were treated as one single sample).

Measures

Customer satisfaction was measured in two ways. First, the following question was asked: “Think about your accumulated experience during the past month of the selected restaurant. How would you summarize your impressions of the restaurant?” It was followed by three satisfaction items used in several national satisfaction barometers (cf. Johnson et al, 2001). Examples of specific studies in which the satisfaction scale consists of the three items are Anderson et al (1994), Fornell (1992), and Fornell et al (1996). These were the items: “How satisfied or

dissatisfied are you with the restaurant?” (1 = Very dissatisfied, 10 = Very satisfied), “To what extent does it meet your expectations?” (1 = Not at all, 10 = Totally), and “Imagine a lunch restaurant that is perfect in every respect. How near or far from this ideal do you find the selected lunch restaurant?” (1 = Very far from, 10 = Can not get any closer). Cronbach’s alpha for this scale was .83, and we used the unweighted average of the responses to the three items as the measure (i.e., a reflective measurement approach was used). It should be noted that this object-oriented way of assessing satisfaction is different from the act-oriented way of capturing evaluations that is called for by many attitude theorists who are interested in predicting intentions with regard to an act (cf. Ajzen and Fishbein, 1973). Therefore, as a second (and act-oriented) measure of satisfaction, we asked the participants the following question: “How would you summarize your view of your decision(s) to have lunch at the selected restaurant during the past month?”. The question was followed by three items: “I am happy about my decision(s) to go there”, “I believe I did the right thing when I selected it”, and “Overall, I am satisfied with the decision(s) to go there” (1 = Do not agree at all, 10 = Agree totally). Similar satisfaction measures have been recommended by Oliver (1997) and used by, for example, Butcher et al (2001) and Cronin et al (2000). In our case, alpha was .92, and we used the average of the responses to the three items as the (act-oriented) satisfaction measure.

In order to put the satisfaction–intention link into context, and since we are assuming that both satisfaction and attitudes are evaluative constructs, we included a *traditional attitude* measure to capture the respondent’s overall evaluation of the selected lunch restaurant. We used a 5-item scale with 10 points and with adjective pairs common in marketing communications research (e.g., Mitchell and Olson, 1981). The question was worded as follows: “Which are your impressions of the restaurant, given your experience of it during the past month?”. These adjective pairs were used to capture the responses: bad–good, dislike it–like it, unpleasant–pleasant, uninteresting–interesting, and negative impression–positive impression.

Alpha for this scale was .90. Again, the average of the scores on the five items was used as the measure in the subsequent analysis.

Turning to the intention measures, a decision had to be made about the use of multiple-item or single-item operationalizations. On the one hand, a single-item approach means that reliability in terms of internal consistency cannot be computed, and in the typical case no other reliability assessment is made. This approach, then, means that a measure with unknown reliability may have a low reliability, and low reliability in the measure of one particular variable is known to attenuate correlations with other variables (Peter, 1979). This argument was adopted in one of our previous attempts to examine differences between intention constructs; Söderlund (2003) developed multiple-item scales (three items in each scale) for intentions-as-expectations and intentions-as-plans and obtained acceptable levels of reliability in two different samples of participants. On the other hand, however, many assessments of the attitude-intention link have been made with single-item intention measures (Sutton, 1998). Courneya (1994), for example, argues that multiple-item measures invite the possibility of a confounded measurement. More recently, Rossiter (2002) has strongly argued that intentions should not be captured with multiple-item scales. In the present case, we were persuaded by his arguments to use single-item measures for the intention constructs. *Intentions-as-expectations* (IE) were assessed using the following statement: "I will have lunch at the restaurant during the coming month" (1 = Very unlikely, 10 = Very likely). Similar items, with an emphasis on probability/likelihood, have been used by Boulding et al (1993), Brady and Robertson (2001), Brady et al (2002), Cronin et al (2000), Gotlieb et al (1994), Krishnan and Smith (1998), LaBarbera and Mazursky (1983), Patterson et al (1997), Shim et al (2001), and Zeithaml et al (1996). *Intentions-as-plans* (IP) were assessed with the response to this statement: "I will choose to have lunch at the restaurant during the coming month" (1 = Do not agree at all, 10 = Agree completely). Intention items of this type, explicitly stressing "choose", appear in Ajzen (1971) and

Taylor and Baker (1994). As indicated in the theoretical section on intentions-as-plans, however, other authors prefer items in terms of "will try to" (Ajzen and Madden, 1986), "will make an effort to" (Madden et al, 1992), "plan to" (Bagozzi and Yi, 1989; Bentler and Speckhart, 1979; Morwitz et al, 1993), "intend to" (Ajzen and Madden, 1986; Bagozzi and Yi, 1989; Mittal et al, 1998; Netemeyer et al, 1991; Terry and O'Leary JE, 1995), and "intend to try" (Bagozzi and Warshaw, 1990). Yet to date there is little empirical evidence about the potential for differences in the meaning of such items (except that some authors, who use multi-item scales in which several of these aspects are included, show that they are internally consistent in terms of high alphas). Finally, *intentions-as-wants* (IW) were measured with this item: "I want to have lunch at the restaurant during the coming month" (1 = Do not agree at all, 10 = Agree completely). Intention items with a specific "want-content" have been used by Fishbein and Stasson (1990) and Norman and Smith (1995). Questionnaire items based on "want" also appear in Bagozzi and Edwards (1998) and Perugini and Bagozzi (2001).

ANALYSIS AND RESULTS

Before we move to the main analysis, the assessment of the strength of the satisfaction-intention link for each of the three intentions constructs, it should be observed that we have assumed that the three intentions constructs represent three different ways for the individual to connect himself/herself with the future. At the same time, given that all of them are loaded with some level of sense of ownership (but not to the same extent), we expect them to be interrelated. That this is the case can be seen from an examination of the zero-order correlations between them; $r = .89$ for the IE-IP link, $r = .70$ for the IE-IW link, and $r = .81$ for the IP-IW link ($p < .01$ in each case). Thus, they share a significant amount of variance. On the other hand, however, they did not reach the same level in terms of absolute values. When the intention means were compared with each other, it could be seen that IE ($M = 7.21$) was higher than IP ($M =$

6.80), and that IP was higher than IW ($M = 6.14$). Indeed, all mean differences turned out to be significant ($p < .01$ in each case). This indicates, we believe, that the three constructs are tapping different aspects of the customer's connection to his/her future acts.

We assessed the strength of the satisfaction-intention link for each of the three intention variables with correlation analysis. As already noted, two satisfaction measures and one traditional attitude measure were used to capture the customers' evaluations. This means that it was possible to assess the evaluation-intention link with three evaluation variables and three intention variables. In total, then, nine bivariate correlation analyses were performed. The outcome is presented in Table 1.

Table 1
Zero-Order Correlations between the Evaluations and the Intention Variables^a

	Satisfaction (object-oriented)	Satisfaction (act-oriented)	Attitude (object-oriented)
Intentions-as-expectations (IE)	0.392	0.443	0.343
Intentions-as-plans (IP)	0.466	0.501	0.393
Intentions-as-wants (IW)	0.598	0.621	0.538

a: all correlation coefficient are significant ($p < .001$)

Table 1 shows – as predicted – that the satisfaction-intention correlations are increasing in strength as we move from IE to IP and then further on to IW. This pattern is also consistent with Söderlund (2002) and Söderlund (2003) – and with previous studies in which the potential for differences in correlation strength was examined regarding attitudes (Fishbein and Stasson, 1990; Netemeyer and Burton 1990; Norman and Smith, 1995; Sheppard et al, 1988). It can also be seen in Table 1 that a similar pattern was obtained for the traditional attitude variable, and this adds some support to our belief that both satisfaction and attitude are evaluative variables.

The data in Table 1 also allow a comparison between object-oriented and act-oriented

measures; in our case, the highest correlations with intentions were obtained with respect to the act-oriented satisfaction measure. This part of the pattern illustrates that it may indeed be worthwhile to pay attention to the traditional correspondence elements. That is to say, satisfaction with an act (having lunch at the restaurant) is doing a better job in predicting intentions to carry out the act again than satisfaction with the restaurant per se.

DISCUSSION

Summary of Main Findings

Previous research shows that different intention constructs covary unequally strong with attitudes and overt behavior (Fishbein and Stasson, 1990; Norman and Smith, 1995; Sheppard et al, 1988; Warshaw and Davis, 1985), and we can now add that satisfaction (in our view, one particular evaluation variable) is influencing different intention constructs with different degrees of strength. We assumed that the strongest association between satisfaction and intentions would be at hand when the intention is of the intentions-as-wants (IW) type rather than of the intentions-as-expectations (IE) and intentions-as-plans (IP) types. The data in this study suggest that this is the case for two common ways of conceptualizing satisfaction (i.e., an act-oriented way and an object-oriented way). The data also suggest a similar pattern when a traditional attitude variable is used for predicting intentions.

Limitations and Suggestions for Further Research

Given that entities in the attitude-intention-behavior chain must be subject to a high level of correspondence in order to correlate strongly, that sense of ownership is a correspondence element, and that sense of ownership is not equally strong for satisfaction and the three intentions constructs, we are not surprised by the patterns obtained in this study. One obvious limitation, however, is that *we* (the researchers) allocated the entities to various positions on a sense of ownership continuum. Thus, the extent to which satisfaction

and the intention constructs actually differ – in the minds of the respondents – was not assessed empirically. Clearly, an important task for future research is to do better than this. One way is to develop questionnaire items for assessing respondents' judgments of intentions (and satisfaction) in terms of the three determinants of sense of ownership (control of the object, intimate knowledge of the object, and self-investment in the object); this will allow for the use of sense of ownership as a moderating variable.

Future research must also examine other characteristics of the entities (e.g., degree of formation, volition, and accessibility) than sense of ownership, since such characteristics may explain why the correlations are not equally strong. Moreover, these characteristics are likely to be interrelated in cause-and-effect terms, and future research needs to untangle this causal web before the final word is said about why the strength in satisfaction–intentions associations are different for different intention constructs.

Another limitation is that our approach allows us to say little about how the intentions constructs are related to each other in conceptual terms. Wanting a future act, for example, may influence the planning of the act (an assumption made in Perugia and Bagozzi, 2001), and planning may affect the perceived likelihood of the act. It is also possible, particularly from a consistency theory point of view, that one's expectations regarding the likelihood that an act takes place may affect planning activities and wants. This calls for a process approach to studying the formation of intentions. Above all, since our results suggest that all forms of intentions should not be considered the same, future research ought to pull the intention construct apart and develop typologies that include more intention constructs than those in focus in this paper. Consider, for example, propositions linking the individual with his/her future of the following type: "I have already decided to do X", "I must do X", "I need to do X", and "I will consider doing X" (this is an intention measure that is sometimes used in commercial studies); how are they positioned vis-à-vis the three constructs used in this paper?

Managerial Implications

One main implication of this study is that the investigator who is examining the link between satisfaction and intention should select the intention measure with care, since the link's strength appears to be dependent on how intentions are measured. And the link's strength, in turn, has important implications for decision making. For example, a weak correlation between a satisfaction measure and an intention indicator may be interpreted as a weak causal link. The logical decision in this case, given that customer loyalty is an important objective (and given that intention is equated with loyalty), would be to abandon activities designed to enhance customer satisfaction.

In fact, in order to avoid dependency on one single indicator given the present state of knowledge about intentions, we believe that a multi-intention construct approach is more viable. The main advantage, particularly for marketers who are interested in customer loyalty, is that it offers a more detailed picture of the customer's view of his/her future. That is to say, differences in levels between different intentions in the mind of a customer (or in customer segments) may provide important information. Some customers, for example, may have strong wants but low behavioral expectations, whereas other customers have strong expectations but weak wants. And segments defined in those terms are likely to call for different activities in order to create stronger intentions.

Furthermore, if a single intention construct is preferred, it may appear as if intentions-as-expectations are superior – since previous research suggests that they predict behavior better than intentions-as-plans (cf. Sheppard et al, 1988). After all, it is the customer's *behavior* (not attitudes or intentions) that produces revenues and costs. Marketers, however, must ask themselves which behavior is most desirable: is it behavior resulting from intentions with a low sense of ownership, or behavior reflecting intentions with a high sense of ownership? This distinction may perhaps be insignificant in the short run, since both types of behavior produce outcomes in terms

of revenues and costs. But in the long run, the case may be different. If marketers want highly loyal or strongly committed customers over time, intentions associated with a high sense of ownership appear to be a particularly useful marketing target. The main reason is that sense of ownership is assumed to go hand in hand with customer variables such as motivation and positive affect (cf. Pierce et al, 1991). It is also likely that target levels formulated in terms of different intention constructs produce different levels of challenge (and thus motivation) for employees. More specifically, it seems to be more inspiring to work for a firm that strives for a high level of wants ("Our target is that our customers should want to come back!") compared to a firm striving for a high level of expectations ("Our target is that our customers should expect to come back..."). The marketer who cares for strong loyalty and commitment in the long run, then, may be advised to pay more attention to IW than IE and IP.

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HAVE YOU HEARD THE WORD? THE EFFECT OF WORD OF MOUTH ON PERCEIVED JUSTICE, SATISFACTION AND REPURCHASE INTENTIONS FOLLOWING COMPLAINT HANDLING

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ABSTRACT

Complaint management has focused on justice or fairness theory to explain satisfaction with the complaint handling process and with post complaint customer behavior such as word of mouth or repurchase intentions. This research shows that, far from being just an outcome variable, word of mouth plays an important role in the complaint process affecting perceived fairness, satisfaction and repurchase intentions. Distributive fairness is the most influential fairness dimension, but word of mouth valance has the largest impact on satisfaction, and is also more influential than satisfaction in impacting repurchase intentions. Limitations and future research directions are noted.

INTRODUCTION

Complaint management continues to be a focal point of research as more companies have become convinced that defensive marketing is highly profitable. The idea that companies can boost profits by almost 100% by retaining just 5% more of their customers (Reichheld and Sasser 1990) has CEO's focusing more and more on the topic. Pioneering work on the subject (TARP 1986) showed that not only did handling complaints lead to an increased intention to repurchase but that it decreased negative word of mouth and increased positive word of mouth, thus increasing the overall benefit to the firm.

While management was aware of the impact that organizational responses to complaints had on word of mouth and intentions to repurchase, they were less sure which aspects of the response were driving this behavior. Recent research in this area (for example, Blodgett, Hill and Tax 1997; Smith, Bolton and Wagner 1999) has started to focus on the justice or fairness literature in an effort to

understand these drivers. However, even in this research, word of mouth is considered an outcome rather than a mediating variable.

Given that a consumer has had a dissatisfying experience, a consumer may engage in multiple responses (Blodgett, Granbois and Walters 1993), demonstrating that complaint handling is a dynamic process. It does not appear logical that a dissatisfied consumer will hold off on the word of mouth until after the complaint has been handled and satisfaction determined. Intuitively, one can expect increased opportunities for word of mouth activity after every encounter with the organization (from the initial, dissatisfying encounter that initiated the complaint, through every stage of the complaint resolution). Depending on the outcome of the encounter, the valance or dissemination of the word of mouth could change. By virtue of the word of mouth activity, the complainant is taking a public position that will be very hard to retract if the result should run counter to what was expected. If word of mouth is really that strong an influence, then it should affect all aspects of the complaint handling process, starting from the perceived justice or fairness of the organizational response, through the determination of satisfaction, and ending with the post complaint customer behavior of repurchase intentions.

This article examines the impact that word of mouth has as a mediating variable between perceived fairness and satisfaction and repurchase intentions (see Figure 1). Modeling word of mouth as a mediating variable takes into account the impact that word of mouth has on determining satisfaction and future repurchase intentions and will hopefully shed some more light on the post complaint customer behavior process. Word of mouth may be either positive or negative depending on the complainant's perception of the complaint recovery by the organization. This

Table 1
Glossary

Term	Definition
Perceived Fairness	Customer's perception of the fairness of the action.
Procedural Fairness	The perception of fairness of the company's visible policies and procedures, those that the customer has direct knowledge or experience of them.
Distributive Fairness	The customer's perception of the fairness of the outcome of the organization's response.
Interactional Fairness	The customer's perception of the fairness of the organizational representative's attitude and personal interaction with the customer. Was there a show of courtesy and respect, or not?
Word of Mouth Dissemination	The activity of giving word of mouth. How likely is it that a customer will talk or has talked to other people about the complaint experience. This is a tendency to relate WOM measure.
Word of Mouth Valance	Given that a person has engaged in word of mouth activity, on the whole, has this communication been mostly positive or mostly negative. Respondents are asked their measure of agreement to statements that they spread positive or negative remarks. This is not a dichotomous variable.
Overall Satisfaction	How has the complaint recovery affected the customer's overall satisfaction with the company. This is an overall measure of satisfaction rather than a more limited measure of satisfaction with the complaint handling.
Repurchase Intentions	How likely is it that the customer will continue to use this product at the same consumption rate as before?

Table 2 shows the exact operationalization of these constructs, as well as their reliability and variance extracted measures.

article will also examine the major role played by perceived fairness in determining post complaint customer behavior. Justice and fairness have been used almost interchangeably in the literature. As justice has a somewhat legal representation to it, fairness will be used in this article, as it feels closer to the consumer context.

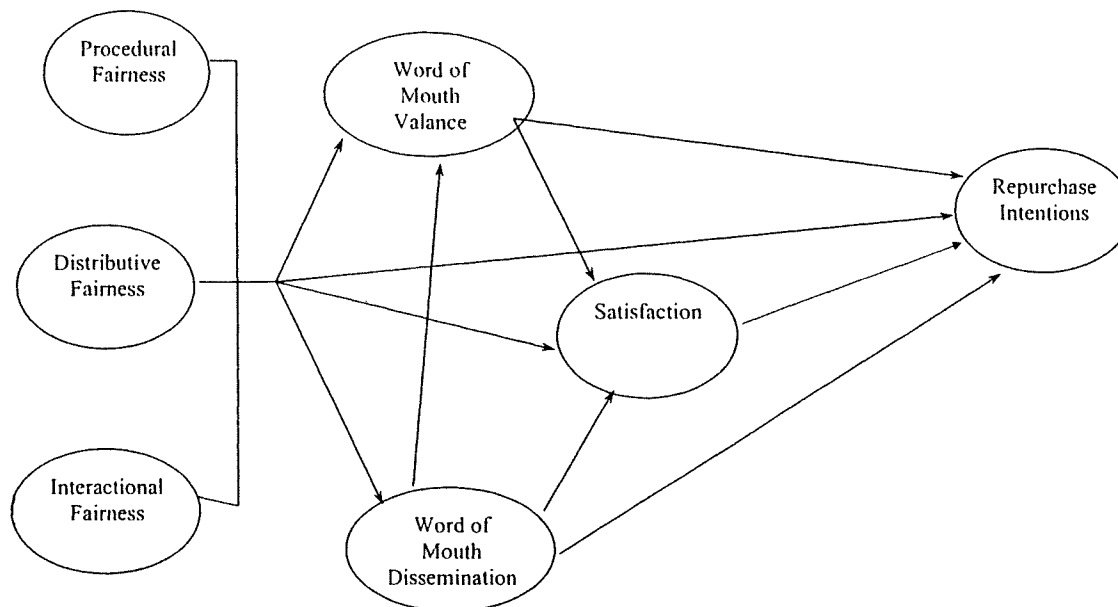
CONCEPTUAL DEVELOPMENT OF THE MODEL

The complaint process can be looked at as composing three distinct stages; complaint, organizational response, and post complaint customer behavior (complainant reaction to the response). In the proposed model, the complainant

reacts to the organizational response by engaging in word of mouth activity (dissemination and valance). This can affect the subsequent satisfaction and repurchase intentions. Word of mouth activity (dissemination and valance) will thus mediate between perceived fairness and satisfaction and repurchase intentions. Satisfaction will also drive the intentions to repurchase (see Figure 1). A short glossary of the main terms in this paper may be found in Table 1.

Since the ultimate success of complaint handling is determined by the repurchase rate of the complainant, it is important to understand the various relationships and influences all the variables in the model have on repurchase intentions. The results from this model will be

Figure 1
Proposed Model



able to show where word of mouth activity will have its biggest impact, which fairness dimension has the biggest influence on satisfaction or repurchase intentions, or whether word of mouth activity has a stronger influence on repurchase intentions than satisfaction.

From a theoretical perspective, this research will shed some more light on the complex process of post complaint customer behavior, allowing us to better understand the forces at work in this complex field. From the managerial perspective, it will allow managers to focus on those variables having a direct impact on the behaviors they want to influence.

Perceived Fairness

An allocation decision (such as complaint handling, where some form of compensation must be determined) has been defined by Bies and Moag (1986) as “a *sequence of events* in which a *procedure* generates a process of *interaction* and decision making through which an *outcome* is allocated to someone” (their emphasis). A

company’s complaint handling procedures lead to an interaction with the customer, at the end of which a decision is made. In other words, a distinction must be made between a procedure, its enactment, and its outcome. These are commonly called procedural, interactional, and distributive fairness. We examine these constructs independently in order to increase the predictive ability of the model. Given that the consumer has already had a dissatisfying experience (hence the complaint), the organizational response to the complaint becomes critical. A poor response means that the consumer has been disappointed twice, while an excellent recovery might enable the organization to retain an otherwise “lost” customer.

Procedural Fairness

Procedural fairness is concerned with the fairness of the procedures used in making decisions (Folger and Greenberg 1985). It is the extent to which procedures used to determine a distribution of outcomes have allowed for

objectivity and consumer representation (Goodwin and Ross (1990). The way decisions are reached is just as important as the decision itself. Lind and Tyler (1988) reported that defendants in traffic court who were acquitted because the officer failed to show up in court were less satisfied because they did not have the chance to defend themselves (even though the outcome was still favorable). An organization is evaluated by its facilitation of the complaint process. The complaint process includes all of the policies, procedures, and tools that a company has in place to support customer communications and complaints, as well as the time it takes for the organization to process the complaint and arrive at a decision. Consumers can evaluate only those policies and procedures that impact them directly, and these are the basis for their perception of procedural justice.

Distributive Fairness

Distributive fairness is concerned with the outcome of the complaint process. It is evaluated by one of three decision rules; equality, equity, or need (Deutsch 1975). Most complaint situations are determined by the equity method, where the complainant looks at the proportionality of the cause of dissatisfaction and the cost of complaining and expects to receive appropriate compensation. There are other situations where the equality or need decision rule would apply. In health care, for instance, customers pay a fixed monthly fee, but receive services based on a need basis. In the travel or lodging industry, customers get the same service in a certain class, regardless of what they paid for the ticket or room.

Interactional Fairness

Interactional fairness relates to the interpersonal communications in the decision making process. It addresses the style with which a decision is implemented. The presence of a policy or rule does not imply that the policy is fairly applied, therefore, a distinction must be made between a policy or a guideline, and how that policy is implemented (Vermunt, Van der

Kloot, and Van der Meer 1993). Interactional fairness encompasses common courtesy, politeness, respect, empathy and a willingness to listen.

The three fairness dimensions have been well documented in previous research, and their relationships with word of mouth, repurchase intentions and satisfaction are remarkably similar, perhaps due to the high degree of correlation recognized between the constructs.

Previous research has shown a positive relationship between fairness and satisfaction (Bowman and Narayandas 2001; Smith, Bolton and Wagner 1999; Tax, Brown and Chandrashekar 1998). A positive relationship was reported between fairness and repurchase intentions (Clemmer 1988; Goodwin and Ross 1992). Blodgett, Granbois and Walters (1993) showed a relationship between perceived fairness and negative word of mouth activity, and Tax and Chandrashekar (1992) reported that word of mouth is actually a U shaped relationship, where satisfied complainers spread positive word of mouth valance, and dissatisfied complainers spread negative word of mouth valance. Anderson (1998) also rejected the traditional linear model in favor of an asymmetric U shaped relationship between satisfaction and word of mouth. There also appears to be more of a tendency for complainers to talk about negative experiences (TARP 1986), therefore it is expected that procedural justice would have a negative relationship with word of mouth dissemination. Lewis (1983) reported that the way the complaint was handled (organizational response fairness) was a key factor in the dissemination of word of mouth activity. Swan and Oliver (1989) showed a link between perceived fairness and the likelihood of engaging in word of mouth activity. Blodgett, Hill and Tax (1997) reported a negative relationship between negative word of mouth and distributive and interactional fairness, but no such relationship was found between procedural justice and negative word of mouth. This may have been due to the conceptualization of procedural justice as timeliness only. In reality, it encompasses far more than that, and this may have contributed to their insignificant finding. Based on the above, it

is hypothesized that

H_{1a}- There is a positive relationship between procedural fairness and word of mouth valance.

H_{2a}- There is a negative relationship between procedural fairness and word of mouth dissemination.

H_{3a}- There is a positive relationship between procedural fairness and satisfaction.

H_{4a}- There is a positive relationship between procedural fairness and repurchase intentions.

H_{1b}- There is a positive relationship between distributive fairness and word of mouth valance.

H_{2b}- There is a negative relationship between distributive fairness and word of mouth dissemination.

H_{3b}- There is a positive relationship between distributive fairness and satisfaction.

H_{4b}- There is a positive relationship between distributive fairness and repurchase intentions.

H_{1c}- There is a positive relationship between interactional fairness and word of mouth valance.

H_{2c}- There is a negative relationship between interactional fairness and word of mouth dissemination.

H_{3c}- There is a positive relationship between interactional fairness and satisfaction.

H_{4c}- There is a positive relationship between interactional fairness and repurchase intentions.

Word of Mouth

Previous research has generally treated word of mouth as an outcome, or final result of complaint handling (see Anderson 1998; Blodgett, Granbois and Walters 1993 for instance). Yet, as suggested by Tax, Chandrashekar and Christiansen (1993), engaging in word of mouth activity may have some impact on assessments of satisfaction and subsequent behavior. In other words, instead of just being an outcome, word of

mouth may actually be a mediator variable, impacting both satisfaction and intentions to repurchase. Intuitively, this is easy to understand. Just because a complainant has filed a complaint does not mean that there is no other response. The notion of multiple complaint responses is well accepted today.

A poor interaction with a rude representative or a bad policy while filing the complaint can cause negative word of mouth, even before the complainant gets a written response from the organization. Therefore, temporally speaking, word of mouth predates satisfaction in the complaint response. Indeed, a dissatisfied consumer may engage in word of mouth activity without even filing a complaint. Can word of mouth actually influence satisfaction and repurchase intentions? Cialdini (1993) reported that public commitment can lead to doggedly consistent future action. This seems to be applicable in high involvement situations because a commitment has been made. Word of mouth is in a sense a public commitment (gone on record as saying "that company is terrible...") or a public stance. Complainers would have a hard time spreading negative word of mouth and then repurchasing the product or claiming to be satisfied (unless there were no alternatives, such as a local phone carrier or other service monopoly). In a similar vein, Knox and Inkster (1968) in a couple of studies at the racetrack, reported that people were much more confident in their horse's chances for success after placing a bet (commitment) than before placing the bet. In other words, once consumers have made a choice (word of mouth valance), they will encounter internal pressure to behave consistently with that commitment. This principle of consistency is a powerful motivator for a complainant to behave in accordance with the word of mouth valance.

Self perception theory (Bem 1972) suggests that people observe their own behavior and then determine their attitudes. This would seem to apply to a low involvement situation. Complainants examine their word of mouth activity and then determine their satisfaction and their intention to repurchase. In either case, it is the word of mouth activity that will influence the

repurchase intentions or the satisfaction level. Lewis (1983) reported that the way the complaint was handled (organizational response fairness) was a key factor in the likelihood of word of mouth activity. Therefore, the likelihood of engaging in word of mouth activity might be different at different stages of the model. Research has also shown that complainers talk more about negative experiences than positive ones (TARP 1986), so that the fairer the complainant feels the response is, the less likely the complainant will be to talk about it, thus leading us to the following:

H_{5a}- Word of mouth valance will have a positive effect on satisfaction.

H_{6a}- Word of mouth valance will have a positive effect on repurchase intentions.

H_{5b}- Word of mouth dissemination will have a negative effect on satisfaction.

H_{6b}- Word of mouth dissemination will have a negative effect on repurchase intentions.

H₇ – Word of mouth dissemination will have a negative effect on word of mouth valance.

Satisfaction

Satisfaction is the customer's overall affective feeling about the company as a result of the company's handling of the complaint. Given the complaint handling, how does the customer now feel about the company? Early research on complaint handling focused on the overall satisfaction with the complaint handling by the organization. TARP (1986) reported a strong positive relationship between satisfaction with the complaint handling and the intentions to repurchase. Subsequent research has overwhelmingly supported this finding (Conlon and Murray 1996; Goodwin and Ross 1989; Smith and Bolton 1998). However, Halstead and Page (1992) reported that consumers' satisfaction with the complaint response does not counteract the negative effects of a high level of dissatisfaction with the product, even though, among dissatisfied consumers, higher satisfaction with complaint

resolution did lead to higher levels of repurchase intentions. Based on these findings, it is suggested that:

H₈- Satisfaction will have a positive relationship on repurchase intentions.

STUDY METHODOLOGY

Design

A cross sectional survey design was used to assess the reactions of respondents to a self-reported complaint experience in the near past. Respondents were required to have complained to a company and to have received a response. The questionnaire began by asking them for details of the case, reminding them of the incident, and reducing selective bias. The respondents were 319 students (out of approximately 500 enrolled) in an introductory marketing class at a large southwestern university. No incentive was given to them for their participation. They reported on their actual consumer behavior and the organizational response, with almost 10% complaining about auto repair, almost 20% involving a retail store, and more than 25% of the complaints involving the hospitality industry.

Scale Development

Following guidelines set down by Churchill (1979), an exhaustive literature search was conducted of the complaint literature. Key informants were interviewed among the consumer affairs professionals. An open-ended survey was administered to 125 students asking them to describe in detail a prior complaint to an organization. They were asked to describe in detail what caused the dissatisfaction, why they decided to complain, the fairness of the response, how many people they talked with about the incident, their level of satisfaction with the response, and the key response factor influencing their satisfaction with the response. Each scale was independently tested using exploratory factor analysis and reliability tests and further refined in pretests.

Table 2
Operationalization of the Variables

Items	Reliability	Variance Extracted	SMC
Procedural	0.889	0.731	
1) I felt that company policies allowed for flexibility in taking care of my complaint.			0.51
2) I feel that the guidelines used by the company to process my complaint were fair.			0.80
3) I believe that the company guidelines for listening to and handling customer complaints are fair.			0.87
Distributive	0.948	0.859	
1) I am pretty happy with what the company gave me.			0.89
2) I thought that the company solution was definitely acceptable.			0.82
3) I think that the result I got from the company was appropriate.			0.87
Interactional	0.967	0.906	
1) I felt that the representative was very courteous.			0.89
2) I felt that the concern shown by the representative was sincere.			0.92
3) I felt like the representative really cared about me.			0.90
Satisfaction	0.977	0.935	
1) In general, I have a good feeling about this company.			0.92
2) My impression of this company has improved.			0.94
3) I now have a more positive attitude towards this company.			0.95
Word of Mouth Dissemination	0.858	0.670	
1) I am likely to tell as many people as possible about my complaint experience.			0.58
2) I am likely to talk about my complaint experience with anyone who will listen.			0.78
3) I am likely to mention my complaint experience at every chance.			0.64
Word of Mouth Valance	0.923	0.800	
1) While talking about my complaint, I emphasize how well the company took care of it.			0.76
2) Whenever I talk about my complaint, I stress the positive way that the company reacted.			0.83
3) When I talk about my complaint experience, I let people know how poorly it was handled by the company (R)			0.81
Repurchase Intentions	0.904	0.759	
1) I will probably not purchase this brand again. (R)			0.66
2) I will use this brand much less in the future. (R)			0.81
3) I will probably switch to another brand in the future. (R)			0.82

All items and constructs are based on a 7 point scale anchored by "strongly disagree" and "strongly agree"

Confirmatory factor analysis was then performed to determine the validity and reliability of all scales. Composite reliabilities (Bagozzi and Yi 1988, Nunnally and Bernstein 1994) for the scales ranged from 0.858 to 0.977, while the average variance extracted (Fornell and Larcker 1981) ranged from 0.670 to 0.935, well exceeding the criteria set by Bagozzi and Yi (1988), thus demonstrating validity. The t-values of all the item loadings are all significant showing construct validity. Final scale items are shown in Table 2.

All the constructs were run together in a confirmatory factor analysis to determine discriminant validity (see Table 3). While the correlations among some of the constructs were high (commensurate with other studies – see Clemmer 1988; Seiders 1995; Tax 1993), the standard deviations were low, thus showing discriminant validity (Anderson and Gerbing 1988; Bagozzi and Warshaw 1990).

Table 3
Correlations between Variables (Phi)
Estimates, Standard Deviations, and t-value*

	1	2	3	4	5	6	7
Satisfaction (1)	1.00						
WOM Valance (2)	0.94 (0.01) 86.86	1.00					
Repurchase (3)	0.76 (0.03) 25.69	0.74 (0.03) 22.58	1.00				
WOM Dissemination (4)	-0.47 (0.05) -8.69	-0.47 (0.06) -8.38	-0.34 (0.06) -5.47	1.00			
Procedural Justice (5)	0.89 (0.02) 55.76	0.87 (0.02) 44.66	0.66 (0.04) 16.81	-0.42 (0.06) -7.35	1.00		
Distributive Justice (6)	0.90 (0.01) 70.37	0.90 (0.02) 56.30	0.68 (0.04) 18.87	-0.48 (0.05) -8.87	0.88 (0.02) 49.71	1.00	
Interactional Justice (7)	0.87 (0.02) 55.84	0.85 (0.02) 42.05	0.66 (0.04) 17.63	-0.45 (0.05) -8.30	0.88 (0.02) 52.58	0.83 (0.02) 40.64	1.00

The top number in each square is the correlation estimate between two variables.
The middle number (in parentheses) is the standard deviation.
The bottom number is the t-value. All values are significant at the $p < 0.0001$ level.

Table 4
Goodness of Fit Measures for the Full Tested Model

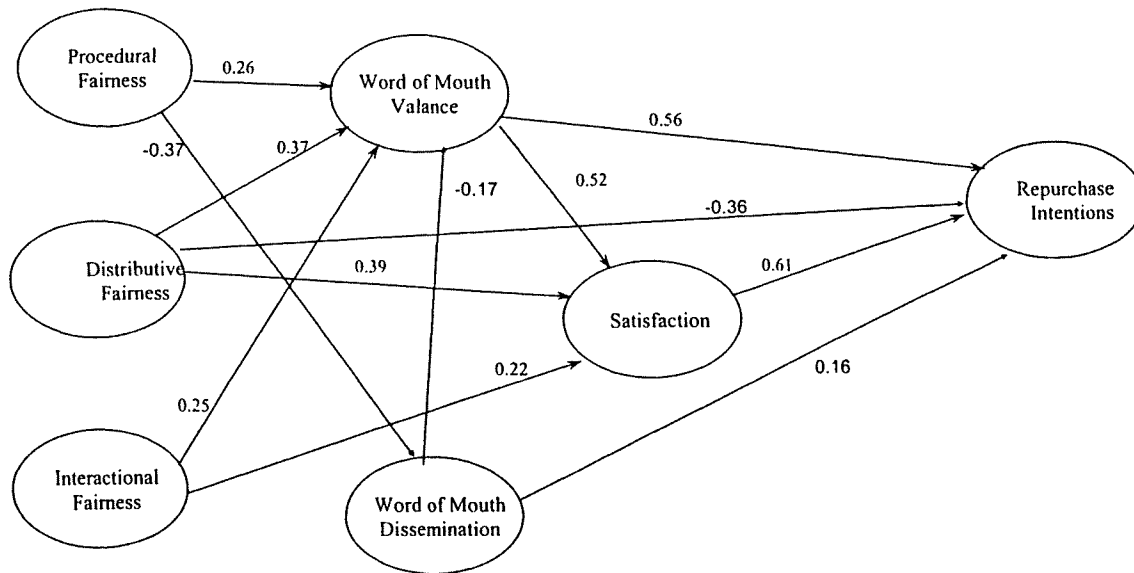
Chi ²	279.04
Degrees of Freedom	168
Normed Chi ²	1.661
Standardized RMR	0.059
Goodness of Fit Index	0.92
Adjusted Goodness of Fit	0.89
Comparative Fit Index	0.82

Analysis and Results

The hypotheses were tested using a structural equations modeling software - Lisrel 8.3 (Joreskog and Sorbom 1996). An examination of all the item loadings on the constructs reveals that they are

significant at the 0.001 level (the lowest t-value was 11.23). The overall fit of the model was tested using several measures (see Table 4). While the chi-square is significant, this is not unexpected in a sample size of more than 300. The normed chi square index is 1.66 (well below the recommended

Figure 2
Significant Paths of the Model
Standardized Estimates



maximum level of 2.0). The goodness of fit index is 0.92, while the adjusted goodness of fit measure is 0.89, both around the recommended level of 0.90. The comparative fit index is a little low at 0.82. The standardized root mean square residual is 0.059, slightly above the recommended level of 0.05. It therefore appears that the model has an adequate fit.

The significant paths of the model are shown in Figure 2 and itemized in Table 5. Distributive fairness had the largest impact on word of mouth valance, while the impact of procedural and interactional fairness was about the same. These relationships were all significant and positive supporting the first hypotheses. Surprisingly, procedural fairness is the only fairness dimension to impact word of mouth dissemination, thus only partial support is available for the second hypothesis. Both distributive and interactional fairness had a significant, direct, positive impact on satisfaction, yet here procedural fairness did not have a significant impact, giving only partial support for the third hypothesis. The fourth hypothesis expected a positive relationship

between fairness and repurchase. In fact, both procedural and interactional fairness had no relationship, while distributive fairness had a significant negative effect on repurchase. This interesting finding will be examined later in the discussion. Word of mouth dissemination has a strong negative impact on word of mouth valance, so hypothesis 7 is supported. Hypothesis 5 stipulated that both word of mouth variables would have an impact on satisfaction. In fact, word of mouth valance had a positive impact, as predicted, but word of mouth dissemination did not have a significant negative impact. Therefore, there is only partial support for hypothesis 5. It is worth pointing out that the impact of word of mouth valance is almost as strong as the impact of all the fairness dimensions together, thus supporting the mediating effect of word of mouth valance. Hypothesis 6 suggested that word of mouth valance would have a positive impact on repurchase, while word of mouth dissemination would have a negative impact on repurchase. In reality, both word of mouth dimensions have positive relationships with repurchase. This will

Table 5
Significant Standardized Effects

Source	Effect	WOM Valance	WOM Dissemination	Satisfaction	Repurchase Intentions
Direct Effect					
Procedural Fairness		0.26	-0.37	0.0	0.0
Distributive Fairness		0.37	0.0	0.39	-0.36
Interactional Fairness		0.25	0.0	0.22	0.0
WOM Dissemination		-0.17	---	0.0	0.16
WOM Valance		---	---	0.52	0.56
Overall Satisfaction		---	---	---	0.61
Indirect Effect					
Procedural Fairness		0.06	---	0.15	0.0
Distributive Fairness		0.0	---	0.20	0.56
Interactional Fairness		0.0	---	0.14	0.35
WOM Dissemination		---	---	-0.09	-0.12
WOM Valance		---	---	---	0.31
Overall Satisfaction		---	---	---	---
Total Effect					
Procedural Fairness		0.32	-0.37	0.0	0.33**
Distributive Fairness		0.39	0.0	0.59	0.19
Interactional Fairness		0.28	0.0	0.34	0.29
WOM Dissemination		-0.17	---	0.0	0.0*
WOM Valance		---	---	0.52	0.88
Overall Satisfaction		---	---	---	0.61

All effects significant at $\alpha = 0.05$

Insignificant relationships are marked by 0.0

*WOM Dissemination has a positive direct effect and a negative indirect effect, the total effect is not significant.

**Both the direct and indirect effect of Procedural were positive, but insignificant. The total effect is, however, significant.

be discussed in detail later. Satisfaction had a significant impact on repurchase intentions, thus supporting hypothesis 8. A quick look at Table 5 shows the direct, indirect and total effects for each variable.

Discussion

From the analysis, it is clear that all three fairness dimensions have a strong, positive impact on word of mouth valance. It is therefore in the interests of managers to increase the perceived fairness of their complaint response, not only to increase favorable word of mouth activity, but also to favorably impact overall satisfaction of the complainant. Increasing procedural fairness has the added benefit of decreasing the dissemination of word of mouth. Given that more word of mouth is produced from a dissatisfying recovery than a positive, satisfying one, and the fact that

procedural fairness is the only fairness dimension that must be in place before the complaint, the implication is that managers must stress the procedural fairness issue, making sure that customers know where to complain and how the complaint will be handled. This has the effect of decreasing the dissemination of word of mouth, as well as increasing the valance of the remaining word of mouth activity. Distributive and interactional fairness are invoked only after the complaint, and while they have a positive impact on the valance of the word of mouth, they may not be relevant to impact word of mouth dissemination.

Managers also need to be aware that increasing word of mouth activity will have more of a negative effect than a positive one, thus the first emphasis should be on reducing the likelihood of word of mouth activity by not giving the customers anything bad to talk about. While

there is no total effect from word of mouth dissemination on either satisfaction or repurchase (the positive direct effect on repurchase is canceled out by the negative indirect effect), it does however, impact other consumers. Output word of mouth from a complainer becomes input word of mouth for a prospective consumer (File, Cermak and Prince 1994).

It would appear that distributive fairness has the strongest impact of the three justice dimensions. This is in direct contrast to Blodgett, Hill and Tax (1997) who reported that the major determinant of respondents' repatronage and negative word of mouth intentions was interactional justice. This may be due to the limitations of their experiment (for example, procedural justice was operationalized as just response speed) or to the fact that the survey covered a variety of actual complaint behaviors. Distributive fairness may have been mitigated by the switching costs, since the shoes could only be returned at that store. This might have made interactional justice more salient. Blodgett and Tax (1993), using a different version of the experiment used in Blodgett, Hill and Tax (1997) reported that distributive justice was stronger than interactional justice.

While procedural fairness affects word of mouth valance just slightly more than interactional fairness, it is the only fairness dimension to impact word of mouth dissemination. Having policies and procedures in place to make it easy for a consumer to complain evidently increases the complainant's feeling that this company really cares about the consumer, and thus increases the valance of the word of mouth, as well as decreasing the dissemination of word of mouth. There is also a positive indirect effect of procedural fairness on word of mouth valance. In all, while not as powerful as distributive justice, procedural justice is cheaper to implement, thus giving managers a low cost method of increasing the word of mouth valance, with the added side benefit of decreasing the word of mouth dissemination. Interactional fairness has a significant influence on word of mouth valance, while not being as influential as distributive and procedural fairness. It is also a low cost alternative to distributive justice in

influencing word of mouth dissemination. Since the representatives must be in contact with the complainers anyway, a little respect and courtesy go a long way to influencing the likelihood of word of mouth activity.

The main issues of this study are the mediating effect of word of mouth on the relationship between the perceived fairness of the organizational response and satisfaction and repurchase intentions. Looking at the total effect of each variable on satisfaction (see table 5), it quickly becomes apparent that word of mouth valance is a key factor mediating those relationships along with distributive fairness. The biggest impact of word of mouth is on repurchase intentions. While the positive direct effect of word of mouth dissemination is canceled out by a negative indirect effect, word of mouth valance has the strongest impact on repurchase of any other variable, and is stronger than the combined effects of all three fairness dimensions combined.

Word of mouth valance also has a stronger total effect on repurchase intentions than satisfaction. It would thus appear that word of mouth valance plays a crucial role in mediating between the organizational response and intentions to repurchase. Given that the only relevant measure of complaint handling is repurchase, managers should really be focusing on word of mouth activity. If the company can get the customers to talk positively about their recovery experience, then this will have a major impact on the future repurchase of the customers, thus providing managers with another good reason to try and handle the complaint appropriately. By focusing on procedural and interactional fairness, managers can cost effectively get consumers talking positively about the company, even before the outcome of the complaint is known, thus shifting the focus of the complainant in their favor. Satisfaction is another strong mediating factor in the relationship between perceived fairness and repurchase intentions. Prior research has focused on satisfaction as the main mediator between fairness and repurchase. This research supports satisfaction's critical role as a mediating construct, but clearly establishes word of mouth valance as another critical mediator, previously

ignored. This has important implications for researchers and managers alike.

From a theoretical perspective, it is apparent that the psychological forces at work on word of mouth also affect satisfaction and repurchase intentions. More effort needs to be focused on the relationship between word of mouth and satisfaction and repurchase.

Two results were particularly interesting and should also be discussed here. First, while we hypothesized a positive relationship between distributive fairness and satisfaction, the relationship was significantly negative. It is very interesting that while distributive justice has a negative direct effect on repurchase intentions, there is a positive indirect effect through satisfaction and an overall positive total effect between distributive fairness and repurchase. One possible explanation could be the replacement effect. Since customers have received fair compensation, they have no need for immediate replacement. Only when they don't receive fair outcomes do they have to purchase immediate replacements. In either case, it appears that satisfaction and word of mouth valance are the immediate drivers of repurchase intentions, and not as much distributive justice.

The second interesting result was the positive direct relationship (total effect was non-significant) between word of mouth dissemination and repurchase instead of the negative relationship hypothesized. One possible explanation could be based on the TARP (1986) finding that repurchase rates of customers who had complained and been dissatisfied from the response, were still more likely to repurchase from the company than those who were dissatisfied and had not complained. The explanation that TARP (1986) gave was that the very act of complaining acted as a catharsis for the complainant, and therefore it had a positive effect on the repurchase intentions. In much the same way, word of mouth dissemination could also be seen as a catharsis.

RESEARCH LIMITATIONS AND FUTURE RESEARCH

First, the use of a student judgement sample

may directly impact the generalizability of these findings. While students made legitimate purchases, they may lack a certain maturity or experience in order to properly evaluate the complaint response. Further, multiple random samples from different populations would increase the generalizability. Random samples from well-established consumers would help to generalize these findings.

Second, relying on respondents to accurately remember events from the past may have affected this research. While certain measures (asking only from the recent past, having them first write details of the incident) were taken to reduce these biases, alternative measures should be explored. For instance, a longitudinal study could compare the results from two different time periods to determine the effect time has on the results. Alternatively, perhaps it would be possible to compare respondents' reports with actual company complaint data.

Third, more research is needed into the complex relationships among the fairness dimensions. Due to the high correlations, it seems possible that there may be relationships between these constructs. Research also needs to be done to improve the measures. This would reduce measurement bias as a source of conflicting results between studies.

Lastly, it is clear that there are other variables that affect word of mouth activity. Given the importance of this variable, it seems crucial that we make every attempt to determine what they are and how they fit into the model.

CONCLUSIONS

The importance of the fairness dimensions in explaining post-complaint customer behavior has been supported, and this research highlights a new mediator, word of mouth valance and dissemination. It appears that word of mouth activity has a critical role in mediating the relationship between the perceived fairness of the organizational response, and satisfaction and repurchase intentions. Future research is necessary to fully integrate this finding into the literature.

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DISCONFIRMED EXPECTATIONS THEORY OF CONSUMER SATISFACTION: AN EXAMINATION OF REPRESENTATIONAL AND RESPONSE LANGUAGE EFFECTS

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ABSTRACT

This paper reports the results of an experiment in which the strength of the linkages among variables specified in the disconfirmed expectations theory of consumer satisfaction is examined while controlling for measurement context and response language effects. The results extend previous research by examining both predictors and consequences of consumer satisfaction and by providing evidence that expectations produce representational effects rather than merely measurement context and response language effects. In general, the findings provide support for the theory and the strategic implications of the disconfirmed expectations theory.

INTRODUCTION

The disconfirmed expectations theory of consumer satisfaction (hereafter referred to as the disconfirmed expectations theory) is a generally accepted theory utilized by marketing managers to impact consumers' satisfaction and their likelihood to make purchases. Salient to the purpose of this study is that theories including perceptual comparative contrasts, such as the disconfirmed expectations theory, are implicitly assumed to produce representational effects, defined by Lynch, Chakravarti, and Mitra (1991, p. 285) as changes in ". . . the underlying mental representations of judged objects." That is, the actual opinions about the objects (e.g., products and services) are affected by the comparison process. For example, Urbany, Bearden, and Weilbaker (1988) found that when subjects were presented with higher reference prices for a television set, they rated the offered price for the television set as better and indicated a weak desire to purchase it relative to the context of lower

reference prices. In another study, Lynch et al. (1991) found a significant correlation between price estimates for cars and rankings of purchase intention for both moderately priced and expensive cars when compared to low-priced cars (this finding was true only for novices, not experts). In both examples, the propensity to buy increased when the perceptions of the product improved through a comparative process. Similarly, the comparative process between consumers' perceived expectations and their ratings of performance, disconfirmation, and satisfaction are assumed to produce parallel changes in their purchase behavior.

However, there is evidence that comparative processes do not necessarily always result in representational effects. Instead, empirical tests of theories can produce response language effects, defined as changes in "...how context-invariant representations are mapped onto response scales provided by researchers..." (Lynch et al. 1991, p. 285), which, in essence, generate false positive results—that is, the changes in ratings due to comparative processes do not carry over to behavior. Moreover, the process of measuring comparative processes can also result in response language effects (Feldman and Lynch 1988). Take the earlier example of television reference prices. With response language effects, a higher reference price, relative to a lower reference price, would still result in a favorable perception of the offered price, but there would be no increase in purchase intention. Upshaw (1978) found that when subjects compared their prior attitudes to Thurstone-type attitude statements, their ratings of those statements were affected. But these effects did not carry over to related judgmental perceptions, nor did they carry over to behavior. In the case of the disconfirmed expectations theory, if response language effects and not representational effects have been driving theory

support, then managerial actions based on the theory may not be valid. Thus, for example, lowering service expectations (e.g., promising that a meal will be served in 15 minutes instead of 10 minutes) may increase consumers' satisfaction ratings but not increase repeat purchases. Given the significance of such a finding to marketing practice, it is essential to subject the disconfirmed expectations theory to a test that can discern whether or not representational or response language effects form the basis for theory support, something which has not specifically been the focus of previous research.

Determining whether or not consumers' ratings based on comparative contrasts of variables in the disconfirmed expectations theory reflect underlying mental representations (representational effects) or effects of an expectations treatment and /or the process of measuring expectations that do not reflect underlying mental representations (response language effects) requires empirical tests that examine the degree to which patterns of concomitant variation among the variables reflects one or the other type of effects (Lynch et al. 1991). In particular, this requires empirical measurement of the behavioral consequences of satisfaction/dissatisfaction experiences. Although several marketing studies have examined the linkage between consumer satisfaction and purchase intentions (Bearden and Teel 1983; Bolton 1998; Bolton and Lemon 1999; LaBarbera and Mazursky 1983; Mittal and Kamakura 2001; Oliver 1980a; Oliver and Linda 1981; Oliver and Swan 1989), there is limited empirical evidence of linkages between transaction-specific satisfaction and future product choice behavior. This is an important limitation of the empirical evidence because, whereas measures of purchase intentions use measurement scales vulnerable to response language effects, measuring product choice involves consumer responses that do not involve measurement scales; consequently, product choice responses may be less vulnerable to response language effects.¹

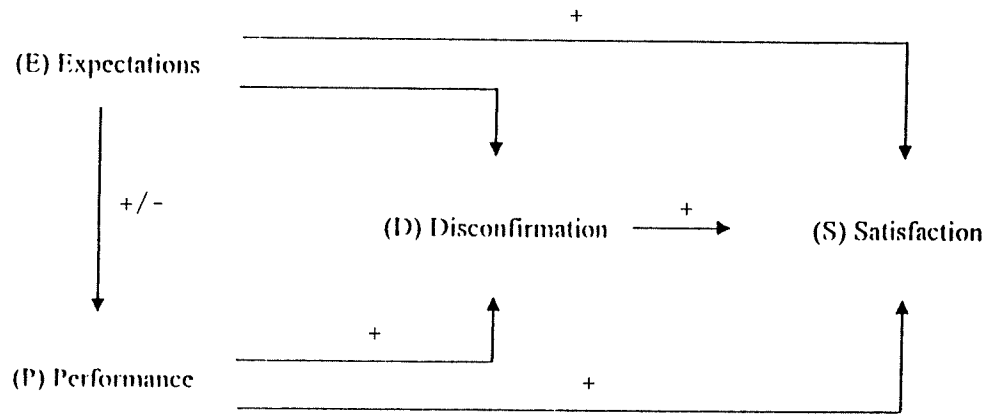
Thus, the purpose of this study is to examine the disconfirmed expectations theory, specifically focusing on whether or not the perceptual

comparative processes result in representational and (or) response language effects. We address these issues with a controlled experiment focusing on the effects of expectation level and measurement manipulations on (a) the primary variables of the classic disconfirmed expectations theory that are potentially vulnerable to response language effects and (b) a choice variable that is less vulnerable to response language effects than the purchase intention variable used in most previous research. This, along with the experimental manipulations and measures, provides a strong test of the theory—the strength of linkages among variables specified in the disconfirmed expectations theory is examined while controlling for measurement context and response language effects.

REPRESENTATIONAL VS. RESPONSE LANGUAGE INTERPRETATIONS OF EXPECTATIONS EFFECTS IN THE DISCONFIRMED EXPECTATIONS THEORY

A summary model of the disconfirmed expectations theory of consumer satisfaction is presented in Exhibit 1, which also summarizes theoretical and empirical evidence for the model. Importantly, the theoretical logic of the model indicates that expectations represent a comparison standard that provides a point of reference for consumers' judgments and (or) ratings of performance, disconfirmation, and satisfaction. For example, when evaluating the service provider in the context of low performance expectations, such as five-day delivery, a consumer may assign favorable disconfirmation and performance ratings to three-day service delivery. However, in the context of high performance expectations, such as two-day delivery, the consumer may assign unfavorable disconfirmation and performance ratings. Expectations and (or) the process of measuring expectations creates a context in which the delivery service is rated which, in turn, affects ratings of disconfirmation and performance. Thus, the determination of representational or response language effects is heavily dependent on consumers' expectations and how they use their

Exhibit 1
The Expectancy Disconfirmation Model of Consumer Satisfaction



A summary of the empirical support for the six linkages (from Oliver 1997 and Churchill and Surprenant 1982:)

Expectations – Performance Linkage

Boulding, Kalra, Staelin, and Zeithaml (1993)
Oliver, Balakrishnan, and Barry (1994)
Churchill and Surprenant (1982)

Expectations – Disconfirmation Linkage

Churchill and Surprenant (1982)

Performance – Disconfirmation Linkage

Swan and Trawick (1981)
Bolton and Drew (1991)
Churchill and Surprenant (1982)
Anderson and Sullivan (1993)
Olson and Dover (1976)

Disconfirmation – Satisfaction Linkage

Olson and Dover (1976)
Churchill and Surprenant (1982)
Oliver (1977, 1979, 1980b, 1993, 1994)
Oliver, Balakrishnan, and Barry (1994)

Expectations – Satisfaction Linkage

Olshavsky and Miller (1972)
Anderson (1973)
Oliver (1977, 1980a)
Olson and Dover (1979)
Churchill and Surprenant (1982)
Oliver and DeSarbo (1988)
Tse and Wilton (1988)
Bone, Shimp, and Sharma (1990)
Szajna and Scamell (1993)

Performance – Satisfaction Linkage

Swan and Trawick (1981)
Churchill and Surprenant (1982)
Bolton and Drew (1991)
Anderson and Sullivan (1993)
Oliver (1993, 1994)
Simester et al. (2000)

expectations in the comparative process.

In order to illustrate the relationship between expectations and representational/response language effects, consider a chocolate chip cookie containing an intermediate number of chocolate chips. This chocolate chip cookie is judged by one group of respondents under the condition of low

chocolate chip expectations (in terms of number of chips) and by another equivalent group of respondents under the condition of high chocolate chip expectations. If statistically significant relationships exist between the expectations level and other constructs in the model (i.e., performance, disconfirmation, and satisfaction),

the question remains concerning whether or not the estimated relationships involve response language or representational effects. Support for a representational effects interpretation is generated if expectations can be shown to be linked, either directly or indirectly, to changes in the magnitude of measures that are less vulnerable to response language effects. The absence of these linkages would be evidence of response language effects.

For purposes of illustration, assume that a group of consumers with low chip expectations is exposed to a situation in which the objective performance (i.e., actual chip content) exceeds expectations; in contrast, another group of consumers with high chip expectations is exposed to a situation in which the actual chip content falls short of expectations. Also assume that performance is held constant at an intermediate level of chocolate chip content.

Response Language Effects

In the response language effects situation, actual perceived chip content is not affected by the expectations treatment and, therefore, the perceived chip content is identical across the two expectations treatment levels. However, the overt cookie ratings (i.e., performance measures) are different because of response language contrast effects. The expectations treatment and (or) the process of measuring expectations cause the cookie performance ratings to shift in the direction of high performance in the low expectations treatment condition and shift in the direction of low performance under high expectations conditions. A potential result is that, although actual and perceived performance is the same in the two scenarios, the respondents' cookie performance ratings, and, perhaps, disconfirmation and satisfaction ratings, are shifted in a manner consistent with the response language contrast effects. The ultimate result is an increase in the concomitant variation across elements of the disconfirmed expectations model which, in turn, generates empirical support for the disconfirmed expectations theory. However, since the actual perceived chip content is unaffected by the high-versus-low expectations treatment, the response

language effects may or may not affect subsequent cookie choice probabilities.

It is important to note that manipulation of expectations levels may produce response language effects directly with respect to subsequent ratings of satisfaction and purchase intentions. In contrast, expectations levels may produce response language effects indirectly through expectations measurement, which then can carry over to subsequent satisfaction and purchase intention ratings. This expectations measurement context effect is referred to as self-generated validity, described by Feldman and Lynch (1988, p. 422) as follows:

“...the act of measurement changes the phenomenon under study, producing the thought processes predicted by the theory being tested and quite possibly influencing behavior.”

The result of either direct or indirect response language effects is distortion of the practical and theoretical implications of the disconfirmed expectations model. Thus, a thorough examination of possible response language effects in tests of the disconfirmed expectations theory requires an examination of both of these response language possibilities.

Representational Effects

Under the representational effects scenario, the respondents' actual unmeasured performance perceptions are affected by the chocolate chip expectations treatment. Moreover, in contrast to the response language effects scenario, the unmeasured perceived cookie performance diverges away from the expectations held by the two groups of respondents. Under low expectations, the unmeasured perceived chip content shifts in the direction of high performance while under the high expectations situation the unmeasured perceived chip content shifts in the direction of low performance. These perceptual contrast effects occur because different expectations conditions produce different reference points against which the cookie is

judged. Observing the cookie from a low (high) chocolate chip content expectations reference point results in respondents' perceptions that the cookie contains a higher (lower) level of chip content. Similar to the empirical implications of the response language scenario, the ultimate result of these representational effects is an increase in the concomitant variation across measured variables of the disconfirmed expectations theory which, in turn, generates empirical support for the model. But, in contrast to the response language situation, which may or may not influence cookie choice probabilities, these representational effects can be expected to influence subsequent cookie choice probabilities.

Just like response language effects, representational effects also can be produced by expectation levels and by expectation measurement processes. First, the manipulated expectation level may produce representational effects that ultimately affect consumer behavior—for example, expectations may affect unmeasured perceived performance that is linked to behavior independent of a psychological measurement context. This result would provide empirical support for the theory. Second, the process of measuring expectations can produce representational effects (e.g., changes in unmeasured performance perceptions) that are the result of self-generated validity. That is, the results of empirical studies suggest the process of measurement can affect the estimated structural relationships among variables and can ultimately affect behavior (Fazio et al. 1981; Higgins and Lurie 1983; Sherman et al. 1978). Evidence that representational effects are produced by the measurement of expectations would suggest that the empirical support for the theory is the result of self-generated validity which, in turn, would suggest that the empirical findings are misleading with respect to the theoretical and practical implications of the disconfirmed expectations theory. Thus, in an examination of representational effects in tests of the disconfirmed expectations theory, it is important to examine for the possibility of both types of representational effects.

DETECTING REPRESENTATIONAL AND RESPONSE LANGUAGE EFFECTS

Interpreting significant relationships in the disconfirmed expectations model as being evidence of either representational or response language effects ultimately rests on a combination of observations collected without measurement scales (e.g., a choice task) or with maximally different measurement methods. Three methods of detection are used in this study.

Decompositional Utility Measurement

Lynch et al. (1991, p. 286-7) argue that response language effects can be distinguished from representational effects in studies that require respondents to “. . . make integrated judgments of multidimensional stimuli (rather than of unidimensional stimuli) and in which contextual stimulus sets differ in their ranges on only one dimension.” We developed the first method of detection based upon this general proposition.

Consider a respondent judging the desirability or preference for a set of offers comprised of various pairs of product and price combinations. The specific exercise involves a conjoint measurement procedure in which a set of four stimulus offers is created based upon a 2 x 2 factorial design resulting in a set of four product/price offerings (i.e., conjoint stimuli) described on two dimensions (chocolate chip cookie product and price) with each dimension consisting of two levels (high and low). Based upon the results of the conjoint measurement, both the price part-worth range and the cookie part-worth can be calculated for each respondent. When changing the chocolate chip context expectations from low to high (or from high to low) alters the psychological representation of the cookie product, only perceptions of the cookie product should vary, since only the product (and not price) is linked to the chocolate chip expectation manipulation. Thus, under the representational effects situation, the part-worth function associated with the cookie product is expected to change but the price part-worth range is expected to be unaffected.

In contrast, changing expectations may cause no change in respondents' perceptions of the cookie product but may simply change the way subjects anchor their ratings of the stimuli in general. That is, both the cookie part-worth and the price part-worth range will be higher (lower) under the low (high) cookie expectations condition. Indeed, Lynch, et al. (1991, p. 287) argue that under these conditions the raw responses to the set of conjoint stimuli will change. Thus, under response language effects, the product and price part-worths can be expected to change proportionately.

Choice Task

An actual choice task represents another method of measuring the consumer's response to the expectations manipulations. In an actual choice situation where the expectations manipulation affects neither the product perceptions nor choice behavior, there is evidence of response language effects. In contrast, when the expectations manipulation affects product perceptions and choice behavior, then there is evidence of representational effects, particularly if the conjoint measurement price part-worth range has not been affected by the experimental manipulations.

Experimental Measurement Manipulation

A third method for examining response language and representational effects is to experimentally manipulate the expectations measurement process through either the expectations level (e.g., high vs. low) or expectations measurement (e.g., measured vs. not measured). Manipulation of the measurement sequence is a traditional method used in measurement context effects research (for examples, see Simmons, Bickart, and Lynch 1993 and Bickart 1993). Significant measurement treatment main effects on the conjoint and (or) the cookie choice results would be evidence that measurement context effects resulting from the measurement process distort the results of empirical tests of the disconfirmed expectations

model. Specifically, a statistically significant expectations measurement treatment effect on the cookie part-worth measure and (or) the cookie choice proportion combined with a statistically insignificant expectations measurement treatment effect on the price part-worth measures would be evidence of representational effects. Conversely, a response language effects interpretation would be indicated if the findings show significant expectations measurement treatment effects on the cookie part-worth measure and (or) the cookie choice proportion and price part-worth estimates. It is important to note that either of these interpretations distort the findings of the empirical test of the model and, therefore, are indicative of self-generated validity.

THE EXPERIMENT

As previously discussed, to fully examine the disconfirmed expectations model for representational and response language effects, it is necessary to examine the effects of (a) expectation level manipulations, (b) expectation measurement processes, and (c) the interaction between expectation level manipulations and measurement processes. Moreover, the effects of these manipulations and measurements need to be examined on both the variables traditionally included in disconfirmed expectations theory research and on other variables that are typically not included. Thus, by using experimental manipulation to separate response language and representational effects linked to expectations level and measurement treatments, it is possible to separate results that provide empirical support for the disconfirmed expectations theory from results that are artifacts of measurement processes.

To this end, we incorporated several elements into the experimental design in order to create a strong test of the disconfirmed expectations theory. First, the experiment manipulated expectations about chocolate chip cookies; respondents were exposed to an ad with either a large number or a low number of chocolate chips but then were presented with a test cookie that would be perceived as either having too few or too many chips, given the ad manipulation exposure.

Exhibit 2
The Design for the Experiment

Cell	Expectations Treatment ET ^a	Taste Test	Expectations Measurement Treatment EM ^b	Disconfirmed Expectations Measurement Treatment DM ^c	Conjoint And Choice Tasks Y
1	ET ₀	T	E ₀	D ₀	Y
2	ET ₀	T	E ₁	D ₀	Y
3	ET ₀	T	E ₀	D ₁	Y
4	ET ₀	T	E ₁	D ₁	Y
5	ET ₁	T	E ₀	D ₀	Y
6	ET ₁	T	E ₁	D ₀	Y
7	ET ₁	T	E ₀	D ₁	Y
8	ET ₁	T	E ₁	D ₁	Y

^a Expectations Treatments
(ET₀) Low Expectations
(ET₁) High Expectations

^b Expectations Measurement Treatment
(E₀) Measurement Omitted
(E₁) Measurement Included

^c Disconfirmed Expectations Measurement Treatments
(D₀) Measurement Omitted
(D₁) Measurement Included

Second, two treatment levels were created with respect to the measurement of expectations and disconfirmed expectations—these variables were either measured or not measured. Third, we included three different variables that would reveal consumer response to the expectations manipulation. These variables included cookie part-worth, cookie choice probability, and price part-worth range. The experimental design is presented in Exhibit 4 and is more fully explained in the following sections.

Subjects, Design, and Procedure

Two hundred seven undergraduate business students participating for course credit were exposed to the cells of a 2 (expectations: high versus low) x 2 (expectations measured vs. not

measured) x 2 (disconfirmation measured vs. not measured) between-subjects experimental design. In addition, measurements were also obtained for a set of dependent variable measures—conjoint measures and product choice—that were specified as being predicted by respondent satisfaction.

The experiment was conducted in a single session. The subjects completed a set of tasks in the following sequence—exposure to an ad for a fictitious brand of chocolate chip cookie, a taste test of a chocolate chip cookie, exposure to the expectations measure treatment (i.e., expectations measured or not measured), exposure to the disconfirmed expectations measurement treatment (i.e., disconfirmation measured or not measured), and participation in the conjoint and product choice tasks. Consumer satisfaction and perceived performance were not measured in this data

collection sequence because the measurement of these variables would have resulted in possible additional uncontrolled measurement context effects that would have resulted in ambiguous results with respect to the variables that were the primary focus of this study—expectations and disconfirmed expectations.² That is, it is the comparative process between the expectations treatment condition and the actual chip content that is presumed to result in support for the theory; perceived performance and satisfaction, while certainly central to the disconfirmed expectations theory, do not involve comparative processes that are potentially to blame for false theory support.

Ad Stimuli

The stimuli for the expectations treatments were ads for two fictitious brands of chocolate chip cookies. The high expectations ad featured Windsor Chips R' Us brand cookie, a cookie with lots of chocolate chips ("50% of cookie covered with chips, GUARANTEED!" and "big chocolate taste"); a picture of a cookie covered with chocolate chips was also portrayed in this ad. The low expectations ad featured the Windsor Chocolight brand cookie, a cookie light on chocolate ("40% less chocolate than our classic Windsor Chips R' Us Cookie" and "light chocolate taste"), and was accompanied by a picture of a cookie with very few chocolate chips.³ The two ads were similar in that each contained identical claims for taste ("all-butter cookie for mom's homemade taste") and texture ("extra large cookie for a bigger crunch"). In addition, the ad layout was similar for both ads—the cookies portrayed in both ads were the same size (four inches in diameter) and differed only in the number of chips. Subjects in Cells 1, 2, 3, and 4 were exposed to the low expectations ad, while subjects in Cells 5, 6, 7, and 8 were exposed to the high expectations ad.

Product Performance

Because we wished to hold performance constant, the chocolate chip cookies used in the taste test were uniformly made with respect to size

(four inches in diameter), texture (soft), taste (buttery), and number of chocolate chips (seven). In order to determine the appropriate number of chocolate chips, a pretest of chocolate chip cookies was conducted using cookies that varied only in the number of chocolate chips, having 4, 7, or 12 chocolate chips. The cookies were randomly distributed to 52 undergraduate marketing students who rated the cookies with respect to performance, disconfirmation, satisfaction, intentions, and product choice. Based on these results, cookies with seven chocolate chips were used in the experiment.

Measures

Expectations and disconfirmed expectations were measured via summated scales. One seven-point bipolar scale (small number of chocolate chips—large number of chocolate chips) was used in each of the expectations and disconfirmed expectations measures. The remaining scale items used for the measures were not the same across scales to reduce the likelihood of methods variance. Since the expectation manipulation involved one attribute—chocolate chips—using measures that focus repeatedly on that attribute could cause methods variance problems. Consequently, we created additional global and attribute specific measurement items to include with the chocolate chip content measures. We designed items that would be expected to be influenced by chocolate chip perceptions but were not directly measuring chocolate chip quantity.

Expectations. Expectations were measured via three items. One item consisted of a difference score calculated as the absolute value of the difference between the expected chocolate chip content and the ideal chocolate content.⁴ Both measures consisted of a 7-point bipolar scale ranging from a "small number of chocolate chips" (coded 1) and a "large number of chocolate chips" (coded 7). The other two items consisted of bipolar 7-point scales anchored with "low (high) level of richness" coded 1 (7) and "poor (good) taste" coded 1 (7). The items were normalized by subtracting the item mean and dividing by the item

standard deviation prior to creating the summated scale. Coefficient alpha for the scale is .81.

Disconfirmation. Disconfirmed expectations were measured via a three-item summated scale. The items were:

1. "The number of chocolate chips in this cookie is..." – "smaller than I anticipated" (coded 0); "exactly what I anticipated" (coded 5); "larger than I anticipated" (coded 10).
2. "The richness of the cookie is..." – "less rich than I anticipated" (coded 0); "exactly what I anticipated" (coded 5); "richer than I anticipated" (coded 10).
3. "The taste of the cookie is..." – "not as good as I anticipated (coded 0); "exactly what I anticipated" (coded 5); "better than I anticipated" (coded 10).

Coefficient alpha for the scale is .74.

Conjoint Measurement. The conjoint measurement exercise was based upon stimuli created by a 3 x 3 full factorial design (see Appendix B for details). Subjects indicated their preferences for nine product-price stimuli created via three different products (12-ounce can of Classic Coke, 2-ounce Snicker candy bar, or two Windsor test cookies) at three different prices (40¢, 50¢, or 60¢).

Product Choice. Product choice was measured by asking subjects to indicate which of two products they wished to receive after the study was completed. Subjects chose between two Windsor test cookies and a 2-ounce Snicker candy bar. One month after the study ended, the subjects were given the product they had chosen.

Tests for Expectations Level Context Effects

In order to determine whether or not the expectations level treatment results in response language or representational effects, it is necessary to examine a series of hypotheses tests. Exhibit 3

depicts two sets of hypotheses tests organized into flow charts; as can be seen, the path taken by any one combination of hypotheses tests will produce different outcomes with respect to response language or representational effects. Indeed, only one path in each flowchart will result in response language or representational effects—all other paths will produce either unexpected or null effects.

Starting with the left-hand side of the exhibit, which examines the direct effects of expectations level on the dependent variables, if the expectations level treatment is significantly related to the cookie part-worth and (or) cookie choice probability, and significantly related to the price part-worth range, a response language effects interpretation is warranted because the expectations level manipulation affected the respondents' reaction to both the cookie stimuli and the price stimuli in the conjoint exercise, generating misleading empirical support for the disconfirmed expectations theory. If, on the other hand, the expectations level treatment is significantly related to the cookie part-worth and (or) cookie choice probability and insignificantly related to the price part-worth range, then a representational effects interpretation is suggested because the expectations level treatment affected the cookie part-worth and (or) choice probability without affecting the price part-worth range variable. This finding would indicate support for the disconfirmed expectations theory. This set of findings is based on the following hypotheses:

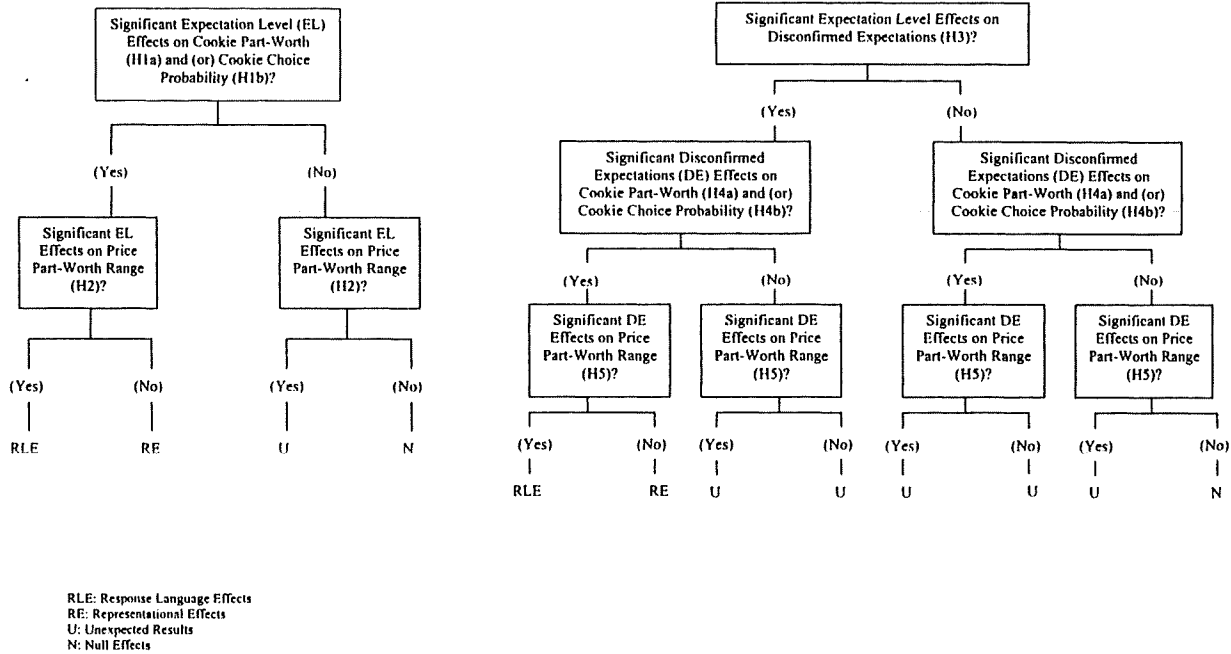
- H1: The expectations level treatment is negatively related to:
- a. the cookie part-worth estimate.
 - b. the respondent's propensity to choose the test cookie from a product choice set.

H2: The expectations level treatment is negatively related to the price part-worth range.

Other findings may also emerge when examining the combination of H1a, H1b, and H2 tests. If the expectations level treatment is insignificantly related to the cookie part-worth and

Exhibit 3

Tests for Expectations Level Context Effects--Response Language vs. Representational Effects



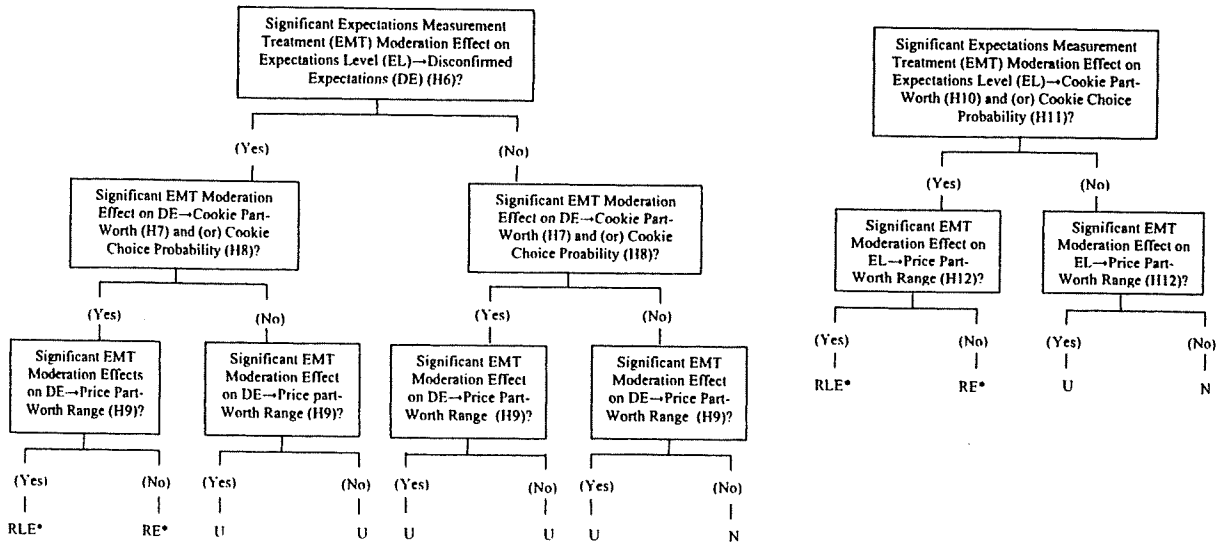
(or) cookie choice probability, yet significantly related to the price part-worth range, then the theory would be unsupported—these findings would be unexpected because it would be unusual to have expectations level treatment effects on the price part-worth range while not having effects on the cookie part-worth or cookie choice probability, the variables to which expectations level is more closely linked. In addition, if the expectations level treatment is insignificantly related to both the cookie part-worth and (or) cookie choice probability and the price part-worth range, then there would be a finding of total insignificance, or null effects, which would suggest no response language effects and no support for the theoretical model.

The right-hand side of Exhibit 3 examines the indirect effect of expectations level on the dependent variables through the mediation variable, disconfirmed expectations. A response language effects interpretation would be suggested

in the situation where there is a significant expectations level treatment effect on disconfirmed expectations, significant disconfirmed expectations effects on the cookie part-worth and (or) cookie choice probability, and on the price part-worth range. However, when the expectations level treatment effect on disconfirmed expectations is significant, and disconfirmed expectations has a significant effect on the cookie part-worth and (or) cookie choice probability, but not on the price part-worth range, a representational effects interpretation is suggested, and the disconfirmed expectations theory is supported. In all other combinations of test results, the theory is not supported because of either unexpected findings or null effects. The combination of tests depicted in this flowchart are represented by the following hypotheses:

H3: The expectations level treatment is negatively related to the disconfirmed

Exhibit 4 Tests for Expectations Measurement Context Effects--Response Language vs. Representational Effects



RLE: Response Language Effects
 RE: Representational Effects
 N: Null Effects
 U: Unexpected Results

* Results attributable to self-generated validity.

expectations measure.

H4: The disconfirmed expectations measure is positively related to:

- a. the cookie part-worth estimate.
- b. the respondent's propensity to choose the test cookie from a product choice set.

H5: The disconfirmed expectations measure is positively related to the price part-worth range.

Tests for Expectations Measurement Context Effects

Exhibit 4 depicts two series of tests that address the possibility that the expectations measurement treatment can moderate the theoretical linkages of the disconfirmed expectations model; significant moderator variable

effects would indicate measurement context effects. The flowchart on the left-hand side of the exhibit considers moderation effects of the expectations measurement treatment (EMT) on the linkages between the expectations level treatment and disconfirmed expectations and between disconfirmed expectations and the cookie part-worth variable and (or) cookie choice probability. A significant EMT moderation effect on the linkages between the expectations level manipulation and disconfirmed expectations and between disconfirmed expectations and the cookie part-worth and (or) cookie choice probability, plus a significant EMT moderation effect on the linkage between disconfirmed expectations and the price part-worth range results in a finding of response language effects. On the other hand, if the EMT moderation effect on the linkage between disconfirmed expectations and the price part-worth range is not significant, then a finding of

representational effects is warranted. However, because both the response language and representational effects are produced by measurement context effects, reflecting self-generated validity, they provide misleading support for the disconfirmed expectations theory. All other test combinations in this flowchart also do not support the theory, either being unexpected results or null effects. The hypotheses related to this combination of tests are:

H6: The negative linkage between the expectations level treatment variable and disconfirmed expectations is negatively moderated (i.e., enhanced) by the expectations measurement treatment.

H7: The positive linkage between disconfirmed expectations and the cookie part-worth measure is positively moderated (i.e., enhanced) by the expectations measurement treatment.

H8: The positive linkage between disconfirmed expectations and the cookie choice probability is positively moderated (i.e., enhanced) by the expectations measurement treatment.

H9: The positive linkage between disconfirmed expectations and the price part-worth range is positively moderated (i.e., enhanced) by the expectations measurement treatment.

Measurement context effects could also involve a situation in which the measurement process enhances the effect of the expectations level treatment on the ultimate dependent variables of the model. These effects would manifest themselves as moderator variable effects. The flowchart on the right-hand side of Exhibit 4 traces the combination of tests that examine the moderation effect of the expectations measurement treatment on the linkage between the expectations level treatment and the cookie part-worth and (or) cookie choice probability. Further, in order to distinguish response language vs.

representational effects, the effect of the expectations measurement treatment on the linkage between the expectations level treatment and the price part-worth range is also examined. The corresponding hypotheses are:

H10: Measuring expectations prior to the conjoint rating task negatively moderates the relationship between the expectations level treatment and the cookie part-worth estimate.

H11: Measuring expectations prior to the product choice task negatively moderates the relationship between the expectations level treatment and cookie choice probability.

H12: Measuring expectations prior to the conjoint rating task negatively moderates the relationship between the expectations level treatment and the price part-worth range.

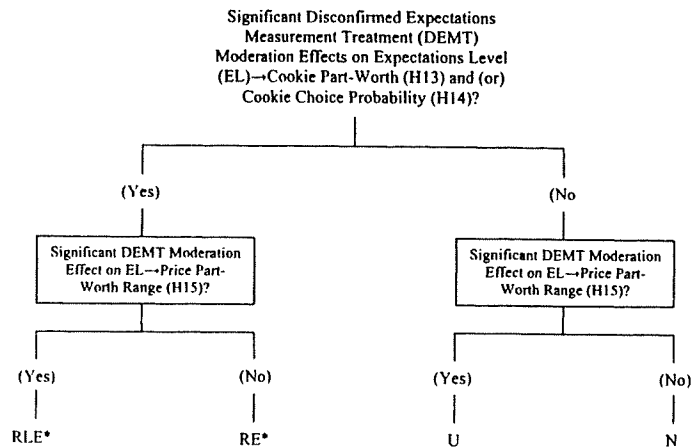
Although response language and representational effects may be indicated by the right combination of hypotheses tests, as shown in Exhibit 4, because the findings are induced by the process of measuring expectations, i.e., self-generated validity, misleading support for the disconfirmed expectations theory is produced.

Tests for Disconfirmed Expectations Measurement Context Effects

A thorough examination of expectations effects in the disconfirmed expectations model includes an investigation of the impact of the measurement of disconfirmed expectations. That is, the process of measuring disconfirmed expectations may also result in measurement context effects that provide misleading support for the theory. The combination of hypotheses tests, as shown in Exhibit 5, necessary to examine for disconfirmed expectations measurement context effects are:

H13: Measuring disconfirmed expectations prior to the conjoint rating task negatively moderates the relationship between the expectations level treatment and the cookie

Exhibit 5
Tests for Disconfirmed Expectations Measurement Context Effects--Response Language vs. Representational Effects



RLE: Response Language Effects
 RE: Representational Effects
 N: Null Effects
 U: Unexpected Results

* Results attributable to self-generated validity.

part-worth estimate.

H14: Measuring disconfirmed expectations prior to the product choice task negatively moderates the relationship between the expectations level treatment and the cookie choice probability.

H15: Measuring disconfirmed expectations prior to the conjoint rating task negatively moderates the relationship between the expectations level treatment and the price part-worth range.

As posited in H10 and H11, the relationship between the expectations level treatment and the dependent variables is predicted to be negative. Consequently, a significant disconfirmed expectations measurement treatment (DEMT) moderation effect on the relationship between the

expectations level treatment and the dependent variables is hypothesized to enhance the negative relationship. This, in combination with a significant DEMT moderation effect between the expectations level treatment and the price part-worth range would be indicative of response language effects; a representational effect would be indicated if there is no significant DEMT moderation effect on the relationship between the expectations level treatment and the price part-worth range. However, both of these findings would again be the result of self-generated validity. Thus, support for the disconfirmed expectations model would be misleading.

FINDINGS

A series of hierarchical regression estimates were conducted to test the hypotheses; estimation equations for all the tests are in Appendix A.

Because the logical reporting of the regression results does not directly relate to the order in which hypotheses were presented, a summary of the hypotheses test findings is reported in Table 1. In addition, Table 1 directs the reader to the appropriate table(s) to see specific results of all the regression tests, in Tables 2 through 8.

Expectations Level Tests

Two combinations of hypotheses tests examine whether or not the expectations level treatment resulted in response language or representational effects, as shown in Exhibit 3. Hypotheses H1-H3 examine the direct effect of the expectations level treatment on the cookie part-worth, cookie choice probability, and the price part-worth range. H1a and H1b were both supported, however, the estimate of the price part-worth range variable (H2) was statistically insignificant. Consequently, the combination of these results indicates the presence of representational effects and support for the disconfirmed expectations theory; there is no evidence of response language effects.

Also shown in Exhibit 3 are combinations of H3-H5, which examine the indirect effect of the expectations level treatment, through disconfirmed expectations, on the dependent variables. A significant expectation level treatment effect on disconfirmed expectations is found in support of H3. Similarly, significant relationships between disconfirmed expectations and the cookie part-worth (H4a) and the cookie choice probability (H4b) are found. But the relationship between disconfirmed expectations and the price part-worth range variable is statistically insignificant, thus, H5 is not supported. Once again, this combination of results indicates a finding of representational effects and support for the disconfirmed expectations theory.

Expectations Measurement Context Effects Tests

Exhibit 4 maps out two flowcharts of hypotheses tests that examine the effects of expectations measurement with respect to support

for the disconfirmed expectations theory. None of the relationships posited in the hypotheses tests in this exhibit were statistically significant. That is, the combination of results for H6, H7, H8, and H9 produced a null effect, as did the combination of results for H10, H11, and H12. This pattern of results suggests an absence of response language effects, and thus, support for the disconfirmed expectations theory.

Disconfirmed Expectations Measurement Context Effects Tests

Hypotheses H13, H14, and H15, as shown in Exhibit 5, examine whether or not the process of measuring disconfirmed expectations provides misleading support for the disconfirmed expectations theory. All three of these hypotheses were unsupported, which together produced a null effect. This indicates the absence of response language effects and support for the disconfirmed expectations theory.

DISCUSSION AND CONCLUSIONS

The purpose of this study was to re-examine the disconfirmed expectations theory using experimental conditions that focus on the question of whether or not the perceptual comparative processes involved in disconfirmation produce representational and (or) response language effects. In order to do this, a controlled experiment was designed to create a strong test of the theory, which had never been undertaken before. Thus, the strength of the linkages between the expectations level treatment and a cookie part-worth variable, a cookie choice variable, and a price part-worth range variable were examined while controlling for measurement context effects. It is important to note that the primary focus of this study was on the comparative process between expectations and disconfirmed expectations. Consequently, to control for measurement context effects that might have possibly occurred from the process of measuring perceived performance and satisfaction (and thus would have created ambiguity in interpreting the results with respect to the focal variables), these

Table 1
Summary of Hypotheses Tests

Hypothesis Test	Result	Corresponding Table*
H1a	Supported	Tables 3, 6
H1b	Supported	Tables 4, 7
H2	Not supported	Tables 5, 8
H3	Supported	Table 2
H4a	Supported	Table 3
H4b	Supported	Table 4
H5	Not supported	Table 5
H6	Not supported	Table 2
H7	Not supported	Table 3
H8	Not supported	Table 4
H9	Not supported	Table 5
H10	Not supported	Tables 3, 6
H11	Not supported	Tables 4, 7
H12	Not supported	Tables 5, 8
H13	Not supported	Table 6
H14	Not supported	Table 7
H15	Not supported	Table 8

* For specific hypothesis test results, see listed table(s).

Table 2
Regression Estimates Predicting Disconfirmed Expectations
(*n* = 107)*

Variable	Relevant Hypothesis	Unstandardized β	Standardized β	<i>t</i>
Expectations level (EL)	H3	-2.04	-.69	-9.64 ^a
Expectations measurement treatment (EMT)		-.16	-.05	-.73
EL*EMT	H6	-.13	-.04	-.60
Constant		7.018 ^c		33.11
$R^2 = .48$				

*Only data from those cells where subjects were exposed to the disconfirmed expectations scale items (Cells 3, 4, 7, and 8) were used in this test.

^a $p < .01$ for a one-tailed *t*-test.

^b $p < .05$ for a one-tailed *t*-test.

^c $p < .01$ for a two-tailed *t*-test.

^d $p < .05$ for a two-tailed *t*-test.

^e $p < .01$.

^f $p < .05$.

Table 3
Regression Estimates Predicting Cookie Part-Worth ($n = 107$)

Hierarchical Regression Results						
Explanatory Variable Set	Relevant Hypothesis	R ² Change	F	Degrees of Freedom	Significance of F	
Set 1: Expectations level (EL), Disconfirmed expectations (DE)	H1a H4a	.177	11.15	2/104	.00	
Set 2: Expectations measurement treatment (EMT), EMT*EL, EMT*DE	H10 H7	.003	.13	3/101	.94	
Estimate of Equation Using the Significant Variable Sets						
Explanatory Variable	Relevant Hypothesis	Unstandardized β	Standardized β	t		
DE	H4a	.59	.55	4.49 ^a		
EL	H1a	.79	.25	2.02 ^b		
Constant		-6.01		-6.19 ^c		
R ² = .177						

*Only data from those cells where subjects were exposed to the disconfirmed expectations scale items (Cells 3, 4, 7, and 8) were used in this test.

^a $p < .01$ for a one-tailed t -test.

^b $p < .05$ for a one-tailed t -test.

^c $p < .01$ for a two-tailed t -test.

^d $p < .05$ for a two-tailed t -test.

^e $p < .01$.

^f $p < .05$.

Table 4
LOGIT Estimates Predicting Cookie Choice Probability ($n = 110$)*

Hierarchical LOGIT Results						
Predictor Variables Added	Relevant Hypothesis	-2 Log Likelihood	Improvement χ^2	Degrees of Freedom	Significance Level	
Set 1: Expectations level (EL), Disconfirmed expectations (DE)	H1b H4b	131.57	16.75	2	.00	
Set 2: Expectations measurement treatment (EMT), EMT*EL, EMT*DE	H11 H8	126.42	5.15	3	.16	
Estimate of Equation Using the Significant Variable Sets						
Variable	Relevant Hypothesis	β	Wald	Degrees of Freedom	Significance Level	
EL	H1b	.77	6.31	1	.01	
DE	H4b	.41	13.82	1	.00	
Constant		-2.82	12.73	1	.00	

Percent correct classification = 67.3%

*Only data from those cells where subjects were exposed to the disconfirmed expectations scale items (Cells 3, 4, 7, and 8) were used in this test.

Table 5
Regression Estimate Predicting Price Part-Worth Range ($n = 110$)*

Hierarchical Regression Results						
Explanatory Variable Set	Relevant Hypothesis	R ² Change	F	Degrees of Freedom	Significance of F	
Set 1: Expectations level (EL), Disconfirmed expectations (DE)	H2 H5	.016	.82	2/104	.44	
Set 2: Expectations measurement treatment (EMT), EMT*EL, EMT*DE	H12 H9	.016	.21	3/101	.89	

*Only data from those cells where subjects were exposed to the disconfirmed expectations scale items (Cells 3, 4, 7, and 8) were used in this test.

Table 6
Regression Estimate Predicting Cookie Part-Worth With Disconfirmed Expectations Measurement Treatment ($n = 206$)

Hierarchical Regression Results						
Explanatory Variable Set ^a	Relevant Hypothesis	R ² Change	F	Degrees of Freedom	Significance of F	
Set 1: Expectations level (EL)	H1a	.013	2.71	1/204	.09	
Set 2: Expectations measurement treatment (EMT), Disconfirmed expectations measurement treatment (DEMT)	H10	.028	3.37	2/202	.04	
Set 3: EMT*EL, DEMT*EL, EMT*DEMT*EL	H13	.002	.28	3/199	.84	

Estimate of Equation Using the Significant Variable Sets					
Explanatory Variable	Relevant Hypothesis	Unstandardized β	Standardized β	t	
EL	H1a	-.41	-.13	-1.83 ^c	
EMT		-.06	-.02	-.28	
DEMT		-.58	-.18	-2.57 ^c	
Constant				-5.58 ^d	
R ² = .05 ^a					

^a Variable sets 1 and 3 correspond to *a priori* hypotheses. Variable set 2 is included in the analysis so that the main effects are controlled when estimating the set 3 interaction effects.

^b $p < .01$ for a one-tailed t -test.

^c $p < .05$ for a one-tailed t -test.

^d $p < .01$ for a two-tailed t -test.

^e $p < .05$ for a two-tailed t -test.

^f $p < .01$.

^g $p < .05$.

variables were not measured until after all other variables had been measured. Furthermore, since perceived performance and satisfaction are not of central interest in this study, the results of those tests are not reported.

As the pattern of hypotheses tests reveals, the results of this study indicate a representational effects interpretation of the expectations level manipulation, and thus support for the disconfirmed expectations theory. That is, the

Table 7
LOGIT Estimates Predicting Cookie Choice Probability With Disconfirmed Expectations
Measurement Treatment (*n* = 217)

Hierarchical LOGIT Results					
Predictor Variables Added	Relevant Hypothesis	-2 Log Likelihood	Improvement χ^2	Degrees of Freedom	Significance Level
Set 1: Expectations level (EL)	H1b	277.10	5.71	1	.02
Set 2: Expectations measurement treatment (EMT), Disconfirmed expectations measurement treatment (DEMT)		276.62	.477	2	.79
Set 3: EMT*EL, DEMT*EL, EMT*DEMT*EL	H11 H14	274.36	.580	3	.90
Estimate of Equation Using the Significant Variable Sets					
Variable	Relevant Hypothesis	β	Wald	Degrees of Freedom	Significance Level
EL	H1b	-.34	5.63	1	.02
Constant		.02	.01	1	.91
Percent correct classification = 58.3%					

Table 8
Regression Estimate Predicting Price Part-Worth Range With Disconfirmed Expectations
Measurement Treatment (*n* = 206)

Hierarchical Regression Results						
Explanatory Variable Set ^a	Relevant Hypothesis	R ² Change	F	Degrees of Freedom	Significance of F	
Set 1: Expectations level (EL)	H2	.003	.60	1/204	.42	
Set 2: Expectations measurement treatment (EMT), Disconfirmed expectations measurement treatment (DEMT)		.009	.89	2/202	.41	
Set 3: EMT*EL, DEMT*EL, EMT*DEMT*EL	H12 H15	.006	.43	3/199	.73	
^a Variables in sets 1 and 3 correspond to <i>a priori</i> hypotheses. Variables in set 2 are included in the analysis so that the main effects are controlled when estimating the set 3 interaction effects.						

expectations level treatment variable consistently was a significant predictor of disconfirmed expectations, cookie part-worth, cookie choice probability, and price part-worth range, whereas the measurement manipulations related to expectations and disconfirmed expectations consistently produced insignificant findings. Thus, the large number of non-supported hypotheses tests, which might be disappointing in some studies, is a positive result in this study. Why? Because strong support of the disconfirmed

expectations theory, such as we find, also supports the strategic implications of the disconfirmed theory. Specifically, the findings suggest that marketing strategies focused on influencing consumer expectations and disconfirmation can be expected to produce effects that go beyond the core variables of the consumer satisfaction model. Consequently, marketing managers who use strategies that affect consumers' expectations can expect that such strategies will impact choice behavior through a complex process--expectations

may produce a positive effect on choice behavior via an indirect linkage with satisfaction that is mediated by disconfirmed expectations. A particularly important finding of this study is that consumer expectations play a role in determining choice behavior. Further, we found strong support that disconfirmation mediates the linkage between consumer expectations and choice behavior. These findings confirm that there is an intricate web of relationships that determine consumers' choice behavior. Had our results shown a pattern of response language effects, the managerial implications of the disconfirmed expectations theory would have been called into doubt. Because previous research has not addressed the possibility of response language effects, this was a critical issue to study.

Another key contribution of this research is that it provides a much needed empirical test of the linkages between variables of the disconfirmed expectations theory and choice behavior. While previous studies have assumed that consumer satisfaction is an important determinant of choice behavior, and, in fact, have measured purchase intentions (Bearden and Teel 1983; LaBarbera and Mazursky 1983; Oliver 1980a; Oliver and Linda 1981; Oliver and Swan 1989), there is a lack of studies that have included choice variables in tests of the disconfirmed expectations theory of consumer satisfaction. As marketers are well aware, however, the intention-behavior linkage is fragile (Ajzen 1985; Fishbein and Ajzen 1975; Sheppard, Hartwick, and Warshaw 1988). The inclusion of a product choice variable in this study addresses Tse, Nicosia, and Wilton's (1990) concern that to fully understand the expectancy-disconfirmation paradigm, attention needs to be given to the transactional circumstances associated with the satisfaction formation process.

Importantly, this extension of the disconfirmed expectations theory also allows us to examine whether consumers' mental representations change when comparing performance to expectations or whether contextual comparative factors are responsible for changing how consumers map their mental representations onto rating scales. It is critically important to demonstrate that statistically significant linkages

among the disconfirmed expectations theory variables are the result of representational effects if the theory is to have practical value. If the empirical support for the theory were merely the result of measurement context or response language effects the support would be misleading. The use of conjoint measurement procedures and a product choice exercise in this study enabled a detailed examination of this response language and measurement context versus representational effects issue.

As with any research, there were some limitations associated with this study. Use of a student sample limits the ability to generalize the results of this study. However, because the study focuses on theory application, the use of a sample of homogeneous respondents, such as students, is ideal for theory falsification procedures (Calder, Phillips, and Tybout 1981). An additional limitation with respect to generalization of results is the employment of a nondurable consumer product (cookie) as the product stimulus. Churchill and Surprenant (1982) report results that suggest the relationships among the variables specified in the disconfirmed expectations theory when durable products are involved are different than when nondurable products are involved. Consequently, further research should examine the relationships examined in this study under conditions in which durable products are the focal stimuli.

Future research might consider using other methods of detecting measurement effects on the disconfirmed expectations theory. For example, it might be possible to rule out response language effects by examining the impact of perceived performance and satisfaction scores on immediate and delayed purchase likelihood measures. Another option might be to systematically vary choice sets and examine differences in part-worths. Still another avenue for future research to consider is the effect of respondent involvement on detecting response language or representational effects. If respondents have low involvement, they may be less likely to engage in cognitive effort, and therefore may be more susceptible to measurement context effects, which should disappear over time. But, under a condition of

high involvement, respondents would engage in more cognitive effort, would be less susceptible to measurement context effects, and should have long-term perceptual changes. A delayed choice measure might be able to detect these effects.

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Appendix A
Estimation Equations Predicting Cookie Part-Worth

The expression predicting the cookie part-worth:

$$(1) \quad CPW = \beta_0 + \beta_3 EMT + (\beta_1 + \beta_5 EMT) DE + (\beta_2 + \beta_4 EMT) EL$$

where: CPW = cookie part-worth

DE = disconfirmed expectations measure

EMT = expectations measurement treatment where:

EMT = 1 when expectations are measured before the conjoint and product choice measures.

EMT = -1 when expectations are not measured.

EL = expectations level treatment where:

EL = 1 for the high chocolate chip expectations level treatment condition.

EL = -1 for the low chocolate chip expectation level treatment condition.

Equation (1) can be rearranged as follows for estimation:

$$(2) \quad CPW = \beta_0 + \beta_1 DE + \beta_2 EL + \beta_3 EMT + \beta_4 EMT*EL + \beta_5 EMT*DE$$

where EMT*EL is the EMT-by-EL cross-product, EMT*DE is the EMT-by-DE cross-product, and the other terms are defined in (1).

Hypothesis H1.a suggests $\hat{\alpha}_2$ will be negative. Hypothesis H4.a. suggests $\hat{\alpha}_1$ will be positive. Hypothesis H7 suggests $\hat{\alpha}_5$ is positive. Hypothesis H10 suggests $\hat{\alpha}_4$ will be negative. The model does not suggest a significant direct linkage between CPW and EMT, consequently, the estimate of $\hat{\alpha}_3$ is expected to be insignificant.

Estimation Equation Predicting Cookie Choice

The expression predicting the cookie choice probability is the following LOGIT expression:

$$(3) \quad C = \frac{1}{1 + \exp. [\hat{\alpha}_0 + \hat{\alpha}_3 EMT + (\hat{\alpha}_1 + \hat{\alpha}_5 EMT) DE + (\hat{\alpha}_2 + \hat{\alpha}_4 EMT) EL]}$$

where C = the cookie choice probability and where the remaining terms are defined in (1). The terms of the exponent expression in equation (3) can be rearranged as in expression (2) for estimation.

Hypotheses H1.b, H4.b, H8, and H11 predict $\hat{\alpha}_2$, $\hat{\alpha}_1$, $\hat{\alpha}_5$, and $\hat{\alpha}_4$ will be negative, positive, positive, and negative, respectively. The estimate of $\hat{\alpha}_3$ is expected to be insignificant.

Estimation Equation Predicting Price Part-Worth Range

The expression predicting the price part-worth range is:

$$(4) \quad PPWR = \beta_0 + \beta_3 EMT + (\beta_1 + \beta_5 EMT) DE + (\beta_2 + \beta_4 EMT) EL$$

where PPWR = price part-worth range and where the other terms are defined in (1). The terms of equation (4) can be rearranged as in expression (2) for estimation.

Hypotheses H2, H5, H9, and H12 predict $\hat{\alpha}_2$, $\hat{\alpha}_1$, $\hat{\alpha}_5$, and $\hat{\alpha}_4$ will be negative, positive, positive, and negative, respectively, and the estimate of $\hat{\alpha}_3$ is expected to be insignificant.

Estimation Equations Predicting Disconfirmed Expectations

The equation for disconfirmed expectations is:

$$(5) \quad DE = \beta_0 + \beta_2 EMT + (\beta_1 + \beta_3 EMT) EL$$

where DE = disconfirmed expectations and where the other terms are defined in (1). Equation (5) can be rearranged for estimation as follows:

$$(6) \quad DE = \beta_0 + \beta_1 EL + \beta_2 EMT + \beta_3 ET*EL$$

where EMT*EL is the EMT-by-EL cross-product and where the remaining terms are defined in (1). Hypotheses H3 and H6 predict $\hat{\alpha}_1$ and $\hat{\alpha}_3$ will be negative. The model does not predict a direct link between DE and EMT; consequently, the estimate of $\hat{\alpha}_3$ is expected to be insignificant.

Estimation Equations Predicting Cookie Part-Worth When Disconfirmed Expectations Measurement Treatment Is Present

The following regression equation predicts the cookie conjoint part-worth measure (CPW) when there is also a disconfirmed expectations measurement manipulation:

$$(7) \text{ CPW} = \beta_0 + \beta_2\text{EMT} + \beta_3\text{DEMT} + (\beta_1 + \beta_4\text{EMT} + \beta_5\text{DEMT} + \beta_6\text{EMT}*\text{DEMT})\text{EL}$$

where: CPW = cookie part-worth.

EMT = expectation measurement manipulation where:

EMT = 1 when expectations are measured before the conjoint measurement.

EMT = -1 when expectations are not measured.

DEMT = disconfirmation measurement manipulation where:

DM = 1 when disconfirmation is measured before the conjoint measurement.

DM = -1 when disconfirmation is not measured.

EL = expectations level manipulation where:

ET = 1 for the high chocolate chip context treatment.

ET = -1 for the low chocolate chip context treatment.

β 's = partial regression coefficients.

Rearranging the terms in equation (6) yields the following equation:

$$(8) \text{ CPW} = \beta_0 + \beta_1\text{EL} + \beta_2\text{EMT} + \beta_3\text{DEMT} + \beta_4\text{EMT}*\text{EL} + \beta_5\text{DEMT}*\text{EL} + \beta_6\text{EMT}*\text{DEMT}*\text{EL}$$

where DEMT*EL = the DEMT-by-EL cross-product, EMT*DEMT*EL = the EMT-by-DEMT-by-EL cross-product, and where the remaining terms are defined in (7). Hypotheses H1.a, H10, and H13 predict $\hat{\alpha}_1$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ will be negative. The model suggests $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_6$ will be insignificant.

Estimation Equation Predicting Cookie Choice When Disconfirmed Expectations Measurement Treatment Is Present

The equation predicting cookie choice probability is the following LOGIT expression:

$$(9) \quad C = \frac{1}{1 + \exp. [\beta_0 + \beta_2\text{EMT} + \beta_3\text{DEMT} + (\beta_1 + \beta_4\text{EMT} + \beta_5\text{DEMT} + \beta_6\text{EMT} * \text{DEMT})\text{EL}]}$$

where C = the cookie choice probability and where the remaining terms are defined in (7).

The terms of the exponent expression in expression (9) can be rearranged as in expression (8) for estimation. Hypotheses H1.b, H11, and H14 predict $\hat{\alpha}_1$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ will be negative. The model suggests $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_6$ will be insignificant.

Estimation Equation Predicting Price Part-Worth Range When Disconfirmed Expectations Measurement Treatment Is Present

Based upon the logic underlying the specification of hypothesis (H2), the test that focuses on the question of response language vs. representational effects involves the estimate of the following equation predicting the price part-worth range variable:

$$(10) \quad \text{PPWR} = \beta_0 + \beta_2\text{EMT} + \beta_3\text{DEMT} + (\beta_1 + \beta_4\text{EMT} + \beta_5\text{DEMT} + \beta_6\text{EMT}*\text{DEMT})\text{EL}$$

where: PPWR = the price part-worth range measure and the remaining variables are defined in (7).

The terms of equation (10) can be rearranged as in equation (8) for estimation. Hypotheses H2, H12, and H15 predict $\hat{\alpha}_1$, $\hat{\alpha}_4$, and $\hat{\alpha}_5$ will be negative. The model suggests $\hat{\alpha}_2$, $\hat{\alpha}_3$, and $\hat{\alpha}_6$ will be insignificant.

Appendix B

Directions. The following are nine product choice options. Each consists of a product and a price to be paid for the product. Please scan all of the options so that you are familiar with the entire set of nine product/price options. After briefly scanning the set, use the scale at the bottom of each box containing each option to indicate your preference for each option. Use larger numbers for stronger preferences and smaller numbers for smaller preferences.

One 12-ounce can of Classic Coke																				
Price = \$.60																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Two Windsor Test Cookies																				
Price = \$.40																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
One 2-ounce Snicker																				
Price = \$.60																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
One 12-ounce can of Classic Coke																				
Price = \$.40																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Two Windsor Test Cookies																				
Price = \$.50																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
One 2-ounce Snicker																				
Price = \$.40																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
One 12-ounce can of Classic Coke																				
Price = \$.50																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Two Windsor Test Cookies																				
Price = \$.60																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
One 2-ounce Snicker																				
Price = \$.50																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

ENDNOTES

1. It is important to note that there is often a low correlation between attitude measures and actual behavior (Eagly and Chaiken, 1993). Using choice as one of the criterion variables, therefore, results in a "risky" prediction for the disconfirmed expectations satisfaction model which, in turn, produces a strong test of the theory. As noted by Wacker (1998, p. 366):

"The criterion of empirical riskiness has been the focus of most of critical evaluators of 'good' theory. Most academics believe that empirical tests of theory should be risky so that there is a good chance of the theory being refuted....Put another way, every legitimate empirical test is designed to disprove the theory and should be risky (Popper, 1957)."

2. Measures of additional consumer satisfaction model variables were obtained, including performance and satisfaction. However, these measures are not reported in this paper because they are not immediately relevant to the research questions. Moreover, because these measures were obtained after all other variables reported in Exhibit 4 were measured, their measurement could not have contributed to any context effects reported in

this paper.

3. A reviewer points out that there is a possible confound in the expectations manipulation. That is, in the low chips ad, a comparison standard was provided ("40% less chocolate than our classic Windsor Chips R Us Cookie") that the high chips ad did not contain ("50% of cookie covered with chips GUARANTEED!"). However, each ad also contained a large visual of a cookie (4 inches in diameter), dominating the ad copy. In the low chips ad, the cookie has six chips; the high chips ad cookie has 17 chips. In fact, the picture in each ad is so large to suggest that most respondents would have focused primarily on the picture, not the ad copy, and would have made inferences about the cookie based on the picture, not the ad copy. To explore this possibility, a sample of undergraduate business students ($n=36$), similar to those used in the experiment, were asked to look at the ad "as they would look at any ad" and then to record what one thing they had most focused on. Half of the sample looked at the low chocolate cookie ad, and half looked at the high chocolate cookie ad. For both ads, 72% of the respondents reported focusing most on the picture of the cookie, suggesting that any confound in the ad copy was not a significant concern. Moreover, our major concern was that the ads created either high or low expectations with respect to chocolate chip content--100% of those students who looked at the light chocolate cookie ad and 94% of those who viewed the high chocolate ad correctly identified the ad cookie (post-viewing) as being either high or low in chocolate content, which again suggests that there was no significant confound effect.

4. Our use of the ideal measure was based upon the Teas (1993) concept of evaluative performance, which he argues can be used to conceptualize perceived quality. Teas (1993) argues that perceived quality can be used to represent perceived performance in the disconfirmed expectations mode. We incorporate the ideal comparison standard in our measures to deal with the possibility that some students may not desire a maximum amount of chocolate chips. Indeed, a small number of students selected an ideal point that was less than the maximum amount on the scale.

THE IMPACT OF E-SERVICES FAILURES AND CUSTOMER COMPLAINTS ON ELECTRONIC COMMERCE CUSTOMER RELATIONSHIP MANAGEMENT

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ABSTRACT

Handling customer complaints has become a strategic concern in electronic commerce Customer Relationship Management (e-CRM). The purposes of this study are to (a) explore the major causes of customer complaints, comparing online and in-store environments, and (b) examine how customer complaints are differently perceived based on the types of service failures. The Justice Dimensions with Complaint Handling framework proposed by Tax, Brown, and Chandrashekar (1998) are applied in this study for the classification of e-service failure types. The data were collected from online customer feedback publicized on Internet websites and the shopping log data reported by selected consumer panels. The research identified that the impact of service failure with the justice dimension affects customers' propensity to complain in the online shopping environment. Further, the study emphasizes that successful service management is the core of e-commerce customer relationship management (e-CRM).

INTRODUCTION

Handling customer complaints and managing customer service have become crucial for Electronic Customer Relationship Management (e-CRM). Previous studies (Cho, Im, Hiltz, and Fjermstad 2002; Julta, Craig, and Bodorik, 2001; Levesque and McDougall 1996) have ascertained that successful e-CRM requires adherence to a stable and consistent strategy that focuses on the goals of maintaining customer loyalty and of using complaint handling data to solve problems and address issues raised by customers. The key e-CRM components proposed in the previous research (Cho et al. 2002) include: (a) maximizing

customer satisfaction/minimizing customer dissatisfaction; (b) increasing customer loyalty; and increasing product/service quality; and (c) resolving customer complaints.

What are the major concerns of e-services? Hollowell (2002) stressed the necessity of understanding the different forms (e.g., virtual: either pure information or automated) service takes in organizations that conduct business through the Internet. With the Internet's technological advances, customers enjoy greater convenience, such as Web-based service centers where customers can ask questions regarding product information, payment issues, delivery, product returns, etc. before and after making a purchase. However, customer complaints due to faulty e-commerce transactions or service still exist. We can find such complaints on various customer feedback systems, such as www.epinions.com, www.thirdvoice.com, or www.complaints.com. Customer feedback systems not only provide a service to deliver customer complaints, but also become a source of spreading the reputation of the business, product, or service.

Based on the importance of e-CRM to improve customer satisfaction and resolve customer complaints in the online environment, the purpose of this study is to explore e-service failures that have been the major causes of customer complaints. In particular, we investigate the major causes of customer complaints in the online and in-store environments; explore different types of service failure; and measure the impact of service failure on the customer's propensity to complain. Previous studies (Cho et al. 2002) have researched major causes of customer complaints in the online and in-store environment. However, how the types of service failures that have been the major causes of customer complaints differ in the online and in the

in-store environments has rarely been researched. This study used the framework by Blodgett, Hill and Tax (1997) and Tax, Brown, and Chandrashekar (1998) to classify the types of e-service failure. This study investigates how the previous framework, called justice dimensions, will work in online environment. While past studies have collected data via surveys, this study used *log* data, which is collected from consumer panels, and customer feedback posted on "customer service centers," which are managed to resolve customer complaints (Cho, Im, Hiltz, and Fjermstad 2002).

CONCEPTUAL BACKGROUND AND HYPOTHESES

Causes of Complaints and Service Failure

A complaint can be defined as a conflict between the customer and the organization in which the fairness of the resolution procedures, the interpersonal communications and behaviors, and the outcome are the principal evaluative criteria of the customer (Tax et al. 1998). Most studies on customer complaints or handling customer complaints about service quality have been done in the context of the physical market place. In the traditional market place, complaints represent an opportunity to remedy product or service related problems and to positively influence subsequent customer behavior (Blodgett, Hill and Tax 1997). How businesses deal effectively with complaints could have a dramatic impact on customers' evaluations of their retail experiences (Blodgett, Hill and Tax 1997; Bitner, Booms, and Tetreault 1990; Kelley, Hoffman, and Davis 1993).

Customer complaints are often considered as a response to a service failure (Bateson and Hoffman 1999). Previous research (e.g., Bateson and Hoffman 1999) stressed that in the in-store environment, service failure will cause a lower satisfaction with the service employee and/or the firm if the problem is attributed to the firm. Previous studies also found that a major cause of customer dissatisfaction arises from the way their complaints are resolved (e.g., Tax and Brown

1998). Therefore, it is no doubt that in the in-store environment, increased service quality and minimized customer complaints will enhance a customer's general expectations and diminish customer dissatisfaction with the firm. A prior study by Cho et al. (2001) stressed that the perceived quality of customer service centers affected customers' propensity to complain in both the online and in-store environment. As described in Cho et al. (2001), differences in degree of dissatisfaction and complaints sometimes occur between online and offline customers for many reasons. The most important are (a) problems associated with different customer service center approaches (e.g., lack of an information or help desk during the order process, slow feedback response time, poor after-sales support), (b) general terms and conditions (e.g., guarantees, guidelines for returning products), (c) delivery issues (e.g., late or no delivery, product damage during delivery), (d) security and privacy issues, (e) failure of information quality, and (f) system performance (e.g., slow web sites, broken links to other pages). Particularly in the online environment, the development of technology has been closely linked to the issues of service quality. Various researchers have addressed the importance of technology that enhances service quality. For example, Bitner, Booms, and Tetreault (1990) found that technology is incorporated into the service-marketing triangle, both supporting and facilitating service delivery. The study by Bitner et al. (2000) also discussed the role of technology in implementing effective service recoveries and encouraging customer complaining (see also Brown 1997 and Shaffer 1999). Most online firms manage *Web-based customer service centers* to deal with customer comments and complaints, utilizing sophisticated technology (Cho et al. 2002). This study posits that a major cause of customer complaints could be generated from unsatisfactory responses by customer service centers. Using a different data collection methodology, called *log* data, this study extends the previous study by Cho et al. (2002), which found that major online customer complaints are generated more from service failure than other problems. This study posits that,

considering effective technologies for online customer services have yet to be implemented, customer complaints due to unsatisfactory customer service centers occur more often in the online environment.

Hypothesis I: Consumer complaints are more often caused by service failure in the online shopping environment than in the in-store environment.

The Impact of Different types of Complaints on Propensity to Complain

Past studies developed a theoretical understanding of how consumers evaluate retailers' responses to their complaints (Blodgett Hill and Tax 1997 and Tax et al. 1998). A study by Tax, et al. (1998; see also Gilliland 1993; and Goodwin and Ross 1992) addressed the concept of *justice*, as a comprehensive framework to explain people's reactions to conflict situations. Complaint handling incidents, which are rated favorably, include compensation in line with the perceived costs experienced by the customer (Kelley, Hoffman, and Davis 1993), thus supporting an equity-based evaluation of complaint outcomes (Blodgett, Hill and 1997). How individuals involved in conflicts or disputes perceive justice has been explained by *equity theory* (Blodgett, Granbois, and Walters 1993). Three justice dimensions were discussed to explain complaint handling when customers encounter service failure (Blodgett, Hill and Tax 1997; and Tax et al. 1998). Dimensions include *distributive justice*, *procedural justice*, and *interactional justice*.

This study focuses on how the different types of e-service failure with three dimensions of justice affects the customer's propensity to complain in the online environment and also what types of service failure significantly affect actual customer complaints. First, the study measures the impact of online customers' expectations about the benefits and costs of dealing with the three dimensions of justice on their willingness to complain. The study applied propensity to complain to measure the perceived impact of the service failure with three justice dimensions.

Propensity to complain is defined as an individual's demonstrated inclination and intention to complain in the face of any unsatisfactory purchase experience (Bearden, Crockett, and Graham 1979). *Propensity to complain* was applied in this study because it is operationally linked to past complaint actions as a proxy for the inclination of customers to complain (Gronhaug 1977; Zaltman, Srivastava, and Deshpande 1978; Bearden et al. 1979). Previous studies described propensity to complain as an effort to summarize the personality, attitudinal, and lifestyle variables that influence whether a person will seek redress or complain when dissatisfied and also have an effect on the nature of the action to be taken (Day and Landon 1977; Day 1977; and Bearden et al. 1979). Previous studies found that the propensity to complain has been operationally linked to past complaint actions as a proxy for the inclination of consumers to complain (Gronhaug 1977; Zaltman et al. 1978; and Bearden et al. 1979). The study hypothesized how the impact of service failure with three justice dimensions affects propensity to complain in the online shopping environment.

Distributive justice involves a) a provision of outcomes proportional to inputs in an exchange of an unsatisfactory product (equity); b) equal outcomes; and c) outcome based on requirements regardless of contributions (Tax et al. 1998; Goodwin and Ross 1992; Greenberg 1990; and Deutsch 1985]). The concept of distributive justice was supported by *social exchange theory*, which emphasizes the role of distributive or exchange considerations in shaping interpersonal relations (Tax et al. 1998).

This study proposes that a service failure with distributive justice would greatly affect propensity to complain in the online business. Particularly, when online customers exchange or return an unsatisfactory product, they often encounter unfairness and/or perceived financial loss, because in most cases delivery costs are not refunded. It is addressed in the traditional environment, as Tax and Brown (1998) stressed that most customers surveyed judged the outcomes they received to be unfair, believing the companies had failed to compensate them adequately for the harm done or

to recognize the costs incurred in getting their complaint resolved. While there are few studies regarding service failure with distribute justice in the online environment, Cho et al. (2002) found that online customers frequently complained about having to pay high delivery costs or not being refunded for delivery costs when returning purchased items.

Therefore, in order to meet distributive justice, e-businesses should provide exchange equitably and also develop strategies that resolve conflict with delivery costs. Some online businesses provide credits for delivery costs if the reason for the return is the company's fault, while other businesses provide pick up service for products being returned. When companies put forth such effort, customers' perceived fairness increases. However, customers often pay the delivery costs for both purchasing and returning the products on the Internet. Most e-businesses provide options to return the product, but do not take responsibility by providing credits for delivery costs unless the reason to return the product is entirely the businesses' fault. Clearly, customer service centers must improve if they want to achieve greater customer satisfaction in resolving complaints. This study proposes that online service failure that does not meet distributive justice affects customers' propensity to complain.

Hypothesis II: In the online environment, as customers perceive the higher degree of service failure with the distributive justice dimension, their propensity to complain will be increased.

Procedural justice includes a) the extent to which a person is free to accept or reject a decision outcome; b) the ease of engaging a process; c) the perceived amount of time taken to complete a procedure; and d) the adaptability of procedures to reflect individual circumstances (Tax et al. 1998; Brett 1986; Bitner et al. 1990; and Fisk and Coney 1982]). Research in the traditional shopping environment found that delays negatively affect one or more service attributes, which in turn affect the overall evaluation (Taylor 1994 and Parasuraman,

Zeithaml, and Berry 1985).

In the online shopping environment, procedural fairness could be enhanced using technological support. Tax and Brown (1998) noted that some firms are now using Internet websites to facilitate service recovery. Search engines and advanced database systems help to minimize customers' waiting time and to resolve their dissatisfaction. Bitner et al. (2000) also proposed that the customers' expectation regarding e-businesses' customer service centers is higher through the effective use of technology in service encounters. According to Kasper (1997), advances of information technology affect the extent of contribution of service in creating value or excellent service quality. This study posits that online customer satisfaction will increase and complaints regarding procedural justice will decrease if e-businesses provide technologically advanced services.

Thus, customers' expectations of procedural justice, particularly with the perceived amount of time taken to complete a procedure, will be elevated in the e-business environment. Time and speed taken to resolve complaints and the ability to engage complaints can be updated as e-businesses acquire advanced technology systems. Cho et al. (2001) showed that the response time significantly affected customers' propensity to complain. While technology positively affects the resolving of customer complaints, customers who purchased the product online encounter inconvenience in exchanging or returning the product. In most cases, online customers require a special trip to the post office or store to return or exchange the product. Based on the study by Cho et al. (2002), it is one of the main causes of online customers' dissatisfaction. Thus, customers' dissatisfaction with Internet transactions increases in proportion to the perceived amount of time taken to complete a procedure. In some cases, customers who purchase a product online require an additional special trip to the physical store, if face-to-face service is needed to fix their problems. Therefore, the following hypothesis is derived.

Hypothesis III: In the online environment, as

customers perceive the higher degree of service failure with the procedural justice dimension, their propensity to complain will be increased.

Interactional justice includes a) a provision of reason for a failure; b) well-mannered, courteous behavior; and c) individual attention (Tax and Brown 1998). According to Bitner et al. (1990), the human interaction component of service delivery is essential to the determination of satisfaction/dissatisfaction. Thus, in the in-store environment, customer complaints throughout face-to-face communication between customers and salespersons could be increased or decreased depending on how customer problems are treated through interactional justice. The online shopping condition differs from in-store shopping because there is a significant lack of face-to-face communication. In the in-store market place, customer satisfaction increases through face-to-face communication if the salesperson manages interpersonal communication successfully, while dissatisfaction increases if it is not successfully done. Online businesses don't have the opportunity to enhance customer satisfaction from face-to-face communication, while conflicts from face-to-face communication are not a factor in e-service failure.

Instead of face-to-face communication, online customers might encounter interactional justice from salespersons' efforts via telephone calls and email responses. Therefore, interactional justice could also be sustained even in an online environment. Online customers' conflict can be reduced through the tone of voice or positive effort via email responses from the salesperson. The tone of voice in an email response might represent individual characteristics and attitudes, just like one's voice in a telephone response. Emoticons and Avatars frequently been used by online portals improve personal relationships during communication on the Internet. Therefore, how online businesses manage email messages regarding customer complaints are an important factor for successful e-service. On the other hand, complaints increase when online customers are not treated well in terms of interactional justice. This

study hypothesized that service failure with the interactional justice dimension affects customers' propensity to complain in the online shopping environment.

Hypothesis IV: In the online environment, as customers perceive a higher degree of service failure with the interactional justice dimension, their propensity to complain will be increased.

METHODOLOGY

The above hypotheses were tested using two different methods, called 1) *log data*, in this study and 2) customer complaints data, posted on websites.

Data Collection Method #1

First, *log data* from subjects are reported in this study. The *log data* collected in this study have been based on the sources of data, called *consumer purchase panels*, which are useful in traditional marketing research. The nature of *log data* has been rooted in the idea of the *home audit* approach of consumer purchase panels, where the panel member agrees to permit an auditor to check the household stocks of certain product categories at regular intervals. While *consumer purchase panels* have been frequently used to reflect consumer buying behavior in the traditional market environment, this study has used the consumer purchase panels to track their complaints about buying activities from their online transaction. We have called this data *log data* in this study.

Log data were collected from self-reported buying behavior record forms filled out by subjects selected from two major universities on the East Coast. Three hundred twenty nine subjects were asked to fill out a buying behavior record form. Subjects reported their unsatisfactory shopping behavior, both online and in-store, including the major reasons for dissatisfaction and the degree of propensity to complain. Every week in a four-week period, the subjects were asked to record their unsatisfactory shopping experience, if

they had any, in both online and in-store shopping environments. One hundred twenty respondents recorded their unsatisfactory online and in-store shopping experiences each week for the four-week period.

The response rate for the log data collected by record forms was about 45.2%. The study found that subjects spent an average of \$85.66 on reported dissatisfied products online and \$84.37 in in-store. About 19% of subjects reported their dissatisfaction in the online environment based on books; 15% on computers and peripherals; 13% on CDs, Videos or DVDs; 10% on apparel; 6% on flowers; 5% on electronics; and 4% on toys, etc. About 26% of subjects reported their dissatisfaction in the in-store environment based on apparel; 17% based on electronics; 12% based on computers and peripherals; 11% on groceries; and 6% on CDs, Videos, or DVDs, etc. The overall means reveal that in-store customers (4.63 from week 1 to 6) exhibited a higher degree of dissatisfaction than online customers (4.00 from week 1 to 6). On a weekly basis, self-reported data were analyzed and coded qualitatively and quantitatively. Qualitative data, which were collected from open-ended questions, provided opinions and comments on customers' overall negative shopping experiences. The information gathered from the interview with volunteers was recorded and coded as data. About five to ten subjects per week who reported unsatisfactory purchase experiences participated in the interviews. Coded data obtained from the interviews were compared to the self-report data. Subjects' thoughts and opinions were grouped by categories, such as types of complaints and types of service failure among the complaints about the problems with service.

Data Collection Method #2

Secondly, this study collected the *consumer feedback data* from bulletin boards in online customer service centers. Actual customer complaints from publicized online customer service centers were collected and used as another data source for this analysis. This study extends the previous study (Cho et al. 2002) by analyzing

customer complaints based on product categories and by increasing sample size. A total of 3,000 complaints were taken from online customer service centers of four major retail companies whose anonymity will be preserved in this report – ABC.com, XYZ.com, PQR.com, and LMN.com. These companies are popular companies that sell diverse product categories online. A total of 3,000 selected complaints have been analyzed qualitatively. An equal amount of complaints (about 760 for each company) were randomly selected from the four websites during a similar time period (September 2000 – May 2002). Complaints were gathered from diverse product categories, such as computers, printers, clothes, electronics, etc. The 3,000 collected complaints were classified according to the major reason for complaints. If the complaint was about service failure, the type of service was classified based on the dimensions of justice with handling complaints by Tax and Brown (1998).

Content analysis was conducted to analyze the log data and the complaints from customer service centers. The framework by Tax and Brown (1998) was also used for analyzing the log data and complaints. Such issues as responsibility, flexibility, timing/speed, convenience (number of people/times), and knowledge of process, (Tax and Brown 1998) were coded as the *procedural justice dimension*. Issues about fairness of the refund, repair, or replacement were coded as the *distributive justice dimension*. Issues such as politeness, empathy, effort, explanation/information, honesty, and attitude were included as the *interactional justice dimension*. This study counted consumer complaints with one major reason that caused the complaints. However, complaints with more than one major reason were not counted in this analysis. Coding was independently done by two persons with proficient knowledge in e-commerce. Inter-coder reliability was measured based on the degree of agreement between coders (Kappa = .89).

RESULTS

Of the Eighty-six respondents of the log data, 51.2% were male and 48.8% were female. About

28.2% were between the ages 18-24; 57.5% were between the ages 25-30; 12.7% were in the 31-40 age group; 1.5% were in the age group 41-50; and 0.1% were age 51 or older. Approximately 10.2% reported that their highest educational level was high school graduate, while 8.1% had an associate degree, 66.8% were college graduates, and 14.9% had done graduate work. More than 67.5% had an annual average income between \$20,000 and \$59,999 and major respondents were Asian/Asian-American, and White-American.

The following scripts from log data are examples of problems with service failure. Script 1 presents an example of service failure regarding *interactional justice*, while Script 2 presents an example of service failure regarding *procedural justice*.

“I bought a digital camera from an online company and received sports utility equipment instead of the camera. I complained about it. Although I was not happy with it, I wasn’t so much upset because of the wrong product delivery. However, I felt upset when a salesperson rudely told me that there is no evidence supporting my claim. Even worse is that she was not willing to trust me and never apologized. I eventually got refunded, but I was so upset about the salesperson’s attitude.”

“I ordered clothes from an online store, but I haven’t received any response after I ordered the product. I emailed the salesperson there, but I received a response after 3-4 days. I also called the customer service center, but it took a long time to be connected. Then, I realized that the product was out of stock and would be shipped later. If I had known this earlier, I would have canceled it and gotten it from another store.”

Table 1 shows the causes of complaints from online and in-store shopping based on the analysis of log data. As shown in the table, the problem with customer service failure was the major cause of complaints in the online environment. As the table indicates, hypothesis I is accepted because

the percentage of complaints with customer service failure was higher (43.4% vs. 34.6%) in online than in the in-store case. Overall, the data show that there is a significant difference in the distribution of the causes of complaints between online and in-store (*Chi-squared* = 51.16; $p \leq .001$). Problems with the product itself, such as quality or performance, were significant in both cases, but it was much higher in the in-store case than in the online case. Problems with misleading information were pretty low in the online shopping case, while they were high in the in-store case. In other words, online customers tend to have clearer information. Unlike the case of in-store, delivery problems were significant in the online shopping environment, but security and trust issues did not impact online shopping.

Table 2 presents the analysis of actual customer complaints collected from the publicized online customer service centers. The table shows that the problem with the service failure is also a major cause of customer complaints in online customer service centers. Dissatisfaction with the customer service centers was ranked as the most significant problem affecting online customer complaints. Problems with product quality and performance ranked second and delivery issues and information failure ranked third and fourth.

The survey data were collected from shopping record forms, as a part of the log data, and were used to analyze the test hypotheses II, III, and IV. Various items were used to measure each of the seven constructs that served as the basis for the questionnaire items (Table 3).

Regression analysis and ANOVA were conducted to test the effects of the three service failure dimensions on customers’ propensity to complain. The measurement variables for the three justice dimensions were grouped using factor analysis method (Table 4). The factor scores were used in ANOVA and regression analysis. As shown in Table 5, the impact of the service failure with three justice dimensions (distributive, procedural, and interactional) significantly affects propensity to complain (hypothesis II-IV). Customers’ perception of the benefits/costs from the service quality affects their willingness to complain. The magnitude of the impact of the

Table 1
Analysis of Cause of Complaints from "Log Data" (Online vs. In-Store)

Causes of Complaints	Example of Actual Responses*	Number of Complaints (%)	
		Online	In-Store
Service Failure	Unresponsive to requests for assistance; longer than average waiting time; contact possibilities, poor after-sale service, unfriendly.	37 (43.0%)	31 (36.1%)
Delivery Problems	Long delivery time; shipping contributes a lot to the cost.	17 (19.8%)	-
Unsatisfactory Product quality or performance	Product damaged/poor quality; underwhelming performance; speakers stop working periodically.	10 (11.6%)	24 (27.9%)
Price	Expensive; pricey; be wary of their financing program; interest rates are insanely high.	8 (9.3%)	12 (13.9%)
Security and Trust Issues	Believe that this company rips people off.	8 (9.3%)	-
Incorrect Information	Websites did not provide exact information about the product.	3 (3.5%)	10 (11.6%)
Tracking and Tracing	The site didn't provide the order status.	2 (2.3%)	-
Promotion	Very few "buy computer-get printer" offers.	2 (2.3%)	9 (10.8%)

Table 2
Analysis of Causes of Complaints from Customer Feedback Data

Causes of Complaints	Example of Actual Responses*	Number of Complaints (%)
Service Failure	Customer service contact is confusing/inefficient, no stores rely on Web, phone, and shipping services, too much for waiting time and slow process, unresponsive to requests for assistance, salespersons' rude behavior.	1014 (33.8%)
Unsatisfactory Product quality or product performance	Poor product performance, poor video acceleration, underwhelming performance, the speed of the computer does not work as advertised.	786 (26.2%)
Problems with delivery	Long delivery time, wait, shipping contributes a lot to the cost.	534 (17.8%)
Price Issues	Expensive, pricey, be wary of their financing program, interest rates are insanely high.	450 (15.0%)
Information Failure	Cannot judge the quality of the products online, online store did not provide enough information about the shoes I was interested in.	48 (3.3%)
Unsatisfactory Business Rules or Generic Services	Limited payment options, possibility for returning the products, problems with guarantees.	60 (2.0%)
Security, Trust	Cannot trust online payment system, yellow lock symbols did not appear when I checked out.	57 (1.9%)

* Source: publicized complaints taken from the Customer Service Center Websites of anonymous online retail companies, called ABC.com, XYZ.com, PQR.com, and LMN.com reported from September, 2000 to May, 2002.

Table 3
Cronbach's Alphas for Each Construct

Constructs & Items	Cronbach Alpha
Distributive Justice Paid extra costs to return the product Delivered product was required to repair A condition of delivered product was no good Unsatisfactory delivery cost Took a long time to get credit back	0.87
Interactional Justice Unsatisfactory respond manner Sales person did not provide enough explanation Sales person did not respond kindly	0.74
Procedural Justice Disappointing timing/speed of delivery Difficulties of engaging a process Adaptability of procedures to reflect individual circumstances Online customer service did not respond promptly	0.78

Table 4
Component Matrix for Predictors

Items	Component		
	1	2	3
Distributive Justice 4 (unsatisfactory delivery cost)	.824		
Distributive Justice 1 (paid extra costs to return the product)	.789		
Distributive Justice 7 (took a long time to get credit back)	.721		
Distributive Justice 3 (a condition of delivered product was no good)	.702		
Distributive Justice 2 (delivered product was required to repair)	.678		
Interactional Justice 5 (unsatisfactory respond manner)		.811	
Interactional Justice 2 (sales person did not provide enough explanation)		.788	
Interactional Justice 3 (sales person did not respond kindly)		.730	
Procedural Justice 4 (disappointing timing/speed of delivery)			.865
Procedural Justice 3 (difficulties of engaging a process)			.810
Procedural Justice 2 (adaptability of procedures to reflect individual circumstances)			.715
Procedural Justice 6 (online customer service did not respond promptly)			.624
Eigen Value	5.781	2.982	1.311

Table 5
The Effect of the Service Failure with Justice Dimension on Customers' Propensity to Complain

Justice Dimension	Standard Coefficient	t-value (sig)
Distributive Justice	.278	3.954 (.000)**
Procedural Justice	.342	5.161 (.000)**
Interactional Justice	.212	3.300 (.001)**
<i>F</i>	14.295**	
<i>R-Square</i>	.311	

**Significant at 0.01 level (2-tailed).

Table 6
Analysis of E-Service Failure

Justice Dimension & Types of Justice Concept*	Definition*	% of Complaints	
		From Log Data	From Customer Feedback Data**
Distributive Justice		24%***	27.8%***
1. Equality	Equal outcomes regardless of contributions to an exchange (i.e., regarding a refund or exchange).	14.6%	16.7%
2. Equity	Provision of outcomes proportional to inputs to an exchange (e.g., regarding adequate compensation).	7.1%	9.4%
3. Need	Outcome based on requirements regardless of contributions.	2.3%	1.7%
Procedural Justice		34.1%***	26.7%***
1. Time/Speed	Perceived amount of time taken to complete a procedure.	18.7%	17.4%
2. Flexibility	Adaptability of procedures to reflect individual circumstances.	10.5%	5.1%
3. Accessibility	Ease of engaging a process.	4.9%	4.2%
Interactional Justice		18.6%***	20.6%***
1. Politeness	Well-mannered, courteous behavior.	12.0%	15.4%
2. Effort	Amount of positive energy put into resolving a problem.	4.5%	3.0%
3. Empathy	Provision of caring, individual attention.	2.1%	2.2%

*Types of justice concept and definition were adapted from the previous study by Tax and Brown (1998) and Blodgett, Hill and Tax (1997).

** Source: publicized complaints taken from the Customer Service Center Websites of anonymous online retail companies, called ABC.com, XYZ.com, PQR.com, and LMN.com reported from September, 2000 to May, 2002.

***Total percentages complaints of sub-categories, distributive, procedural, and interactional justice from log data and customer service center.

service failure with procedural justice was higher than distributive or interactional justice. This implies that the customers' expectation regarding high speed of response or short waiting time has a greater impact than other expectations. Therefore, when the service quality with procedural justice does not meet customer expectation, customers are more likely to complain than when other justice dimensions fail.

Table 6 presents the analysis of types of service failure from two sources of data, the log data and the complaints from the customer feedback data. Both data analyses showed what types of service failure affect customer complaints in online shopping. Both results showed that the major factor of service failure that causes online customer complaints is the timing/speed issue. Customer complaints were also caused if they encounter a salesperson's impolite behavior. Furthermore, 14.1% of online customers who complained did not perceive that the outcomes were equal even if they received a refund or exchange.

DISCUSSION

How online businesses exert service quality is often judged by how effectively they handle customer complaints. By examining actual customer complaints from log data and customer service centers, this study shows that major online customer complaints and dissatisfaction are generated from unsatisfactory service quality, such as a conflict with Web customer service centers. From the comparison analysis of the causes of complaints in online and in-store shopping environments, it was found that major causes of complaints are significantly different in these two markets. For example, the major cause of customer complaints both in online and in-store shopping environments was a service failure, and the incidence was higher in the online than in-store environment. This study also determined implications to business by analyzing the types of service failure on complaints. Based on the log data analysis, a major issue of online customers' complaints is procedural justice, such as delivery and response time, while analysis of customer

feedback data showed that customer complaints due to both distributive and procedural justice are almost equal. Another finding from regression analysis indicates that the impact of service failure with the justice dimension affects customers' propensity to complain in the online shopping environment. Particularly, the magnitude of the impact of service failure with the procedural justice dimension was higher than distributive and interactional justice.

By investigating online customers' perceived service quality from their complaints, this study provides implications for how e-businesses' customer service centers should manage customer complaints effectively. The findings imply that online customer complaints are generated more from e-service failure regarding procedural justice than other justice dimensions. Thus, this study suggests that e-businesses should pay more attention to procedural justice by providing faster feedback and responses. Practitioners should put more emphasis on the importance of rapid feedback on complaints and also improvement of the advanced system. For example, online customer service centers (also referred to as *Web-enabled customer contact centers*: <http://www.iir-ny.com>) could provide online chat services to their customers, more efficient customer self-help centers, or a combination of several customer communication channels (<http://www.rightnow.com>). A synchronous feedback system, of course, is the fastest means of communication online. On the other hand, delayed response frustrates customers, hindering them from becoming loyal. Another example of offering real-time customer service is <http://www.neimanmarcus.com>. The online customer center at *Neiman Marcus* operates a real-time service that enables customers to solve their problems/questions without having a delay. *Rightnow technologies* (www.rightnow.com) also focuses on live chat and collaboration to improve relationships with their customers. Moreover, the company also offers personalized service to customers through a service portal as a consideration of *eService solution* (www.rightnow.com). Thus, this study suggests that technology-oriented service systems or well-

designed e-service customer centers would be an important key to reduce online customer complaints regarding service failure.

The study also suggests that online businesses should build up strategies concerning service failure with justice dimensions. Online businesses should consider such strategies as offering adequate compensation to customers for unsatisfactory transactions and also delivering messages more efficiently to minimize conflicts with customers. If the major cause of the purchase failure was not the customer, the e-business should take responsibility, e.g., by refunding delivery cost and also product cost to the customer. Well-mannered interpersonal communication between customers and salespersons throughout email or call centers could decrease customer complaints. Special training of service representatives will be required to learn how to handle customer complaints. Service representatives dealing with customer complaints should recognize the customer's viewpoint, specifically understanding what is valued by the customer, knowing the customer's problem, and listening to their voice (Gardial, Clemons, Woodruff, Schumann and Burns 1994). In addition, using enhanced communication tools, such as emoticons or avatars that are personal icons representing you and your feelings (Hanson 2000), or imaginary symbols for representatives, will help to improve closeness to the customers. AT&T uses "Ask Allie" on their Web customer service center (www.customer.service.att.com) to convey an image of closeness to the customer. It is believed that those contributions to complaint management will enhance e-businesses' overall market effectiveness.

Further, this study will be extended by considering customer complaints caused by different dimensions of service failure based on different types of businesses and product categories. There are some limitations of the study. This study applied constructs to classify the different types of services, proposed for the traditional store environment. For future study, constructs should be more conceptually established in the online situation. Interaction effects between constructs should be considered in

the future study. Also, an extended number of samples for log data analysis will enhance the reliability of the paper.

CONCLUSIONS

This study demonstrates that the problems with e-business customer service centers are the critical causes of online customer complaints. In turn, this article argues that customers' dissatisfaction and complaints in e-businesses increase if they encounter a problem with customer service. This study recommends that e-businesses should consider a) fairness dealing with customer complaints; b) improvement of response time; and c) polite and courteous interpersonal communication. Such efforts to improve the e-service quality will be vital in enhancing customer satisfaction, leading to more successful customer relationship management (CRM).

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A CONCEPTUAL LOOK AT THE INFLUENCE OF RELATIONSHIP STRUCTURE ON THE DISCONFIRMATION PROCESS IN A BUSINESS-TO-BUSINESS CONTEXT

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ABSTRACT

Although many believe close inter-organizational relationships and customer satisfaction are interrelated, limited business-to-business research explores the interrelationship between these variables. This paper integrates the interorganizational relationship literature and the disconfirmation theory literature from consumer behavior to fill this gap. A conceptual model is presented to suggest how the structure of a buyer-seller relationship, which is composed of the two dimensions of magnitude and type, influences the process of disconfirmation and customer retention in the business-to-business context. Propositions are offered along with an agenda to guide further research in this area.

INTRODUCTION

A large element of managing supply chains consists of managing multiple relationships among the member organizations (Cooper et al. 1997; Mentzer et. al. 2001a and b), with connections between member organizations ranging from single transactions to complex interdependent relationships. As the business environment becomes increasingly complex, organizations realize that many benefits, including sustainable competitive advantage, can be obtained from long-term, committed relationships (Day 2000; Ganesan 1994). Thus, many firms are moving away from adversarial, transactional exchanges toward closer and more long-term relationships (Holmlund and Kock 1993; Kalwani and Narayandas 1995).

Much has been written in both the popular press and academic literature about the drivers, expected benefits, and behavioral outcomes from various supply chain relationships such as

alliances, partnerships, and collaborative relationships. However, a high level of ambiguity still exists regarding the different relationship terms (Cravens, Shipp, and Cravens 1993). Various terms describing these relationships are often used interchangeably, creating confusion for both practitioners and academicians. Recent work has begun to address this issue by clarifying the difference between two components of relationship structure, the type and the magnitude of a relationship (Golicic, Foggin and Mentzer 2003). Relationship type is defined as *the group or class of relationships that share common governance characteristics*, such as an arm's length or cooperative relationships. Relationship magnitude is *the extent or degree of closeness or strength of the relationship between or among organizations*; for example, a relationship can range from distant (low level of magnitude) to close (high level of magnitude).

Strong and cooperative relationships may provide opportunities for firms to develop sustainable competitive advantages and inherent barriers to competition, and to potentially increase customer satisfaction (Berry and Parasuraman 1991; Day 2000; Patterson, Johnson and Spreng 1997). However, there is not much evidence in the business-to-business literature supporting or refuting these linkages. Gwinner, Gremler, and Bitner (1998) identify customer benefits from long-term business-to-business relationships, and Gassenheimer, Houston, and Davis (1998) examine the economic and social value of close business-to-business relationships in order to maintain them, but neither directly discusses satisfaction. Given that there is little clarity on the different relationship forms, there is no research on how relationship structure affects the determination of satisfaction by the customer in the relationship. In contrast, much research has

been done on the consumer satisfaction evaluation process. This knowledge can be applied to business-to-business relationships.

The purpose of this article is to integrate the consumer satisfaction and business-to-business relationship research to begin addressing the question: What is the impact of interorganizational relationship structure on the evaluation process leading to customer satisfaction? For clarification, the terms "satisfaction" and "customer satisfaction", as used in this paper, will refer to a buying organization's satisfaction with a supplying organization. The word "consumer" will be used whenever discussing existing consumer behavior theories of satisfaction. The next section reviews current theory on consumer satisfaction, followed by insights gained from marketing, logistics, and psychology research to discuss the structure of relationships between businesses in a supply chain. These areas are then integrated into a model to propose how they are interrelated and to highlight research opportunities. Our conceptual model proposes that the structure of the relationship through the dimensions of type and magnitude impacts the components of the evaluation process used by customers to determine satisfaction. This paper concludes by offering a research agenda and discussion of implications for organizational relationship theory.

SATISFACTION

Consumer satisfaction has received a great deal of attention in the behavior literature since the late 1970's. Often defined as both a psychological state of mind and a process to explain how consumers arrive at the state of being satisfied (Oliver 1999), disconfirmation models typically indicate that consumer satisfaction or dissatisfaction feelings arise out of a comparison process. The comparison takes place between some initial, prepurchase standard created from a frame of reference and the perceived postpurchase performance of a product or service occurring in a usage situation. If there is no discrepancy, confirmation results and if the comparison outcome is better (poorer) than the standard, then

positive (negative) disconfirmation results.

Initially, "expectations" received most attention as the standard for comparison (Oliver 1980). Day (1982) added clarity to this concept by proposing that expectations are predictions made by consumers about product/service performance. However, later research has shown that other standards may be used by consumers as the frame of reference (Cadotte, Woodruff and Jenkins 1987); Woodruff et al. 1991). Consequently, the original disconfirmation-of-expectations process is an instance of a larger class of disconfirmation-of-standards processes, each differing in the standard used during comparison.

Consumers' propensity to use different standards suggests that the actual standard(s) selected may be constructed after experiencing a product/service performance (Woodruff, Cadotte and Jenkins 1983). In contrast, expectations likely arise prior to actual product/service use, as an outgrowth of the selection process. This difference means that consumer satisfaction states need not be linked to prior choice processes, as would be the case if "expectations" were the only standard used.

In addition to the disconfirmation paradigm, other theories on consumer satisfaction have begun to surface (for example, see Fournier and Mick 1999; Gardial et al. 1994). However, all of these have the common thread of an evaluation process in which performance of the product or service is compared to some type of standard.

Woodruff et al. (1991) provide a summary of earlier standards research, and present expectations, equity, experienced-based norms, desires or values, ideals, and seller's promises as the different types of standards. These researchers referred to equity as the comparison between a consumer's perceived benefit/cost ratio and the seller's corresponding ratio. Equity has since been broadened to a fairness, rightness, or deservingness judgment (distributive justice) in reference to a comparison of what others receive (Szymanski and Henard 2001). Experience-based norms reflect desired performance based on prior experiences beyond just the focal brand, such as with other brands and/or other products and

services. Garver and Flint (1995) distinguish between standards and sources of information used to create standards, which include word of mouth and perceptions of alternatives. Woodruff and Gardial (1996) add industry norms to the types of norms used for comparison. Finally, Neeley and Schumann (2000) present perceived social approval, which reflects a consumer's consideration of other persons' reactions to a purchase, as a new comparison standard.

Comparison standards are believed to vary over these many experiences (Woodruff, Cadotte, and Jenkins 1983) as well as between pre and postpurchase evaluations (Gardial et. al. 1994). But at what stage in the experience do the standards develop and what prompts them to vary? Consumers may use multiple comparison standards simultaneously (Cadotte, Woodruff, and Jenkins 1987; Gardial et. al. 1993). If this is the case, do multiple standards lead to multiple feelings of consumer satisfaction or even satisfaction and dissatisfaction simultaneously? More research is needed on the formation and use of comparison standards.

Businesses tend to develop and use formal measures against which to judge their supplier's performance. Events may occur, such as the consolidation of suppliers, change in company goals, or turnover of employees, that would trigger the development of new or revision of existing standards. Perhaps this is an area where research on satisfaction in the business-to-business context could contribute to consumer research.

The importance of satisfaction and dissatisfaction feelings lies in their outcomes – the ability to motivate consumers' behavior. Anderson and Sullivan (1993) identify repurchase intentions as an outcome of consumer satisfaction. In addition, several other outcomes have been proposed. For instance, Szymanski and Henard's (2001) meta-analysis of 15 satisfaction studies found that satisfaction influences multiple behaviors, including repeat purchase, word of mouth, and complaining behaviors. An additional consequence of satisfaction, a higher share of purchases, was found by Reynolds and Beatty (1999).

While consumer satisfaction research tells us

a lot about how individual consumers form motivating satisfaction or dissatisfaction feelings, it has not been extended to business-to-business relationships. We know that an organization's personnel may be highly satisfied, satisfied, or dissatisfied with another organization, but just how does the interorganizational relationship impact the evaluation process? To address this question, we need to examine the characteristics of business-to-business relationships, which we do in the next section.

RELATIONSHIP STRUCTURE

Interorganizational relationships have historically been categorized by where they fall on a governance spectrum. The channels literature was the first to propose a range of relationships from arm's length transactions (or market governance) to vertical integration (or hierarchical governance). More recently it has been recognized that integration of more than one firm may be more appropriate for the end of this range since one firm cannot effectively accomplish the control and management of the whole channel (or supply chain). Several authors have since acknowledged these two end points, arms length and integration, and placed interfirm cooperative relationships (types of relationships where there is cooperation between or among the firms involved such as partnerships, alliances, joint ventures, network organizations, franchises, license agreements to name a few) in the middle (Contractor and Lorange 1988; Heide 1994; Landeros and Monczka 1989; Rinehart et al. 2003; Webster 1992). These studies attempted to categorize the relationships, and therefore the behaviors motivated by the relationship, based on its characteristics or type. Type is defined as *the group or class of relationships that share common governance characteristics* (Golicic, Foggin, and Mentzer 2003).

Much of the existing research on different cooperative relationship types (e.g., alliances or partnerships) views types as interorganizational governance structures that straddle the two ends of markets and hierarchies (Thorelli 1986). However, some authors argue a single type, such

as alliances, can span a variety of structures along a continuum with varying levels of collaboration throughout its evolution (Iyer 2002). Personal relationships are structured based on needs and the level of attraction or intimacy between two or more people. In social psychology, attributes such as trust, commitment and dependence often describe the intimacy or level of closeness of the relationship as opposed to the type of relationship (e.g., friendship, marriage). Thus, the type of the relationship explains only part of the structure of a relationship. Another dimension of structure that is similar to the idea of intimacy is necessary to fully explain the multitude of possible relationships.

Bove and Johnson (2001) review the literature on relationship strength, closeness and quality in an attempt to determine when it is appropriate to use each. The authors propose that the distinction is the context in which they are used, but that all three are descriptors of the *magnitude* of a relationship. In addition, the authors discuss closeness varying as a function of the type of relationship, thus conceptualizing the two as distinct constructs. Golicic, Foggin, and Mentzer (2003) discuss the same concept in the context of the structure of interorganizational relationships. Through analysis of existing literature and focus group research, the authors differentiated between two components of relationship structure -- relationship type and relationship magnitude. According to those authors, magnitude is defined as *the degree or extent of closeness or strength of the relationship among organizations*. Magnitude contributes to the structure of the relationship in that it varies from distant to close within different relationship types allowing a multitude of possible relationship structures.

Psychology literature discusses different levels of intimacy as part of the structure of personal relationships. Aune, Buller, and Aune (1996), Collins, Kennedy, and Francis (1976), and Guerrero and Andersen (1994) provide examples of the variation in intimacy as personal relationships progress through different types (identified as casual dating, serious dating, engagement, and marriage). While the formation and maintenance of interpersonal relationships

differ from interorganizational relationships, the notion of varying levels of intimacy within types could also apply to organizational relationships.

Some interorganizational research has indirectly described different magnitudes within one type of relationship. Birnberg (1998) proposed that strategic alliances have varying levels of relationship strength depending on factors such as the degree of commitment to the relationship, the symmetry of rewards, and the degree of mutual trust. In their research on partnerships, Lambert, Emmelhainz, and Gardner (1996) distinguish among three different levels based on the interactions and closeness between trading partners. These levels are: (1) coordination between the partners (what the authors term Type I), (2) beyond coordination to integration (Type II), and (3) significant integration (Type III). Various other terms commonly used to refer to closeness in relationships include coordination, cooperation, and collaboration. In focus group interviews with company executives that manage their supply chains, Golicic, Foggin, and Mentzer (2003) found the respondents used these same terms to describe the strength or magnitude of relationships within their supply chains. Interestingly, the respondents described different intensities within the context of a single type of relationship, highlighting the difference between relationship magnitude and type.

Golicic (2003) empirically tested the notion that relationship magnitude and type were distinct constructs. There was statistical evidence that they were distinct and also highly related to each other. Both constructs exhibited variation with antecedents and consequences (e.g., trust, commitment, dependence, value) often included in interorganizational relationship research, lending support to the contention that the two are components of the structure of relationships. The structure, through the levels of magnitude and type, is expected to influence the behaviors of the firms within the relationship.

Relationship structure is likely to vary over time between two organizations as well as across pairs of organizations within supply chains. Similarly, satisfaction varies in the same ways. In

the next section, we suggest how the structure of the relationship through the levels of magnitude and type may influence the business-to-business customer's satisfaction process.

THE INFLUENCE OF RELATIONSHIP STRUCTURE ON THE DISCONFIRMATION PROCESS

Suppliers frequently try to evaluate their customers' levels of satisfaction through customer surveys. However, potentially serious problems may limit the usefulness of these surveys. For example, the measurement of satisfaction is too often based on the supplying firm's notion of what customers should value (Fawcett and Swenson 1998; Piercy 1998; Woodruff and Gardial 1996). In addition, these surveys do not always capture the comparison standards that customers use, or the processes customers go through to evaluate the supplying firm's performance. Research on business-to-business satisfaction is more limited than consumer satisfaction research, possibly because the business-to-business context involves more variables when evaluating satisfaction. This point was expressed in Swan and Trawick's (1993, pg. 30) view that, "almost nothing" has been done with regard to industrial buyer satisfaction.

Only recently have specific studies emerged. One study addresses the comparison standards during business relationship formation (Garver and Flint 1995). Another describes how customer satisfaction may enhance supply chain relationships (Fawcett and Swenson 1998) by eliminating service gaps and helping suppliers meet their customers' needs. Patterson, Johnson, and Spreng (1997) were the first to empirically test the determinants of satisfaction in a business-to-business context, providing support for applying consumer behavior theory to customer interactions in the services industry.

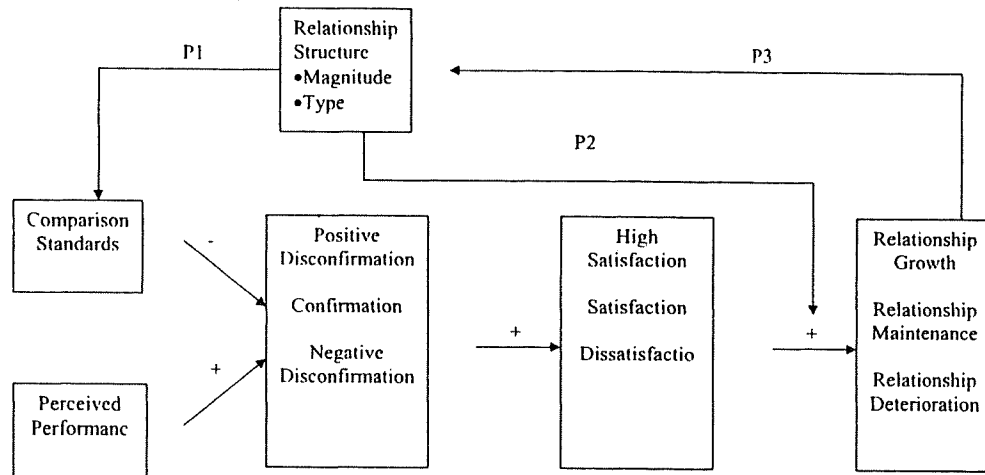
In 1999, Geyskens, Steenkamp, and Kumar published a meta-analysis of 71 studies that included satisfaction in their channel relationship models. The original studies focused on satisfaction as a consequence of channel relationships and related satisfaction to more than 80 different variables, often with inconsistent

findings across the studies. More recently, trust and commitment have replaced satisfaction as a focal consequence of channel relationships. For example, Geyskens, Steenkamp, and Kumar (1999) group relationship antecedents into channel conduct and structure, and they place satisfaction as a mediating consequence between conduct and the consequences of trust and commitment.

Within recent satisfaction research, Patterson, Johnson and Spreng (1997) empirically tested the disconfirmation theory in the business-to-business context with customers of management consulting services. They recognized that the disconfirmation process in this context is somewhat different than in the consumer context. Variables surrounding the purchase situation were included and found to impact the determination of customer satisfaction. Patterson, Johnson and Spreng found that the disconfirmation paradigm can be applied to industrial buying situations. However, the research did not take into account how the existing relationship between firms, an extremely important variable, might impact the satisfaction process. The conceptual model described in the following sections addresses this research gap by tying the evaluation of customer satisfaction to the levels of relationship magnitude and relationship type between companies in a supply chain.

The influence of relationship structure on the evaluation of customer satisfaction in the business-to-business context is presented in Figure 1. This model shows the general constructs involved in a business-to-business relationship satisfaction process as well as the interaction among them. The relationships among the satisfaction constructs (comparison standards, perceived performance, confirmation, satisfaction, and relationship maintenance) have been empirically tested in the consumer behavior literature, as well as in the business-to-business context (Patterson, Johnson and Spreng 1997). These interactions are therefore not shown as propositions, but as the empirically tested relationship. Each construct is discussed in the following sections with propositions about the influence of relationship structure offered to guide research in this area. The model prompts

Figure 1
A Model of Business-to-Business Customer Satisfaction



numerous research questions, which are discussed in detail in the final section of the paper.

Comparison Standard(s)

Similar to consumer evaluations, companies are thought to use a comparative process to evaluate their satisfaction with a channel partner (Garver and Flint 1995). They compare the performance of an interaction incident against one or more selected standards that serve as a frame of reference. In a buyer-seller context, standards are frequently documented as measures or performance indicators. Thus, suppliers know the standards against which their performance is compared (Garver and Flint 1995). These standards are expected to vary over experiences and may be composed of multiple criteria. Garver and Flint (1995) propose that standards may differ with the stage in relationship development and will be influenced by the nature of business-to-business buying.

For example, early in relationship formation when the magnitude and type of relationship are generally low, buyers typically have standards that are based on their needs or desires. As the relationship intensifies and the parties explore its costs and benefits, Garver and Flint (1995) suggest

that buyers may also use equity as a comparison standard. Thus, as a relationship develops, both parties want to feel as though it is equally beneficial. This is supported by Gassenheimer, Houston, and Davis's (1998) relationship retention model and their view that companies use principles of distributive justice to assess relationships.

Experience is another comparison standard that people rely on for evaluating their satisfaction (Garver and Flint 1995). If the companies are not familiar with each other, they will rely on their knowledge of other suppliers and industry norms, or industry experience, to evaluate performance. As the relationship grows closer or more intense and the parties become increasingly committed to each other, interpersonal norms based on experience with the firm are more likely to be used (Garver and Flint 1995).

Park and Choi (1998) support the usage of certain standards argued by Garver and Flint (1995). In their study, Park and Choi (1998) tested the influence of both experience and involvement on chosen comparison standards. They found that normative standards are more likely in high-involvement/high-experience situations, and ideals are more likely when experience is low. Therefore, we propose that the

relationship structure will influence the comparison standard(s) used in the evaluation of satisfaction. Companies with lower levels of relationship magnitude and type will rely more on needs, desires, ideals, and industry experience as comparison standards. In contrast, companies with a higher magnitude and type will rely more on firm experience and equity as comparison standards.

P1: The structure of the relationship influences the kinds or types of comparison standards used in the disconfirmation process.

Disconfirmation and Satisfaction

Disconfirmation is a result of the evaluation of the perceived performance against the comparison standard. If the perceived performance matches the comparison standard, confirmation occurs and satisfaction results. If perceived performance is higher (lower) than the comparison standard, disconfirmation occurs and the result will be feelings of high satisfaction (dissatisfaction).

Research has shown there is a negative relationship between comparison standards and evaluation. The higher the comparison standards, the more likely the evaluation will produce negative results (Patterson, Johnson and Spreng 1997; Cadotte, Woodruff and Jenkins 1987). Research has also shown there is a positive relationship between perceived performance and the evaluation. The higher the performance, the more likely the evaluation will produce positive results (Anderson and Sullivan 1993; Cadotte, Woodruff, and Jenkins 1987; Patterson, Johnson, and Spreng 1997; Spreng, MacKenzie, and Olshavsky 1996). As noted earlier, these relationships are recognized in our model.

Relationship Retention

Feelings of satisfaction by channel members have positive consequences for the relationship (Frazier 1983). The anticipated outcome of satisfaction includes intentions toward and behaviors of repeat purchase and loyalty (Reynolds and Beatty 1999). This view is

supported by Rusbult's (1983) study of interpersonal relationships, which found that satisfaction leads to committed, long-term relationships. It is further supported by Garver and Flint's (1995) position that satisfaction can be instrumental in moving relationships toward mutual dependence and solidification of the relationship. If customers experience feelings of satisfaction, the relationship is maintained.

Consistency theory indicates that a highly satisfied customer should exhibit greater attraction to the relationship (Frazier 1983). This is supported by Gassenheimer, Houston, and Davis (1998); they found that when dissatisfaction arose, relationships deteriorated or failed. Satisfaction research, however, has not adequately explored the role that feelings of high satisfaction plays as a motivator for interorganizational relationship retention.

How do customers' feelings of high satisfaction or dissatisfaction that arise from the disconfirmation process affect their intention toward retaining the relationship? Limited evidence suggests the potential of a non-linear linkage (Bitner 1990; Bloemer and Poiesz 1989; Broyles and Myers 2003; Grewal 1995; Kang 1990; Spreng and Olshavsky 1993). For example, feelings of satisfaction may not be sufficient to motivate relationship retention (Bloemer and Poiesz 1989; Oliva, Oliver and MacMillan 1992). This negative linkage appears to be further supported by findings that sometimes repeat purchasing occurs even when feelings of satisfaction do not occur (Bloemer and Poiesz 1989; Anderson and Sullivan 1993).

What causes this non-intuitive behavior to happen in business-to-business relationships? It may be that the structure of the relationship moderates the linkage between feelings of satisfaction and relationship retention. For example, when relationship magnitude and type are high, customers may want to maintain a relationship even when performance does not meet the standards of comparison. However, if relationship magnitude and type are low, anything less than feelings of high satisfaction may not motivate customers to remain in the relationship.

Reynolds and Beatty (1999) provided

additional insight into relationship retention when they found a link between the length of a relationship and salesperson loyalty. In addition, Hewitt, Money and Sharma (2002) studied the correlation between the quality of a business-to-business relationship and repurchase intentions. They found a positive association between buyers' perceptions of the quality of the relationship with sellers and their intentions to purchase from those sellers. Based on these various views and findings, we expect the structure of the relationship to moderate the intention toward relationship retention.

P2: Relationship structure moderates the strength of the linkage between feelings of satisfaction and the intention toward relationship retention.

Woodruff, Cadotte, and Jenkins (1983) posited that feelings of high satisfaction might reinforce the decision to use a brand. They stated that the "reinforcement can lead to maintenance or even strengthening of prior brand attitudes and intentions to use the brand again," (pg. 300). Similarly, each usage experience provides feedback to customers, potentially resulting in a change in the standards for subsequent interactions with a supplier (Oliver 1980; Schwartz 1992; Sheth 1968). Interestingly, this is supported by the opposite finding that while satisfied customers will have heightened standards for subsequent usage of a product or service, dissatisfied consumers that repeat usage of a product or service maintain the same standards for subsequent usage (Bloemer and Poiesz, 1989; Anderson and Sullivan, 1993).

The level of satisfaction and subsequent decision to retain a relationship will impact that relationship (Cullen, Johnson and Sakano, 2000; Lambert, Emmelhainz, and Gardner 1996). For example, if a firm experiences high satisfaction and therefore intends for the relationship to grow, the levels of relationship magnitude and type will increase. A similar, but opposite affect on structure will occur should the firm choose to end the relationship. So while the level of satisfaction and the intention to retain a relationship influence

comparison standards, they do so through the relationship structure (i.e., through both P3 and P1). Consequently, we propose the following.

P3: Intention toward relationship retention influences the relationship structure.

IMPLICATIONS FROM THE MODEL

Managerial Implications

Recently, supply chain relationships are increasingly acknowledged as a source of sustainable competitive advantage (Day 2000; Ganesan 1994). Yet, sustaining competitive advantage depends on maintaining these relationships, which will only occur if the companies are satisfied with their supply chain members' performances. While there has been a great deal of research on consumer satisfaction over the past 25 years, the application of these theories to business relationships in the supply chain has been limited. This paper attempted to integrate these two research areas to gain insight into the disconfirmation process in the business-to-business context and to begin understanding the impact of the structure of the relationship on this process.

Practitioners have much to gain from this research. If they can better understand the process their customers or suppliers go through to appraise satisfaction in a relationship, companies may be able to anticipate problems and better maintain the relationship. In addition, companies need to understand the dynamic nature of customers' choice of comparison standards so they can be better prepared to adjust to any changes in the standards. Supplier companies also may be able to influence their customers' comparison standards in order to improve the satisfaction of the relationship. Understanding the effect of the relationship structure on perceived performance and comparison standards will help companies decide what levels of relationship magnitude and type may be appropriate in certain situations. It is important to understand the effect of satisfaction and dissatisfaction on relationship success, both initially and over time. Knowing the implications

of the evaluation outcomes will better equip companies to improve their supply chain relationships in the hunt for competitive advantage.

Research Implications

The overall objective of this research is to understand and explain the influence of relationship structure on the disconfirmation process in the business-to-business context. This will pave the way for predicting which relationships will grow, which will be maintained, which will fail, and how companies can influence this outcome. Future research should verify the components of the model presented in this paper. The model should then be tested, followed by additional research in different contexts.

Incorporating relationship structure in the disconfirmation process enhances the understanding of the differences in interfirm relationships. Application of consumer satisfaction theories to the business-to-business context will open up new areas for research that will advance the knowledge of satisfaction in both contexts. Because these two contexts are very different, research identifying the differences would benefit any future research applying theories from one context to the other.

Both business-to-business relationships and satisfaction are important research areas because of the benefits companies can realize. Practitioners are trying to get their arms around these issues and look to research for guidance on how to succeed. Researchers can help minimize the "trial and error" that practitioners typically use in many areas by leading the knowledge development and dissemination in this integrated area. Some areas that should be pursued by researchers are discussed in the following sections.

Model Validation. The first step to validate the model would be to adapt existing or create new measures for each concept, including customer satisfaction. The nature of relationship structure is not yet fully understood. In order to measure this variable, a distinction must be made between the components of this construct and its

antecedents. Then each proposition can be restated to form operational hypotheses for empirical testing. We suggest conducting these tests in multiple supply chains from different industries to determine if the relationships are generalizable.

In addition, other adaptations of the model may be necessary. The evaluation process described in this article is the disconfirmation paradigm. Perhaps there are other theories that could contribute to this research. *Do other theories, such as means-end theory or transaction cost theory provide better explanations of these phenomena?* If applicable, the model may need to be extended or revised and retested.

Following validation of the model, additional questions about the constructs in the model and the propositions should be addressed. *What are the comparison standards used by companies at different relationship levels? When does customer satisfaction lead to relationship growth as opposed to maintenance or deterioration? How does a customer's desire to stay in a relationship affect a change in comparison standards or a reevaluation of satisfaction? Is the heightening of expectations limited to existing standards and/or the development of entirely new standards for subsequent usage?* Qualitative research methods have recently become more popular for investigating consumer behavior concepts such as satisfaction. Depth interviews or case studies with select companies may be the best way to begin this part of the research based on the nature of the questions.

There could be additional relationships among the constructs in the model as well. *Does the structure of the relationship affect the perception of product or service performance?* In personal relationships, higher levels of relationship type (e.g., marriage) often mean higher performance expectations of the other person in the relationship (Guerrero and Andersen 1994). The same may be true of business-to-business relationships. Customers in closer relationships may hold suppliers to stricter performance standards than those in a lower level of relationship and may be more critical when evaluating the performance. The opposite is also possible. For example,

because they have a close relationship, some customers may become biased and perceive their supplier's performance as higher than if they objectively evaluated the performance. Customers might occasionally tolerate a performance slip without it affecting the perception of performance, indicating that the higher the magnitude of the relationship, the higher the perceived performance. Survey research would be effective for testing alternative relationships in models.

New research is needed to expand the explanatory power of the model in Figure 1. Patterson, Johnson and Spreng (1997) include situational and individual variables as antecedents to expectations and performance in their customer satisfaction model. These types of variables should be explored. Our discussion also suggests looking for moderator variables, such as size of the companies, positions in the supply chain, length of relationship, or importance of the supplier or customer relationship.

Future Research on Business-to-Business Relationships. Companies are generally part of many supply chains. Often they are in different positions within varying supply chains, meaning they compete with their own suppliers and customers. Consequently, we need to know more about how satisfaction affects relationships across supply chains. *Do other relationships within the supply chain impact satisfaction evaluations? If a company competes against a customer, does that influence that customer's satisfaction with the company?* Also, as satisfaction affects the intention to maintain a relationship and thus the structure of a relationship, there may also be an influence on the stages of relationship development presented by Garver and Flint (1995). *Does high satisfaction in a relationship move firms through development stages faster than they would normally progress?* Finally, e-commerce affects supply chain structures and relationships through the connectivity possible among companies. The impact of this as well as any other different business environments should be explored.

SUMMARY

This paper attempts to initiate a stream of research applying the disconfirmation process to the business-to-business context. Research in this area has great implications for interfirm relationships. Understanding what leads to satisfaction and high satisfaction could aid the development of protocols and procedures for forming and maintaining relationships among firms. We propose accomplishing this by applying existing theory in consumer satisfaction to business-to-business relationships. Customer satisfaction is thought to help companies achieve a competitive advantage. In this age of supply chains competing with other supply chains, it is imperative for management to understand how to attain satisfaction and high satisfaction among the members.

Although some research has been conducted that integrates customer satisfaction research into business-to-business relationship research, additional research in this direction specifically in the area of relationship structure is needed. For example: *How does satisfaction affect the development of business-to-business relationships longitudinally? Does the feeling of satisfaction directly impact the levels of relationship magnitude or relationship type? Do varying levels of satisfaction impact the buying firms' commitment to the relationship with the supplying firm? Is the performance of the relationship affected by varying levels of satisfaction?* Building a model of business-to-business relationship structure that incorporates satisfaction would begin another stream of research that would be of significant importance.

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AN EFFORT MODEL OF FIRST-STAGE COMPLAINING BEHAVIOR

John W. Huppertz, Eric Mower and Associates

ABSTRACT

This paper introduces an integrative model of consumer complaining behavior, in which effort is posited as the critical determinant of consumer complaint voicing in first-stage CCB. The model builds on the theoretical and empirical literature in decision making and pre-purchase search effort. It is necessary to distinguish between first-stage and latter-stage complaining because a) most dissatisfied consumers still do not voice complaints despite the best efforts of practitioners who prefer to hear complaints voiced directly to them, b) latter-stage complainants have already identified themselves as dissatisfied by voicing complaints, and c) their behavior tends to be responsive to recovery attempts rather than to initial dissatisfying experiences. The Effort Model (EM) suggests that anticipated effort mediates the relationship between CCB and well-known antecedents such as product importance, assertiveness, attitude toward complaining, experience, and time constraints. It is suggested that firms can increase the proportion of consumers voicing complaints by taking actions to reduce the amount of effort required to complain.

INTRODUCTION

It has become widely accepted that customer retention must receive high priority on the agenda of firms' managers (Reichheld 1996a, 1996b; Reichheld and Sasser 1990). Reichheld (1996b) notes that on average U.S. corporations lose about half their customers every five years, and that the most profitable companies have the lowest rates of customer turnover. Of course, managers fear that if their customers become dissatisfied, they will defect to competitors. However, besides defection, customers have other means of responding to problems they encounter with products and services (Andreasen 1985; Bearden and Teel 1983; Best and Andreasen 1977; Singh 1988). They can choose to engage in negative word-of-mouth to friends and family; they can

voice complaints to the seller and seek redress; they can complain to outside authorities in an attempt to force the firm to redress their complaints; or they can simply do nothing and presumably make the best of it.

Of all these alternatives, many believe that it is in the firm's best interest to encourage customers to directly voice their complaints. Fornell and Wernerfelt (1987, 1988) show that by encouraging complaints, firms can guard against customer defections, thereby protecting or even enhancing market share while reducing customer acquisition costs. Complaining gives management an opportunity both to remedy specific problems that are episodic and limited to the individual customer, and to correct systemic problems that affect many individuals throughout the firm's customer base. Recognizing the critical importance of learning about problems, some firms have begun initiatives to prompt voicing by even mildly dissatisfied customers. Sheraton Hotels, for example, announced a program in which guests would receive cash payments for informing management about problems they encounter during their stays, and front-line employees are authorized to offer discounts, points, or other amenities to customers who complain (Paterik 2002).

Despite such programs, as well as a substantial amount of research in the CCB literature, surprisingly little progress has been made toward the goal of increasing the proportion of customers who voice complaints when they experience dissatisfaction. When Best and Andreasen (1977) and Day, Grabicke, Schaetzle, and Staubach (1981) published the first systematic investigations of customer complaining behavior, they found that only a small proportion of dissatisfied purchasers voiced complaints. Years later, studies of complaining behavior continued to report that few dissatisfied customers complain directly to the sellers. For example, a study by TARP showed that over 70% of the customers experiencing service failures did not complain (TARP, 1996). According to the TARP study, the

percent of customers who did not complain after experiencing dissatisfaction ranged from 58% for travel and leisure and 61% for financial services to 83% for consumer goods. More recently, Huppertz (2000) reported that although 30.9% of the patients in a healthcare setting experienced a service failure, the majority (66.4%) did not complain.

It is important to distinguish between genuine attempts by firms to encourage consumer complaints and less sincere verbalizations of opportunities to voice that hold little promise of redress. In some contexts, front-line employees of service providers prompt consumers to voice complaints as part of the service experience; for example, servers at a restaurant will almost invariably ask patrons questions like, "Everything OK here?" In such cases, they provide the consumer with an opportunity to complain, but if the answer comes back "No," it is far from certain that the service provider will do anything substantive to remedy the problem. Rather, these exchanges have become so routine that scripts have developed between consumers and service providers (Abelson 1981; Rook 1985), and few expect genuine complaints or remedies to result. In these contexts, consumers learn that they stand to gain little from complaining, so why bother?

Most of the research in the consumer complaining behavior literature has examined the responses of those who complain rather than those who do not. Complaining customers are easy to identify because they have already voiced their dissatisfaction and have attempted to achieve some resolution of their problems directly with the seller. The focus of these investigations has centered on the reactions of complainants to attempts by sellers to recover from their failures *after* they have learned of their complaints (Blodgett, Granbois, and Walters 1993; Blodgett, Hill, and Tax 1997; Maxham and Netemeyer 2002; McCollough, Berry, and Yadav 2000; Tax, Brown, and Chandrashekar 1998). Less easily identifiable are the "silent majority" of dissatisfied consumers who do not complain, but behave differently when they experience dissatisfaction. Such individuals represent the greatest risk to a firm at this first stage because managers cannot

remedy a problem if they have never learned about it (Fornell and Westbrook 1984; Keaveney 1995; Richins 1987).

Stages of Consumer Complaining Behavior

Several authors have proposed expanded models of the consumer complaining process, recognizing that in many instances complaining behavior involves multiple steps which may or may not result in favorable outcomes. Blodgett and Granbois (1992) suggested that dissatisfied consumers who voice their complaints initiate a dynamic process in which success or failure in attaining perceived justice early on determines whether and what kind of complaining behavior occurs over time. Failure to achieve redress after voicing a complaint directly to the seller sets the stage for future action, namely negative word-of-mouth, exit, or lodging a third-party complaint (Blodgett and Granbois 1992, p. 93).

By considering CCB as a dynamic process, the model proposed by Blodgett and Granbois creates the framework for considering CCB as a multi-stage event. However, they focus attention on the latter stages, *after* a dissatisfied customer has voiced his/her complaint directly to the seller. In several studies Blodgett and his colleagues demonstrated that perceived justice resulting from early-stage voicing significantly predicted the negative word-of-mouth and repurchase intentions of complaining consumers later on (cf. Blodgett, Granbois, and Walters 1993; Blodgett, Hill, and Tax 1997; Blodgett and Tax 1993). However, Boote (1998, p. 146) argues that the CCB process does not usually work in such a fashion, and that it is "a distortion of reality to simply suggest that voice comes first, and all other CCB types are dependent on perceptions of justice relating to it." It is necessary to examine all forms of CCB responses in first-stage as well as in latter-stage complaining. And a key issue remains unresolved: What happens at the first stage to cause a dissatisfied consumer to voice a complaint?

Though a substantial body of research has addressed the antecedents of first-stage complaining behavior, some gaps in our

knowledge remain. Regarding complainants, the literature has examined a variety of demographic, personality, situational, and attitudinal factors. After reviewing this literature, Morel, Poiesz, and Wilke (1997, p. 465) concluded that although researchers have found sets of variables to significantly predict consumer complaining behavior, "it is not clear which variables contribute to the prediction of (consumer complaining behavior) and which ones do not." Maute and Forrester (1993, p.224) postulate that such disappointing results are attributable to a largely atheoretical approach to the study of complaining behavior, causing researchers to examine "the effect of haphazardly chosen predictors."

This paper attempts to fill these voids in the literature by examining a neglected area of consumer complaining behavior: consumer effort. Building upon the theoretical and empirical work on the effort construct, we briefly review the pertinent literature on effort and extend it to complaining behavior. We examine the moderating effects of some key situational and individual difference variables that have been shown to influence complaining behavior, using them to propose a new effort-based model of CCB.

Consumer Effort

Simply put, it takes work to complain. In most cases, a dissatisfied customer must take the initiative to contact the seller (either by phone or in person), explain the problem, hope that the seller will accept the explanation, and arrange for an acceptable remedy. Not only does this require physical effort and time, but the consumer must also invest cognitive effort to decide whether or not to complain and how to go about it. Generally, cognitive effort can be broken down into smaller components known as elementary information processes (EIPs), which vary across several kinds of decision strategies for completing a choice task (Bettman, Johnson, and Payne 1990; Payne, Bettman, and Johnson 1993). Bettman and colleagues (1990) have demonstrated that the greater the number of EIPs a strategy requires, the

longer it takes a decision maker to process information and arrive at a conclusion. They have validated these measures against self-reports of effort expended on a variety of decision tasks using a variety of strategies.

The literature on pre-purchase search effort informs our understanding of the antecedents of consumer effort expenditures, and this research can be applied to consumer complaining situations. Beatty and Smith (1987) found relationships between external search effort and purchase involvement, attitudes toward shopping, time availability, and product class knowledge in a consumer electronics purchase context. Similarly, Clarke and Belk (1979) found that both product involvement and situational task importance increase anticipated purchase effort. These variables bear similarity to the antecedents of CCB in the complaining literature, and they are summarized in Table 1.

Table 1
Comparison of Search Effort Antecedents and CCB Antecedents

Factors Affecting Search Effort	Factors Affecting Complaining Effort
Purchase involvement	→ Product importance
Attitude toward shopping	→ Attitude toward complaining
Time availability	→ Time availability
Product class knowledge	→ Experience

Effort involves the expenditure of limited resources, such as time and processing capacity. The notion that people are "cognitive misers" (Fiske and Taylor 1984) implies that consumers will expend the minimum possible amount of effort to arrive at a satisfactory decision. For example, in a study of consumers' search for information about new products, Ozanne, Brucks, and Grewal (1992) found that when new products are very difficult to categorize, consumers attempt to manage their cognitive effort by limiting the amount of work they devote to searching for information about the products. That consumers choose to limit their expenditure of search effort

often results in less than optimal purchase decisions, prompting Garbarino and Edell (1997, p. 148) to conclude, "it is clear that people are willing to forgo some benefits to conserve cognitive effort."

The role of effort in consumer decision processes is not limited to pre-purchase search behavior. Soman (1998) demonstrated that effort has a significant effect on consumers' post-purchase decisions. In his study, subjects were presented with a choice task in which an advertised brand came with a rebate that required purchasers to travel to a store which was either ten or twenty miles away in order to redeem it. The level of post-purchase effort had no effect on brand choice, but the level of redemptions declined with increasing levels of required effort.

Effort in Complaining Behavior

Although the effort construct has been used extensively in research on pre-purchase search, purchase decision making, and consumption, effort has been neither explicitly defined nor systematically researched in a consumer complaining context. The effort construct has most often been incorporated into a perceived "cost-benefit" factor expected to influence consumers' decisions to voice complaints (Andreasen 1985; Day 1984; Fornell and Didow 1980; Richins 1979). Consumers are hypothesized to make a mental judgment of "worth it" versus "not worth it," based on their simultaneous assessment of the probability of success, the effort it takes to complain, and the value of the product involved. These three factors were first suggested by Hirschman (1970); however, the research to date has not systematically investigated the role of effort in the consumer's decision to voice a complaint.

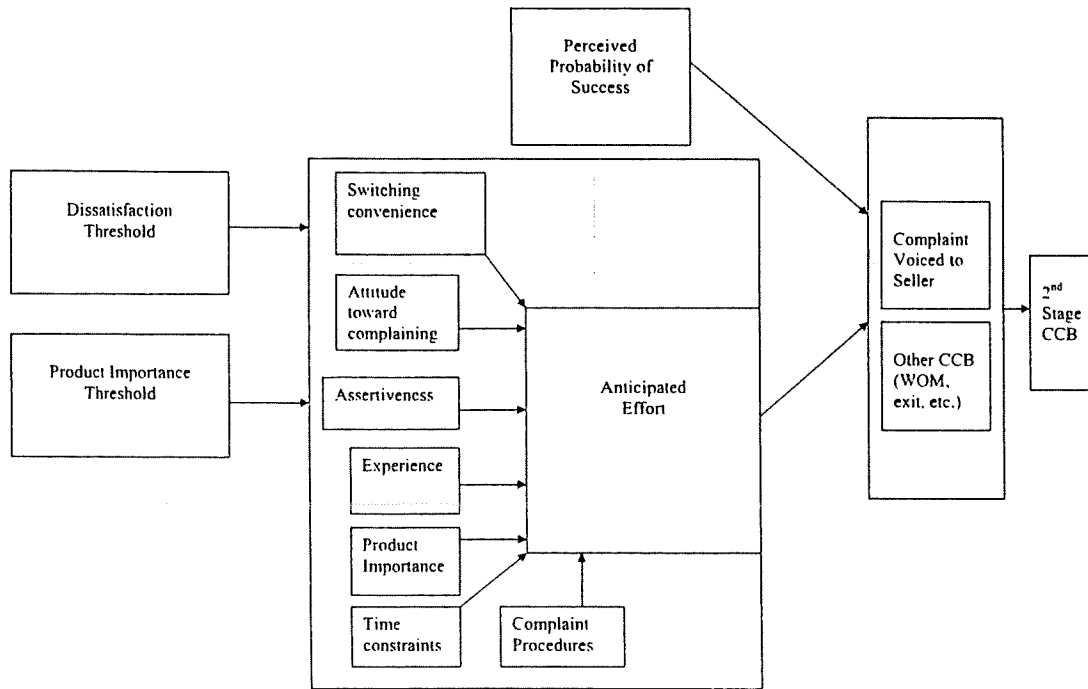
The cost of complaining has been included in some models of consumer complaining behavior. As Hirschman (1970) noted, the cost of voicing is greater than the cost of exit, and is often greater than the benefit to be gained from redress. Extending this logic, Richins (1982) created Guttman scales from consumers' alternative responses to dissatisfaction in an attempt to

measure complaining behavior along a single, quantitative interval scale. The behaviors ranged from mild (e.g., not leaving a tip at a restaurant) to extreme (writing a complaint letter to a business). Similarly, Bearden and Teel (1983, p.24) used a Guttman scale to "reflect increasing intensity of complaint actions." This approach seems to have been abandoned when further research demonstrated that behavioral responses to dissatisfaction are complex and multi-dimensional.

Nonetheless, the idea of trying to align various complaining behaviors along a one-dimensional scale is an intriguing one. On what premise did Richins (1982) and Bearden and Teel (1983) base their decisions to scale the different complaining behaviors? I maintain that disparate reactions to dissatisfaction could be scaled because all of them are related to the latent variable of effort. In fact, Richins (1983b, p. 70) ranked three alternative responses to dissatisfaction "a priori by the level of effort involved. Doing nothing, for instance, requires no effort or resources, while making a complaint often involves a great deal of effort and inconvenience. Telling others about the dissatisfaction requires a low to intermediate level of effort expenditure." Though intuitively logical, no empirical data has been offered to support these effort-based rankings of alternative responses to dissatisfaction. If, as Richins (1983b) suggests, complaining directly to the seller requires a great deal of effort compared to other behavioral responses, voicing should be relatively infrequent among dissatisfied customers – and it is infrequent. Anticipated effort should be considered a significant and powerful predictor of the consumer's decision whether or not to voice a complaint.

This analysis helps explain the problems that researchers have identified with current CCB models that focus on a single behavioral response to dissatisfaction. Singh (1988) showed that alternative complaining behaviors are in reality quite different from each other, and people choose one over the other depending on their own personal styles (preferences) and situational factors. However, Halstead (2002) and Boote (1998) maintain that multiple CCB actions can be taken in response to dissatisfaction, and that

Figure 1
Effort Model of First-Stage Complaining Behavior



limiting the investigation to one complaining behavior does not correspond to what happens in real life. They point out that people who voice complaints frequently engage in negative WOM as well. The effort framework postulates that the ease of engaging in negative WOM with friends and relatives makes this response likely to be added to complaints voiced to the seller. For example, very little effort is needed to include a recounting of problems with a retailer in the course of casual social conversation with a friend.

AN EFFORT MODEL OF CCB

The Effort Model (EM) is summarized in Figure 1. Because of its importance in the CCB process, the EM focuses solely on first-stage CCB. First-stage CCB is defined as the initial behavioral response(s) to dissatisfaction with a purchase or service encounter.

The EM builds upon the conceptual work by Blodgett and Granbois (1992) and Kowalski

(1996). A central contribution of these authors' models is the status they endow upon voicing. Complaining responses are grouped into two major categories: 1) voicing and 2) WOM/exit/other. The significance of this dichotomous definition of CCB should not be overlooked. Because firms need to hear about problems as soon after the dissatisfying episode as possible, encouraging voice complaints at the first stage is of critical importance. Although CCB researchers have expanded the concept of complaining behavior to include a variety of other responses, *the essential nature of complaining behavior is voice*.

The Effort Model presumes that dissatisfaction is a necessary but not sufficient condition for CCB to occur, and that the consumer has experienced a level of dissatisfaction high enough to initiate the various antecedents of CCB. That is, a "dissatisfaction threshold" exists (Day 1984; Kowalski 1996), and having crossed it, the consumer must decide what course of action to

pursue.

Product importance represents another threshold the consumer must cross before seriously considering complaint action. If a product or service is unimportant, it is unlikely that the consumer will entertain any thoughts of complaining about it. Just as Day (1984) suggested that a threshold may apply to intensity of dissatisfaction as a predictor of complaining behavior, a similar threshold applies to product importance. There are some products (both goods and services) that are important enough to complain about if something goes wrong, while others are not worth the trouble. Rather than considering product importance as a continuous variable that directly influences CCB, in the EM it is a discrete variable with two levels: worth complaining about versus not worth complaining about. The variables that have been shown to predict CCB are likely to have less impact on complaining if the product or service is unimportant. For example, assertiveness has been shown to correlate with voice (Richins 1983a; Slama and Celuch 1994); but even the most assertive person is unlikely to complain about a product he considers unimportant.

The EM represents a departure from previously articulated conceptualizations of the complaining decision process. Day (1984) postulated that the consumer's assertiveness and attitude toward complaining directly affect her decision to voice a complaint, as does her cost-benefit calculation. By contrast, in the EM framework, experience, assertiveness, and the consumer's attitude toward complaining influence her perception of the effort required to complain, which in turn affects her decision of whether or not to complain.

In addition, the EM departs from Blodgett and Granbois (1992) in that dissatisfaction completely mediates all attribution effects. Attribution of fault, controllability, and responsibility (Folkes 1984, 1988) affect the consumer's satisfaction/dissatisfaction judgments, but do not directly impact CCB. This is consistent with Boote's (1998) thesis that attributions influence whether the consumer crosses the threshold of dissatisfaction required for complaining. It is also

supported by Richins (1985) who found a significant path between attribution and level of dissatisfaction, but no significant direct link between attribution and complaint behavior. Thus, attribution-related variables have no place in the EM.

Note that the Effort specified in the EM refers to *perceived* effort, rather than a measure created from a weighted combination of individual elements, like the elementary information processes used by Bettman, Payne, and Johnson (1990) in their decision strategy experiments. EIPs work well in controlled laboratory studies using homogeneous subject populations, but in diverse consumer populations, the same action is likely to involve different levels of perceived effort. For example, Richins (1979, p. 52) observed that:

"Two consumers may both perceive it equally likely that registering a complaint will involve making a special trip to the retail store. For one consumer this might be a rather simple and routine matter. For the other, however, the presence of small children in the household, lack of convenient transportation, or a busy time schedule may make the trip especially costly or difficult."

It is important to separate measures of effort from such situational factors and individual differences. Payne, Bettman, and Johnson (1993) propose a simple scaled measure of perceived effort that they use to validate EIPs in laboratory experiments; we propose adapting this measure to the EM.

EFFORT MODEL INTERPRETATION OF CCB ANTECEDENTS

It is instructive to briefly address the principal antecedents of first-stage complaining from the CCB literature and discuss their role in the EM.

Switching Convenience

When consumers have a great deal of choice and switching is relatively easy, voicing

complaints is harder than simply switching brands, stores, or service providers (Fornell and Didow 1980). By contrast, when the customer's alternatives are limited, dissatisfaction does not usually prompt switching (Andreasen 1985; Gruen, Summers, and Acito 2000; Maute and Forrester 1993).

The customer who complains when alternative choices exist could be demonstrating loyalty by signaling the firm that something wrong needs fixing. In some respects, complaining behavior could be considered a form of loyalty, especially in markets where highly competitive conditions exist (Hirschman 1970).

Assertiveness and Attitude toward Complaining

Researchers have examined the effects of attitudinal and personality factors on consumer complaining behavior, including consumers' attitudes toward complaining (Best and Andreasen 1977; Halstead and Droge 1991; Richins 1982, 1987; Singh 1988) and their assertiveness (Fornell and Westbrook 1979; Richins 1983a; Singh 1990; Slama and Celuch 1994). In these streams of research, investigators have explored the hypotheses that the likelihood of complaining is significantly greater when the complainant is assertive and/or has a positive attitude toward the act. However, empirical findings have only weakly supported these hypotheses. For example, Fornell and Westbrook (1979) and Slama and Celuch (1994) report weak (though significant) relationships between measures of assertiveness and consumer complaining behavior. Likewise, Halstead and Droge (1991) found that attitudes toward complaining explain just 6% of the variance in consumers' complaint intentions. And Leary and Kowalski (1995) found mild negative correlations between measures of social anxiety and high-assertiveness confrontation behaviors, including complaining.

None of these studies has linked such attitudinal and personality characteristics to consumer effort. It takes more effort for an individual who is low in assertiveness to engage in a confrontation with a seller than it does for a

highly assertive person. Similarly, the higher likelihood of voicing by consumers who have positive attitudes toward complaining can be explained by the effort construct. Consumers with a positive attitude toward complaining find it easy to approach sellers whenever they are dissatisfied, while those with a negative attitude toward complaining will find it quite difficult to voice their grievances no matter how justified they may be. The EM predicts that these individual difference factors will influence the perceived effort required to complain.

Experience

Prior experience has also been shown to affect complaining behavior. Two kinds of experience have been investigated in the consumer complaining literature: a) marketplace participation or experience as buyers of goods and services, and b) prior experience complaining about dissatisfactory purchases. Generally, less experienced consumers are less likely to complain than those with more experience in the marketplace (Morel, Poiesz, and Wilke 1997). Marketplace experience has been proposed as an explanation for investigators' findings of small but significant correlations between socio-demographics and complaining behavior (Day, et al. 1981). Consumers with higher levels of education and more disposable income have been found to be more likely than others to voice complaints (Warland, Herrmann, and Willits 1975). The effects of demographics on voicing complaints is due to the greater levels of experience that wealthier and better-educated individuals enjoy as purchasers of goods and services (Gronhaug and Zaltman 1981).

In the EM framework, experience (both marketplace participation and prior experience voicing complaints) makes subsequent complaining less effortful. This view is supported by research on the effects of experience or familiarity on consumers' purchase decision processes. Generally, the more experience the consumer has with a seller or service provider, the easier it is to evaluate the seller's goods or services (Brucks 1985). Berry, Seiders, and

Grewal (2002, p. 11) conclude that "consumers who know where to go and what to do as participants in a service operation minimize wasted time and energy." This knowledge is learned by decision makers as they gain feedback about the difficulty of decision tasks they experience in a variety of settings (Fennema and Kleinmutz 1995). In addition, consumers learn how to participate in the co-production of services with service providers through experience and by organizational socialization initiatives by the firm (Kelley, Donnelly, and Skinner 1990). As they gain complaining experience, consumers learn how to minimize the effort required to voice complaints in various settings.

In addition, consumers who have more experience in the marketplace enjoy a greater level of comfort interacting with sellers, thereby lowering the amount of effort they perceive it will take to complain, and increasing the probability that they will complain.

Time Constraints

By exploring demographics of complainers vs. non-complainers, some of the earliest studies of CCB took into account individuals' personal circumstances that either facilitated or hindered their ability to voice complaints (e.g., Gronhaug 1977; Gronhaug and Zaltman 1981). For example, elderly consumers who have limited means of transportation will be less likely to complain simply because they cannot get to a store to return something they find dissatisfactory. Andreasen and Manning (1990) found that the incidence of voicing was extremely low among vulnerable consumers, whom they defined as challenged and/or disadvantaged sub-populations that have extraordinary difficulty seeking redress because of societal stigmata, discrimination, and inexperience. However, beyond these special sub-populations, research in this field has shown weak correlations between demographics and complaining behavior.

Few would argue that demographic sub-populations vary in the amount of time available for discretionary activities (Kolodinsky 1993, 1995). For example, a dual-career married couple

in their thirties with four children at home is more pressed for time than a single person in her mid-twenties living in an apartment. Time constraints prompt individuals to limit the amount of effort they invest in a variety of consumer problem-solving tasks (Garbarino and Edell 1997). The time available for voicing complaints is an overlooked component of the CCB decision process. For instance, Morel, et al. (1997) propose a triad model (motivation, capacity, and opportunity) to predict CCB; but their definition of "capacity" is limited to experience in the category investigated. In the EM *time constraints* formalize this aspect of capacity for voicing.

Note, however, that the perception of discretionary time is subjective (Marmorstein, Grewal, and Fishe 1992), so the absolute quantity of time available for discretionary activities will not be the best predictor of effort.

Complaining Procedures

Recognizing the importance of hearing about problems as soon as they occur, a number of firms have attempted to simplify their complaint handling processes and procedures, thus reducing the amount of time and effort dissatisfied consumers must invest in order to voice complaints.

Although firms use a variety of methods to mitigate the effort it takes to complain (Fornell and Wernerfelt 1988; Tax and Brown 1998), including toll-free telephone numbers, instructional literature with purchases, signs at the point of purchase or at point of service, and Internet websites, it is not clear whether these methods are sufficient to produce increases in the small percentage of consumers who complain. Kolodinsky (1993) found that enhanced customer service efforts (i.e., making it easier to access the firm's representatives) were marginally significant ($p < .10$) predictors of consumer complaining in a healthcare setting. However, Owens and Hausknecht (1999) found that by simplifying the complaint process, customers were significantly more likely to return complaint forms to the firm. Very little research has addressed this issue, and nothing from an effort perspective has been done.

If firms take more aggressive actions to simplify the complaint handling process, the EM framework predicts that complaints voiced directly to the firm will increase.

Perceived Probability of Success

The dissatisfied consumer's perceived likelihood of obtaining justice through voicing has long been recognized as an important determinant of CCB (Blodgett and Anderson 2000; Day 1984; Hirschman 1970; Landon 1977; Richins 1979). A dissatisfied customer's decision to voice a complaint rather than defecting to a competitor depends, in part, on her estimation of the probability of achieving a positive outcome: "...the decision whether to exit will often be taken *in the light of the prospects for the effective use of voice*. If customers are sufficiently convinced that voice will be effective, then they may well *postpone* exit" (Hirschman 1970, p.37, italics in the original). If a customer complains, she does so with the expectation that things will improve. Research findings in the CCB literature have supported this hypothesis, as perceptions of the likelihood of obtaining redress have been found to influence dissatisfied consumers' complaining behavior (Blodgett, Granbois and Walters 1993; Richins 1983b, 1985, 1987).

Much work remains to be done to understand the relationships between effort, perceived probability of success, and CCB. Landon (1977) simply noted that dissatisfied consumers perform a mental cost-benefit analysis. Day (1984) posited two independent variables, perceived costs of complaining and subjective probability that complaining will be successful, which would be combined along with knowledge/experience and significance of the consumption event (importance) in an analysis of alternatives. Yet, it is unclear whether probability of success and effort (i.e., perceived costs of complaining, in Day's framework) are truly independent: it stands to reason that a consumer who perceives that his complaint would be welcome by the seller would also believe he will need less effort to voice it. Until further research can clarify the relationships between these constructs, perceived probability of

success is included in the EM as a separate variable that directly influences the complaining decision along with perceived effort, and a dotted line represents the possible moderating or interactive relationship between the two.

DISCUSSION

In the EM framework, anticipated effort is posited as a critical determinant of complaining behavior. The effort construct has been widely used in pre-purchase search behavior, where studies have demonstrated links between consumer behavior and variables that bear remarkable similarity to well-known antecedents of CCB. In addition, the EM provides a theoretical foundation for research on CCB responses to dissatisfaction. The central contribution of this article is the formalization of effort in our understanding of the dissatisfied consumer's complaining decision process. Those who find it easier to complain are more likely to voice their complaints directly to a seller than are individuals who find it difficult, and effort is posited to mediate the relationship between attitudinal, situational, personality, and experience factors and the consumer's decision to complain.

The fact that effort is proposed as a mediating (as opposed to moderating) variable implies that anticipated effort plays a crucial role in dissatisfied consumers' decision making, one that has not been heretofore recognized. This contention is supported by research outside the CCB domain, which has demonstrated the key role of effort in a variety of contexts, including decision-making and job performance. For instance, researchers investigating the cognitive processes involved in choice decisions have consistently found that decision makers appear to trade off accuracy for effort (Creyer and Ross 1993; Fennema and Kleinmutz 1995; Garbarino and Edell 1997; Josephs and Hahn 1995; Johnson and Payne 1985). People are willing to settle for less than ideal decisions to conserve effort, especially when the outcome is uncertain. In a series of studies of salespersons' job performance, Brown and colleagues (Brown and Leigh 1996; VandeWalle, Brown, Cron, and Slocum 1999)

found that effort fully mediated the effects of situational, attitudinal and individual differences factors. Time and again, effort (both expended and anticipated) has been found to play a mediating role in explaining behaviors that involve judgment and decisions about tasks. These studies are relevant to CCB because a dissatisfied consumer's decision to voice a complaint is a task whose outcome is uncertain and involves work. Applying the findings to consumer complaining, we predict that effort will mediate the relationship between CCB and attitudinal, situational, and individual differences antecedents. Empirical research is needed to test these proposed relationships.

Two other studies by Richins (1979; 1982) help support the thesis that effort should be considered a mediating as opposed to a moderating variable. Richins (1979) found moderate levels of relationship between the costs and benefits of complaining and actual consumer complaining behavior. Though other antecedents such as attitude toward complaining and assertiveness were not included in the study, several items considered "costs" have been used in subsequent studies to measure these constructs. For example, Richins (1979) included "Be considered too much of a complainer" and "Would feel guilty about complaining" in her measures of costs. Similar items have appeared in studies of the effects of attitudes toward complaining and assertiveness. Separating these items from measures such as "Special trip to store to complain" and "Time and effort to fill out forms" would make a significant contribution toward understanding the relative contribution of effort (versus attitudes toward complaining and individual differences) to the understanding of the decision to complain. Further insight is provided by Richins (1982) who found attitudes toward complaining accounted for about 14% to 18% of the variance in self-reported CCB. However, the fact that CCB had been measured using a Guttman scale of various complaining responses (to reflect varying levels of effortful actions) suggests that the latent variable effort may have influenced the reported relationships.

Finally, Kowalski (1996, p. 180) proposed a

model of complaining behavior that included "Assessment of Utility of Complaining" as a mediating variable between dissatisfaction, self-focus (an individual differences variable), and the decision whether or not to complain. No other antecedents were included. Although no data were presented, this model assigns great importance to the construct of effort, which is included in a cost-benefit perception and labeled "Utility."

There are several important implications of the EM conceptualization of complaining behavior. If perceived effort is shown to affect the customer's decision of whether or not to voice a complaint, the question arises as to whether deliberately reducing that level of effort will generate higher levels of voicing behavior. Can firms initiate programs or mechanisms that effectively reduce the dissatisfied customer's perceived level of effort enough so that he/she will be more likely to voice a complaint? Can the firm increase the number of voiced complaints from non-assertive and complaint-averse customers by reducing the effort they must expend?

The notion that reducing consumer effort will result in positive outcomes for the firm is supported by Smith, Bolton, and Wagner (1999), who found that when the firm *initiated* service recovery without the customer having to complain about a service failure, consumers reacted in a positive manner. The subjects in their study rated all three justice dimensions (distributive justice, procedural justice, and interactional justice) of the firm's response to service failures more favorably when the firm initiated service recovery. When consumers do not have to initiate voice complaints about service failure, the amount of effort they must expend is greatly reduced. By initiating more aggressive steps to reduce the effort it takes to complain, we posit that firms can reduce or even eliminate the customer's need to invest more resources into the exchange by complaining, thereby helping to bring about a perception of fairness to the relationship. Empirical research is needed to validate these hypotheses.

To the extent that different complaining behaviors require varying amounts of effort and can be so arrayed (Bearden and Teel 1983,

Richins 1982), it is possible for the EM to be expanded to enhance the prediction of these behaviors. For instance, if negative WOM lies between complaining and doing nothing, a moderate amount of anticipated effort may be associated with WOM. Further research can uncover such links, and empirical data is needed to examine these relationships.

Future research should also explore the possibility of interactions among the constructs in the EM, which are posited to be independent at present. For example, the EM predicts that if firms reduce the obstacles to complaining, complaints voiced directly to the firm will increase. To the extent that consumers are reluctant to complain because they are either not assertive, or because they hold negative attitudes toward the act of complaining, more aggressive actions by the firm to reduce effort may encourage these individuals to voice complaints more than their assertive, experienced counterparts. Assertive, experienced consumers who have a positive attitude toward complaining have little difficulty voicing their complaints, so we would expect them to complain regardless of actions by the firm to make complaining easier. These relationships should be explored with empirical data.

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SITUATIONAL CHARACTERISTICS AS MODERATORS OF THE SATISFACTION-LOYALTY LINK: AN INVESTIGATION IN A BUSINESS-TO-BUSINESS CONTEXT

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ABSTRACT

This paper researches moderating effects of the customer satisfaction-loyalty link with specific regards to situational characteristics. We develop hypotheses about moderating effects of perceived product importance, purchase uncertainty, switching costs and relationship duration and test them in an empirical study, using data from 425 business customers of a major European energy provider. The results of a multi-group causal analysis indicate that it is important to consider the effect of customer satisfaction on customer loyalty separately for each of the loyalty dimensions, as it is shown that the relationship is moderated by different factors for different loyalty dimensions. In substance, the results suggest that strategies for enhancing word of mouth and reinforcement behavior should focus on different customer groups than those for enhancing price resistance.

INTRODUCTION

Customer loyalty has been subject to a number of investigations in the last decade (e.g., Anderson and Sullivan 1993; Fornell et al. 1996). The rationale behind this stream of research is that firms that achieve higher loyalty levels should be more successful in the marketplace due to retained customers' word of mouth, higher price tolerance and cross- and up-buying (Reichheld and Sasser 1990). Therefore, much research has been directed at identifying the drivers of customer loyalty (e.g., Keaveney 1995; Mittal and Kamakura 2001).

There is wide agreement that customer satisfaction is a key factor in determining a customer's loyalty level (e.g., Anderson and Mittal 2000; Bloemer and Kasper 1995; Mittal, Ross and Baldasare 1998). However, it has been noted that the link between satisfaction and loyalty is not straightforward (Anderson and Mittal 2000;

Dick and Basu 1994) and that more research is needed to understand the asymmetries (Mittal, Ross and Baldasare 1998), non-linearities (Anderson and Mittal 2000; Jones and Sasser 1995) and moderating characteristics (Homburg and Giering 2001) of the relationship.

This paper attempts to shed light on one of those aspects, namely, the effect of moderating characteristics. In particular, a moderating role of product importance, purchase uncertainty, perceived switching costs and the duration of the customer relationship is researched. A moderating role of certain variables on the satisfaction-loyalty link has implications for market segmentation and prioritization of customer groups - in short, if the strength of the relationship between satisfaction and loyalty differed with respect to certain characteristics, customer groups could be segmented based on those variables. Subsequently, groups for which the relationship between satisfaction and loyalty is stronger could primarily be targeted with satisfaction programs, because prospective returns on satisfaction improvement are higher (Mittal and Kamakura 2001).

While a few studies investigating moderating effects of satisfaction on loyalty have been conducted (Bloemer and Kasper 1995; Mittal and Kamakura 2001; Oliva, Oliver and MacMillan 1992), more research has been called for (e.g., Anderson and Mittal 2000; Homburg and Giering 2001). Specifically, past research is restricted to moderating effects of buyer-related variables, such as age and gender (Homburg and Giering 2001; Mittal and Kamakura 2001) or involvement (Oliva, Oliver and MacMillan 1992; Bloemer and Kasper 1995). In contrast, effects of situational characteristics have been widely neglected (one limited exception is de Ruyter, Wetzels and Bloemer 1998). Further, no research is known that investigates the relationship in a business-to-business setting.

This paper aims at contributing to research on moderating effects of the satisfaction-loyalty link. Its remainder is organized as follows. First, we briefly review the literature regarding the link between the two key concepts of our work, customer satisfaction and customer loyalty. Next, we develop a theoretically based model of the moderating effects of perceived product-category level variables on the satisfaction-loyalty link. In particular, we investigate the role of product importance (Bunn 1993), purchase uncertainty (Spekman and Stern 1979), perceived switching costs (de Ruyter, Wetzels and Bloemer 1998; Nielson 1996) and the duration of the customer relationship (Bolton 1998). Hypotheses are tested in an empirical study in a business-to-business context.

THE DIRECT LINK BETWEEN CUSTOMER SATISFACTION AND LOYALTY

In recent years, it is more and more common in the marketing literature to view loyalty as an attitude, or at least as an attitude-like construct (Dick and Basu 1994; Jacoby and Chestnut 1978; Oliver 1999). Oliver (1997) defines customer loyalty as a "deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior" (p.392).

Social exchange theory (Blau 1964; Thibaut and Kelley 1959) has been identified as a useful theoretical basis for explaining customer loyalty. According to social exchange theory, exit or maintenance of exchange relationships depends upon future expectations regarding costs and benefits of the relationship, weighted against the expected benefits of alternative relationships (Thibaut and Kelley 1959). In short, in the event that an individual or an organization has multiple options, it will choose the most beneficial relationship, and it will remain as long in a relationship as expectations regarding costs and benefits regarding the current relationship (E) surpass a certain threshold, the so-called comparison level of alternatives (CL_{Alt}).

Expectations regarding future costs and benefits are mainly influenced by prior experiences in the relationship. Thibaut and Kelley (1959) suggest that satisfaction judgments are nothing else but the cumulated prior experiences in the relationship – a proposition that is consistent with a relationship (i.e., long term) rather than a transactional (i.e., one-time) view on customer satisfaction. While research during the 1980s has emphasized that customer satisfaction reflects the assessment of a one-time experience, the relationship satisfaction view receives more and more support in the literature (e.g., Dwyer, Schurr and Oh 1987). Consistent with this view, we define customer satisfaction as the outcome of a comparison between expected and perceived performance throughout the customer relationship.

Expectations regarding costs and benefits of the relationship mainly depend on past experience, and satisfying experiences increase the motivation to remain in the relationship (Thibaut and Kelley 1959). Therefore, a positive relationship between customer satisfaction and customer loyalty is in accordance with social exchange theory. The intuitive assumption of a positive effect of customer satisfaction on customer loyalty has been verified in numerous empirical studies (e.g., Anderson and Sullivan 1993; Fornell et al. 1996). For the present paper, this assumption forms the basis of our analysis, because a moderating role of a number of variables on this relationship is investigated. We therefore propose the basic hypothesis that

H₁: The more satisfied a customer is, the higher her/his loyalty will be.

SITUATIONAL CHARACTERISTICS AS MODERATORS OF THE SATISFACTION- LOYALTY LINK

As described before, research on moderating characteristics of the relationship between satisfaction and loyalty has so far been limited. This is especially true for research on the role of situational characteristics as moderators of the relationship between satisfaction and loyalty, and the literature remains silent on aspects of the

relationship in a business-to-business context.

According to Anderson and Mittal (2000), there should be no principal difference with regards to the satisfaction-loyalty link between the business-to-consumer and a business-to-business context (at least, it may be added, as long as a single person and not a buying center is involved on the client side). However, this may only be partially true when investigating situational variables, because research suggests that industrial buying and satisfaction judgments are influenced by a number of variables that have not been found to be very relevant in consumer decision making and vice versa (e.g., Bunn 1993; Patterson, Johnson and Spreng 1997). Subsequently, we examine four situational characteristics, product importance, purchase uncertainty, switching costs and duration of the customer-firm relationship, as potential moderators of the satisfaction-loyalty link. The first three variables have been selected because they have been found to be important determinants of industrial buyers' purchasing and loyalty behaviors (Bunn 1993; Bunn and Liu 1996; Spekman and Stern 1979; Williamson 1981), and have therefore been suggested as segmentation variables for industrial buyers already. Duration of the customer relationship is a situational characteristic that has been shown to be an important determinant of the satisfaction—loyalty link in a business-to-consumer context already (Bolton 1998), and is a characteristic that is easy to trace for managers. Research findings about a moderating effect of the four mentioned variables on the satisfaction-loyalty link would therefore not only add to academic knowledge, but also be likely to have potential managerial significance, as customers could be segmented and targeted according to those characteristics. Next, we will develop specific hypotheses about their role in moderating the satisfaction-loyalty link.

Product Importance

Product importance is "the buyer's perception of the significance of the buying decision and/or the potential impact of the purchase on the functioning of the firm" (Bunn 1993, p.43).

Similar to the consumer research construct of involvement, perceived product importance is an important determinant for the choice process or heuristics that will be applied in a purchase decision (McQuiston 1989).

In short, when a product is perceived as highly important, business decision makers will engage in more information search activities, and, consequently, be better informed about the product. They will spend more time on making decisions and consider a greater variety of alternatives. Further, they will rethink the quality or the "goodness" of their choice more often and will observe purchase outcomes more carefully than in low-importance cases, which in turn makes it more likely that they will detect even small differences between expectations and performance. Because both positive and negative consequences of such differences are perceived as more critical when product importance is high, the motivation to terminate an unsatisfactory relationship will be high. On the other hand, when the performance surpasses expectations and positive disconfirmation occurs, the motivation to stay with the provider in this critical product category will be strengthened. Hence, customers will react more strongly to satisfactions changes, which means that under high product importance conditions the relationship between satisfaction and loyalty is stronger.

H₂: The relationship between satisfaction and loyalty is stronger when perceived purchase importance is high.

Purchase Uncertainty

Purchase uncertainty is defined as "the buyer's perceived lack of information relevant to a decision situation" (Bunn 1993, p.44). It has been found to be a key aspect of industrial buying behavior (Spekman and Stern 1979).

For a customer to develop the deep commitment described by Oliver (1999), a relatively high degree of certainty about the quality of a provider is required. For example, the intention to give word-of-mouth means that the customer is ready to make a public commitment to

the provider, which is associated with an inherent risk to give wrong advice, and in part also because receivers of referrals might hold the source responsible for false or incomplete information (Gatignon and Robertson 1986). Also, to resist strong marketing efforts and aggressive price tactics requires that the customer is certain about the superiority of her provider as compared to competitors. Therefore, customer loyalty will increase only slightly even in the presence of a relatively high degree of customer satisfaction when purchase uncertainty is high. At the same time, switching intentions in the presence of dissatisfaction may also be inhibited when uncertainty is high, because it is more difficult to evaluate the attractiveness of alternatives, and decision makers cannot be sure whether other providers will be able to provide better service. In sum, this suggests that the relationship between customer satisfaction and loyalty is significantly weaker when purchase uncertainty is high.

It is therefore hypothesized that

H₃: The relationship between satisfaction and loyalty is weaker when perceived purchase uncertainty is high.

Switching Costs

The concept of switching costs is theoretically backed by both social psychological exchange theory (e.g., Blau 1964) and newer institutional economics (Williamson 1975). Both approaches highlight that exchange relationships depend to a large extent on the investments made by both parties that are specifically devoted to it. These investments can be described as "the value of specific capital that, in other uses is, by definition, much smaller than the specialized use for which it has been intended" (Williamson 1981, p.555).

From both a customer's and a provider's perspective, having made a specific investment creates switching costs, which are the investment actions that inhibit changing suppliers or customers (Nielson 1996). A number of different types of switching costs can be considered: for example, Heide and Weiss (1995) show that in high technology markets, switching costs can arise

from incompatibility of an installed product or service system (e.g., software) with competing offers. However, in this research we are only concerned with time and hassle as potential sources of switching costs. Time costs evolve because of the time-consuming nature of a search process for a new provider, while hassle refers to the psychic costs of a provider change, including the termination of the relationship with the old transaction partner.

By definition, high switching costs imply that switching is strongly inhibited by past transaction-specific investments. In that case customer loyalty becomes more independent of satisfaction judgments. In other words, high switching costs will eventually outweigh the perceived switching benefits arising from dissatisfaction (Jones, Mothersbaugh and Beatty 2000). For example, price increases will not directly translate into lower loyalty, but will be weighed against those investments, and the relationship between satisfaction and loyalty is weakened. In a consumer setting, the moderating effect of switching costs on the satisfaction-loyalty link has already been confirmed (de Ruyter, Wetzels and Bloemer 1998; Jones, Mothersbaugh and Beatty 2000). Therefore, we propose that

H₄: The relationship between satisfaction and loyalty is weaker when switching costs are high.

Duration of Customer Relationship

The duration of a customer's relationship with a provider may be seen as an indicator of customer loyalty. In the present study, however, customer loyalty is only viewed as an attitudinal construct, whereas duration is being viewed as a behavioral variable that is independent of attitudinal loyalty. Hence, both long-term or short-term customers may be attitudinally loyal. This distinction may seem problematic at first, but makes sense for the present research since the subsequently presented empirical study deals with a market that has only recently been liberalized. Thus, there may be a large number of long-term customers that are not necessarily attitudinally loyal.

A number of studies show that customers recently acquired from other providers ("new customers") differ from those who have for long been a client of their company ("old customers") with respect to a number of aspects (Bolton 1998; Mittal and Katrichis 2000; Richins and Bloch 1986). First, in forming satisfaction judgments, new customers are focusing on different attributes than old customers. Next, new customers' behaviors are strongly driven by the "newness" of the situation (i.e., the relationship with the provider) while old customers can rely on past experiences (Richins and Bloch 1986). Also, it can be argued that new customers' satisfaction judgments are more transactional, while old customers satisfaction judgments are more relational (Dwyer, Schurr and Oh 1987). Lastly, the satisfaction-retention link has been found to be stronger for old than for new customers (Bolton 1998). These differences, in sum, suggest that also the relationships between satisfaction and loyalty should be different for both groups.

For newly acquired customers, some manifestation of customer loyalty, such as the willingness to disseminate positive WOM, has been shown to occur relatively independent of satisfaction levels, due to the situational involvement of a recent purchase (Richins and Bloch 1986) or to serve the purpose of reducing post-purchase dissonance (Festinger 1957). Hence, loyalty should depend more on satisfaction for long term than for short term customers. Further, it will take some time and cumulative rather than one-time satisfying experiences to build up such a strong commitment to a relationship that satisfaction translates into loyalty. Likewise, Bolton (1998) argues that for long term customer relationships, cumulative experiences with a provider should have more weight than for short term relationships. She shows that satisfaction is a better predictor of retention for long term than for short term customers. Therefore, the relationship between satisfaction and passive loyalty will be stronger for old than for new customers. Hence, we expect that

H₅: The relationship between satisfaction and loyalty is stronger for old than for new

customers.

RESEARCH METHOD

Research Design and Data Collection

For testing the developed hypotheses, an empirical study was conducted. The German market for industrial energy provision represented the chosen industry because (a) energy provision constitutes a service that every company has to use, (b) exploratory interviews revealed that buying decisions are being made and reviewed by a single person in this industry and (c) the relatively recent liberalization of the German energy market should have raised the general market involvement, thus increasing the salience of the topic of loyalty and/or switching behavior in the mind of customers and potentially the likelihood to participate in the study.

Trained interviewers conducted the survey via telephone. The sample was randomly drawn from a large database of German companies ("Hoppenstedt"). In total, the interviewers made calls to 5724 companies. 3131 calls resulted in either no answer or a busy signal even after three calls. 2168 potential respondents refused to participate in the study. 425 interviews were completed. Because of missing values or contradictory answers, seven cases had to be removed from the data set, resulting in 418 usable questionnaires.

Measurement of Constructs

For measurement of the latent constructs, we used scales from previous research. Customer satisfaction and loyalty have been conceptualized and measured in a large number of earlier studies. In this research, we used a six-item instrument for measuring customer satisfaction and a six-item instrument for measuring customer loyalty. Both instruments consisted of items that had been used in previous studies (e.g., Fornell et al. 1996; Ganesh, Arnold and Reynolds 2000; Homburg and Giering 2001; Rust and Zahorik 1993).

For measuring product importance, purchase uncertainty and switching costs, items used in

previous studies (Bunn 1993; de Ruyter, Wetzels and Bloemer 1998; Nielson 1996) were modified for the present purpose. All three constructs were measured using 3-item instruments. Finally, whether the respondent was a new or an old customer of his provider was measured using a dichotomous, 1-Item measure, indicating whether the company had switched its provider after the market liberalization.

To test the quality of our measures, we conducted exploratory and confirmatory factor analysis and computed coefficient alpha for the final instruments. For customer satisfaction, the exploratory factor analysis revealed a clear 1-factor solution. The average explained variance of this factor was 58%, and coefficient alpha of .85 indicated good reliability for the instrument (Nunnally 1978).

Factor analysis for the loyalty construct revealed a two-factor solution. However, one item did not load highly on any of the two dimensions and was therefore eliminated from further analysis. The remaining five items showed a similar loading structure as in the study by Ganesh, Arnold and Reynolds (2000). In accordance with these authors, we name the first factor active loyalty, as the items pertain to active behavioral intentions such as the willingness to stay in the relationship or recommend the provider to other customers. The second dimension describes behavior in response to competitive action, such as reactions to relative price changes, and is therefore named passive loyalty. Ganesh, Arnold and Reynold (2000) find that those two dimensions are relatively independent of each other, and relate to attitudinally different aspects of the loyalty construct: while active loyalty is a relatively static construct that reflects an assessment of the client-provider relationship, the passive loyalty dimension reflects a more dynamic and comparative perspective on the provider in view of potential market reactions such as competitor's price drops. Alphas equaled .80 for active and .72 for passive loyalty, which can be interpreted as satisfactory (Nunnally 1978).

The instruments for measuring product importance and purchase uncertainty showed high internal consistency (alphas .75, .73, respectively).

For the switching costs instrument, one item had to be removed due to low item to total correlation, and the remaining two items showed good reliability (alpha .84). The use of confirmatory factor analysis for our latent variables produced similar results. In particular, the two-dimensional factor structure for the loyalty items was confirmed. The items used for measuring our latent constructs and key statistical information are listed in table 1.

In order to test for discriminant validity, we applied the Fornell/Larker criterion (Fornell and Larker 1981), which requires that none of the factors among our latent variables should have a higher squared correlation coefficient with any other variable than the average variance explained by the factor. In table 2, we display the correlation matrix and level of significance of our latent constructs (upper non-diagonal elements), as well as the squared correlation coefficients (lower non-diagonal elements). It can be seen that none of the squared correlation coefficients exceed 0.25, while the lowest average variance explained by a factor is .58 (customer satisfaction). Hence, we conclude that discriminant validity is given.

RESULTS

To test our hypotheses, a structural equation model was computed using LISREL 8.53. First, for testing H_1 , the direct relationship between satisfaction and loyalty, we estimated a model including the customer satisfaction construct and the two loyalty dimensions. Then, we used multi-group causal analysis to test the our hypotheses regarding the moderating influences in our model.

For assessing the overall fit of the model, the most frequent fit indices are reported (e.g., Bagozzi and Yi 1988). In particular, we address chi-squared, χ^2 / df , GFI (Goodness-of-Fit), AGFI (Adjusted Goodness-of-Fit) and RMSEA (root-mean-square error of approximation). The χ^2 / df statistics for our model is 2.32 and therefore below the recommended 2.5. While RMSEA should not exceed .08, we obtained .06. Finally, GFI und AGFI should reach at least .9, and these criteria were also fulfilled by our model (GFI: .95; AGFI: .91). Overall, our measures indicate a good fit,

Table 1
Latent Variable Measures

Factor	Item	Av. Expl. Variance	Cronbach Alpha	Item-to-total
Sat	The relationship with our provider fully matches our expectations.			.78
Sat	We are pleased with the relationship with our provider.			.48
Sat	I am satisfied with our current provider.			.63
Sat	There is nothing negative we can say about our provider.			.63
Sat	I am not convinced of our current provider.*			.74
Sat	My provider does not fulfill our expectations.*	.58	.85	.55
Aloy	I would recommend this provider to other companies.			.68
Aloy	If I had to choose again today, I would select the same provider.			.63
Aloy	We will continue the relationship with this provider.	.72	.80	.63
Ploy	If our provider were to increase prices, we would still stay.			.56
Ploy	If another provider offered a cheaper rate, we would switch.*	.78	.72	.56
PU	Choosing an energy provider is a difficult decision.			.61
PU	It is difficult to judge the quality of an energy provider.			.52
PU	It is not easy to decide between providers.	.79	.73	.56
PI	One should be very careful when choosing an energy provider.			.60
PI	The choice of an energy provider is an important decision.			.60
PI	We take the decision of choosing an energy provider very seriously.	.80	.75	.60
SC	Switching an energy provider costs a lot of time and money.			.74
SC	A lot of hassle is involved when switching a provider.	.87	.84	.74

Sat = Satisfaction; Aloy = Active Loyalty; Ploy = Passive Loyalty

PU = Purchase Uncertainty; PI = Product Importance; SC = Switching Costs

*= Reversed scaled

Table 2
Correlations, Level of Significance and Squared Correlations of Latent Constructs*

	Satisfaction	Active Loyalty	Passive Loyalty	Purchase Uncertainty	Product Importance	Switching Costs
Satisfaction		.50 (.00)	.33 (.00)	.04 (.50)	.15 (.00)	-.13 (.01)
Active Loyalty	.25		.35 (.00)	-.04 (.40)	.07 (.17)	-.11 (.02)
Passive Loyalty	.11	.13		.00 (.96)	.07 (.17)	-.01 (.89)
Purchase Uncertainty	.00	.00	.00		.31 (.00)	.33 (.00)
Product Importance	.02	.00	.02	.10		.01 (.81)
Switching Costs	.02	.01	.00	.11	.00	

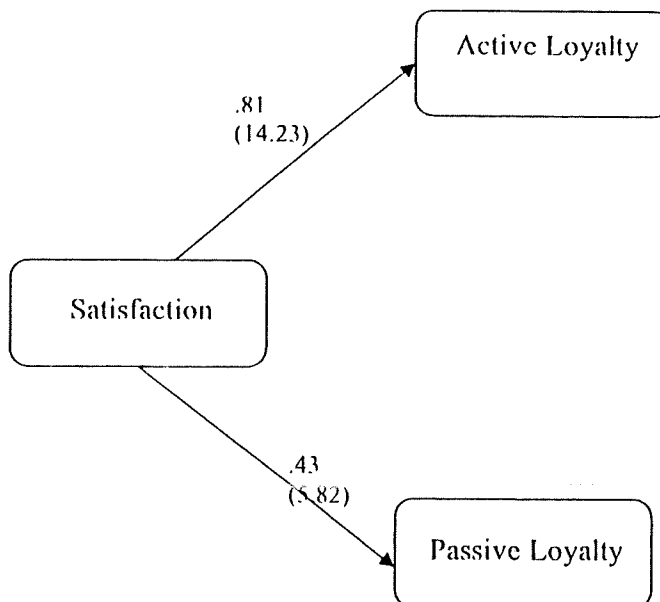
* Correlation coefficients and p-values are displayed on the upper diagonal. Squared correlation coefficients are displayed on the lower diagonal

with all indices better than the recommended values (e.g., Bagozzi and Yi 1988).

Figure 1 shows the parameter estimates of the model based on the full data set. It can be seen

that hypothesis H_1 receives strong support. Satisfaction exhibits positive, statistically significant influence on both types of loyalty ($\gamma_a = .82, t = 14.23, \gamma_p = .45, t = 5.82$ for active and for

Figure 1
Direct Effects of Customer Satisfaction on Loyalty Dimensions



passive loyalty, respectively).

To test the hypotheses regarding the moderating variables, we used multi-group causal analysis, as suggested by Jöreskog and Sörbom (1993). This technique has been applied for researching moderating effects of satisfaction on loyalty by, e.g., Homburg and Giering (2001), and is typically conducted in four steps:

First, for all latent variables, we split the data set into two groups by performing a median-split. As a result, one group contained the customers that scored high on the respective variable, while the other group consisted of those customers who scored low (for the variable “new vs. old client”, the splitting mechanism was given by our 1-item dichotomous instrument). Second, a path model is estimated for the respective sub-samples, in which all paths in the model (i.e., the two paths from satisfaction to active and passive loyalty) are restricted to be equal between the two groups. Results of this model are similar to the model depicted in figure 1 (there are hardly differences in the parameter estimates, but substantial differences in the fit indices only, as the model is

now estimated from two rather than one covariance matrix). Third, the same path model is estimated in which the path from satisfaction to one of the two loyalty dimensions is allowed to vary between the two groups. This model has one degree of freedom less, because there is one more path to be estimated. In order to determine a moderating influence, in the fourth step attention is drawn to the difference in chi-squared of the two models. A positive moderating influence of a variable is confirmed if (a) the path from satisfaction to the respective loyalty dimension is higher for the group which scores higher on this variable and (b) the drop in chi-squared between the restricted and the unrestricted model with one degree of freedom less (due to the additional path to be estimated) is statistically significant.

In table 3, we display the results of the test regarding the moderating effects. It can be seen that H_2 receives partial support. The relationship between satisfaction and active loyalty is stronger when product importance is high, but no statistically significant difference can be found for passive loyalty. H_3 is also partially confirmed.

Table 3
Results of Multi-Group Analysis

Product Importance			
	High	Low	$\Delta\chi^2$
Active Loyalty	.86	.69	4.31**
Passive Loyalty	.47	.53	.01
Purchase Uncertainty			
	High	Low	$\Delta\chi^2$
Active Loyalty	.78	.74	.23
Passive Loyalty	.35	.57	3.33*
Switching Costs			
	High	Low	$\Delta\chi^2$
Active Loyalty	.73	.87	3.32*
Passive Loyalty	.45	.47	.17
Duration of Customer Relationship			
	New Customer	Old Customer	$\Delta\chi^2$
Active Loyalty	.67	.82	3.18*
Passive Loyalty	.29	.55	4.52**

* = Statistically significant at the 10%-level

** = Statistically significant at the 5%-level

Here, the relationship between satisfaction and passive loyalty is significantly weakened by high purchase uncertainty, but not the satisfaction-active loyalty link. In both cases, the difference between the model parameters is in the expected direction and the chi-squared change from the restricted to the unrestricted model is statistically significant. H_4 is also only confirmed for one loyalty dimension, as there is a negative moderating effect of switching costs on the relationship between satisfaction and active loyalty, while an effect on the satisfaction-passive loyalty link cannot be confirmed. Finally, H_5 receives full support. The effect of satisfaction on both types of loyalty is stronger for old than for new customers.

DISCUSSION

The results of the present study shed light on a number of important issues regarding the

customer loyalty construct that have not been addressed by previous research. We develop a model of moderating effects on the satisfaction-loyalty link in a business-to-business context. The results show that the relationships between customer satisfaction and two dimensions of the loyalty construct are moderated by various variables, but that these moderating effects can often only be confirmed for one rather than both loyalty dimensions.

These results underline that customer loyalty should be viewed as a multidimensional construct and that the different loyalty dimensions should be considered and analyzed separately. For interpreting our results it is important to keep the differences between the two loyalty dimensions in mind. Active loyalty, such as word of mouth intention, is more strongly influenced by satisfaction when the importance of the purchase is perceived as high, possibly because a high degree of product importance leads to the product

being more often discussed and thought about. This means, in turn, that expectations are more clearly defined in the customers' minds, and assessments of the degree to which those are met becomes more important. The satisfaction-passive loyalty link, however, is unaffected by product importance.

In contrast, purchase uncertainty does not influence the satisfaction-active loyalty link, suggesting that this variable is not relevant for active loyalty behaviors such as word of mouth. But, purchase uncertainty moderates the satisfaction-passive loyalty link negatively. High purchase uncertainty implies high complexity of choice, making it difficult to form strong repurchase or WOM intentions because assessment of the provider in comparison to others is inherently difficult. However, at the same time, high complexity means that a large number of factors have to be considered when a better offer is available and switching is considered, deflating satisfaction's role in switching. In other words, customers who cannot judge the quality of their provider properly are not building up strong price resistance even when satisfied, due to their inability of rating the provider against others.

Further, switching costs negatively moderate the satisfaction-active loyalty link. Hence, when switching costs are high, switching/staying intentions are not strongly dependent on satisfaction, but switching is inhibited by the switching costs themselves. Switching costs, however, do not moderate the satisfaction-passive loyalty link, which means that the level of switching costs is irrelevant when it comes to the effect of satisfaction on the willingness to accept higher prices.

Finally, the duration of customer relationship moderates the link between satisfaction and both active and passive loyalty positively. Long-term customers are more influenced by customer satisfaction than new ones. It seems that, consistent with the hypothesis, when satisfaction judgments are more transactional (such as in the case of new customers), they have less influence on loyalty than when they are cumulative or relational (such as in the case of the longstanding customers), in which case they have less effect on

loyalty.

MANAGERIAL IMPLICATIONS

In designing satisfaction and loyalty campaigns, managers must have a clear understanding of the two distinct dimensions. For example, an increase in satisfaction among a group of customers that perceive low switching costs and the purchase of the product as being important can be expected to result in more positive word of mouth and repurchase intentions. However, the same campaign directed towards a group that is high in perceived purchase uncertainty will much rather result in increased resistance towards price increases. Depending on the goals of the respective satisfaction investments, managers should target these programs carefully towards the groups. Market segmentation within a company's customer base according to characteristics such as switching costs, product importance and purchase uncertainty should therefore be considered. For example, word of mouth campaigns are more likely to be successful when directed towards customers that are high in product importance and low in switching costs. More defensive strategies directed at keeping customers with the company and building up price resistance will be especially successful when they are geared towards customers high in purchase uncertainty.

For recently recruited customers, the influence of satisfaction on both types of loyalty is weaker. This confirms that companies should indeed strive for long term relationships, because for such customers, they will be able to increase retention rates and loyalty behavior by strongly focusing on service quality and satisfaction. Whether it is worth investing into an increase of new customer's satisfaction has to be decided based on a careful cost-benefit analysis, as new customers will be more likely to defect despite high satisfaction levels, and high satisfaction is not such a strong predictor of retention for them. This finding may be the most actionable of our results, as the distinction between new and old customers is easily made on the basis of customer databases, while customers' rating on all other researched

variables are more difficult to determine.

Finally, it is well worth noting that the effect of satisfaction is much stronger on active than on passive loyalty. Managers must be aware that raising exit barriers and price acceptance is much more difficult than increasing positive word of mouth and reinforcement.

LIMITATIONS AND FUTURE RESEARCH

This study adds to a stream of research which shows that satisfaction is important, but not sufficient to achieve customer loyalty, and that customer loyalty is multi-dimensional, with the dimensions being relatively independent of each other.

It is important to note some limitations of our work. The findings of the study may not be generalizable as the sample was limited to one industry and one country. Some of the hypotheses could not be confirmed. Further, the response rate was relatively low, potentially giving rise to non-response bias. It could also be that the recent liberalization of the market affects the results. Finally, the analysis of moderating effects was conducted step by step, as is usual for this type of analysis, but it could be that analyzing the moderating factors simultaneously would reveal further interesting results. In sum, this suggests that both substantial results and managerial implications should be viewed as tentative. As the results of the study are in accordance with prior research in that moderating variables clearly affect the satisfaction-loyalty link, future research should test whether the effects found here can be confirmed in other industrial markets as well.

Another limitation of the study is connected with our measures. As widely used, we employed attitudinal multi-item measures for capturing the loyalty construct. While research has repeatedly shown that satisfaction and loyalty measures are good predictors of subsequent retention and loyalty behavior (e.g., Bolton 1998; Fornell et al. 1996), it would be important to study the form and moderating characteristics of the relationship between these attitudinal and behavioral loyalty measures. As outlined by Mittal and Kamakura

(2001), researchers and managers should be aware that the form of the satisfaction-loyalty behavior relationship (e.g., actual repeat purchase, or customer relationship duration) might yet be different from formerly studied and proposed forms. In future research, loyalty should be measured as both an attitude and a behavior to determine the "true" form of the satisfaction-loyalty link.

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COMPENSATORY SATISFACTION: AN ETHNOGRAPHY OF AVOIDING DISAPPOINTMENT AND PRODUCING SATISFACTION IN BIRDING

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ABSTRACT

Using an ethnographic approach, the authors use birding to provide an exploratory account of compensatory satisfaction, that is avoiding disappointment when expectations are disconfirmed by seeking alternatives to what one hoped or expected. The findings of this study will provide ideas that could be used to analyze compensatory satisfaction in other settings. Implications for both theory and marketing practice are given.

INTRODUCTION: AN INSTANCE OF COMPENSATORY SATISFACTION

Seeking satisfaction and enjoyment is a fundamental motivation in many leisure/recreational activities. Choices, such as a vacation designation, are made in anticipation of what the choice will bring. Markula (1997) reports on a holiday, at the end of which she recalled: "What a disappointing trip! Why did I ever come to Tahiti?" In discussing the selection of Tahiti, she said: "I had my eyes set on Tahiti - someplace different - an exotic, peripheral, pleasure paradise. And that was what I expected to see". By different, she anticipated a culture different from the industrialized Western world. She found a commercialized culture and was profoundly dissatisfied.

Markula's experience is interpretable in terms of the familiar disconfirmation paradigm. The outcomes of her choice were below expectations, dissatisfaction followed. Her account of visiting Tahiti also touches on another process different from disconfirmation. The second process, seeking compensatory satisfaction, involves avoiding disappointment when expectations are disconfirmed by actively seeking alternatives to

what one hoped or expected. Markula sought and experienced some compensatory satisfaction. After disappointing initial experiences, on the third day of the trip, she and her husband opted for an organized inland tour of the island which was she wrote was successful as it gave "a spectacular view of Tahiti and adjacent islands" and a look at village life.

The disconfirmation paradigm has received much attention, however the possibility of compensatory satisfaction has not been explicitly treated in the literature. Our purpose is to present the concept of compensatory satisfaction and how consumers who find that their primary objectives are not being obtained still obtain satisfaction. The theme of our article is that in leisure pursuits, when primary objectives are blocked, satisfaction is sought and experienced by engaging in substitute activities. In the context of birding, we analyze experiencing compensatory satisfaction.

LITERATURE AND BACKGROUND

Compensatory satisfaction involves a shift in consumer attention from service attributes that are of most value prior to the experience to other attributes as the experience unfolds. Accordingly, we present some literature that suggests the possibility of shifts in expectations and evaluative criteria over the purchase and consumption process into alternative activities to achieve satisfaction.

The familiar disconfirmation literature and research on consumer satisfaction has consistently held that satisfaction results when post-purchase perceptions of service performance meet or exceed expectations, pre-purchase estimates of service performance. Post purchase performance short of expectations leads to dissatisfaction (Spreng, MacKenzie and Olshavsky 1996). The

disconfirmation model is the dominant theoretical framework in the consumer satisfaction literature that has been supported by numerous studies (Oliver 1980, 1996).

Much of the disconfirmation literature assumes that the importance of service attributes to the consumer remains constant from pre to post purchase and that consumers use the same set of attributes in both forming prepurchase expectations and comparing expectations to post purchase performance. In some studies the stability of attribute importance and expectations has been questioned. Cote, Foxman and Cutler (1989) have noted three reasons that the expectations of consumers may change (from pre- to post-measurements). Consumer needs change over time. Purchase situation factors such as tradeoffs may result in evaluative criteria changing. Finally, individual differences (i.e. variety seeking) may cause changes in criteria (for selected consumers). Gardial et al (1994) documented many similarities and some differences in pre- and post-purchase product evaluation experiences for automobiles and shoes. In these general situations (where consumers' recall was measured), the pre- and post-purchase expectations shifted. Clow, Kurtz and Ozment (1998) reported on the measurement of consumer expectations for a service. Their data supported the hypotheses that consumers' expectations for restaurant service were stable over time (17 of 19 items rated did not change). However, two items' ratings did change.

Taylor and Burns (1999) have presented a vocabulary to describe changes in pre- and post-purchase evaluative criterion. Their work defined three types of evaluative criteria: (1) enduring criteria-features of the product experience that appeared in both pre- and post-purchase product judgments; (2) receding criteria-features of the product experience that appeared in the pre-purchase product judgments, but not in the post-purchase product judgments; and (3) emerging criteria-features of the product experience that appear in the post-purchase judgments but not in the pre-purchase product judgments. The authors documented that the majority of the subjects had a shift in the criteria in pre- and post-purchase

measurements (i.e. new criteria emerged) and that the importance ratings changed. Using a technological purchase as the focus of a study, Fournier and Mick (1999) documented the emergence of new criteria for evaluation during the consumer experience (suggesting the instability of expectations). Fournier and Mick (1999) suggested the need for a holistic context-dependent and dynamic process of satisfaction. We feel that the concept of compensatory satisfaction fulfills at least part of that quest.

We first describe the fieldwork that provides data for this article. Second, since expectations play a key role in satisfaction, we treat how expectations are generated in birding. Third, an account is provided of satisfaction seeking in a birding experience where primary goals are achieved. Next, we cover two ways that compensatory satisfaction is achieved. Finally, this article ends with discussions of contributions to theory, practice and conclusions.

METHOD

Our general interest was in learning how birders experience satisfaction/dissatisfaction, not to test hypothesis drawn from a well-established literature stream. Very little is known about consumption experience and processes involving satisfaction in birding. Thus an inductive, ethnographic method, primarily participant observation was used (Hudson and Ozanne 1988, Hunt 1991, Prus, 1996). Similar methods have been employed in recent studies of consumption experiences (Arnould and Price 1993; Price, Arnould and Tierney 1995; Sherry 1990; Celsi, Rose and Leigh 1993), satisfaction (Swan and Trawick 1999) and satisfaction with birding (Swan and Trawick 1997). After observing birding activities, it became clear that the process we identify as compensatory satisfaction occurs in birding 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 and continued over several years 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 two years of fieldwork, compensatory satisfaction emerged as a topic. Our analysis of field notes focused on that topic. Most names are pseudonyms.

FINDINGS: EXPERIENCING COMPENSATORY SATISFACTION IN BIRDING

Compensatory satisfaction, finding alternative sources of satisfaction when expectations are disconfirmed, hinges on the nature of expectations in birding and our discussion of the findings starts with that topic. We classify satisfaction efforts in terms of the extent to which the actions taken represent means of achieving the primary or

secondary goals/expectations of a field trip. Primary actions involve efforts to find and view birds and constitute satisfaction seeking. Compensatory satisfaction includes all activities directed towards secondary goals. We discuss compensatory satisfaction in terms of two different sets of activities. One category of activities consists of striving for compensatory satisfaction by shifting attention from birds to other elements in the natural environment. Compensatory satisfaction seeking by sociability is the second set of secondary actions.

Expectations for Birding Field Trips

The literature on consumer satisfaction has consistently held that satisfaction results when perceptions of service performance meet or exceed expectations (Spreng, MacKenzie and Olshavsky 1996). In turn, expectations have two basic components, the likelihood of occurrence of outcomes and the post consumption evaluation of the outcomes that occur. Spreng, MacKenzie and Olshavsky (1996) suggest that to achieve a clear understanding of expectations, separate terms should be used for each expectations component. We follow their basic recommendation and use **predictive expectations** to refer to the likelihood or probability that certain outcomes/benefits will be realized. **Desires** are evaluations of the degree to which outcomes result in the attainment of a person's values and can occur at levels ranging from the abstract, such as the desire to be protected; intermediate, a safe product; or concrete, antilock brakes in a car (example from Spreng, MacKenzie and Olshavsky (1996). We treat desires in birding at the concrete level of seeing or hearing birds while on a field trip. Predictive expectations are birders subjective estimate of the probability of seeing specific bird(s) on a field trip and/or that the trip will result in "good birding".

Predictive expectations for organized field trips are rooted in a combination of the birder's past experience and birds mentioned in the trip announcement. The birder's past experience, both birding in general and experience, if any, with the location of the trip and season of the year, is a

source of predictive expectations. A second source is the common practice of mentioning birds that may be seen in the announcement of an upcoming field trip. Both past experience and announcement are contained in Oliver Good's birding class as he talks of a possible class field trip: "Late Feb, (if we go to) Lake Farms, see Osprey Spring Migration - (with) luck, catch early one (on the) 3rd Saturday (of February).

Oliver's experience is the source of his predictive expectations that he conveys to the class: "see Osprey Spring Migration...". He has birded many areas a number of times, recalls bird sightings and often tells the class about them:

"(My) favorite spring memory (is) Babies Restaurant, (just after a) light rain at 7:00 am, 53 species in (the) parking lot. It was simply remarkable! The Botanical Gardens after light rain, just incredible".

Oliver has a great deal of additional knowledge bearing on his expectations including such factors as the seasonal movement of migratory birds, what birds might be seen where, and so on.

The announcement per se is a source of expectations for members of the class. The expert is telling us that we may see Ospreys in spring migration.

An important factor in expectations for a birding field trip is unpredictability and variability in birding. Oliver's phrase "with luck..." helps communicate that property. The field trip experience did not match an announcement in which Oliver Good says: "We (are) in April, Migration is happening like rain down South. (We will go to the) Okamulgee National Forrest... (It has) Red Cockaded Woodpeckers, the largest population ...in Alabama ... and the third largest on that species (it is an endangered species)." Oliver went on to name other birds...lots of Prairie Warblers, ... will be Prothonotary Warblers, Common Yellow Throat, ...last year had five Mississippi Kites." Of the birds mentioned only Prairie Warblers and Common Yellow Throat are seen. Not many birds are seen and the trip is rained out about 3:00 PM.

SATISFACTION SEEKING: ACHIEVING PRIMARY GOALS

What birders most often **desire** during a field trip is to see a variety of birds and/or one or more unusual birds. Primary satisfaction seeking actions include a number of activities all undertaken to place the birder at the right place at the right time. A number of primary satisfaction seeing actions occur during an outing at Vincent Wildlife Refuge, less than 100 miles from our home city. A key action is selecting Vincent, a popular birding area with 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. Winter is best for ducks, geese and other winter migrants. On a December day trip one of us goes to Vincent in the morning, parks at a likely spot and walks along with binoculars and telescope looking and listening for birds and happens to meet two birders from that area. We all enjoy quite a variety of 30 species including a goose that is uncommon. The two Vincent birders are quite pleased.

The trip to Vincent involves little, if any, compensatory satisfaction seeking actions as most of the time primary objectives are being achieved. However, when primary objectives are elusive, "good birds" are not being seen, instances of compensatory satisfaction actions emerge. In the following accounts we first treat secondary actions to gain compensatory satisfaction and second cover tertiary activities.

COMPENSATORY SATISFACTION BY SECONDARY ACTIVITIES-SWITCHING FOCUS: SHIFTING ATTENTION FROM BIRDS TO OTHER ELEMENTS IN THE NATURAL ENVIRONMENT

Many birders have interests in nature beyond just birds. A number of Metro Birding Association members are quite interested in wildflowers, are members of the Wildflower Society and are able to readily identify many of the wildflowers

encountered on a birding trip. Butterflies are another item of interest to some birders. While out birding if the primary objective of seeing or hearing birds is not being achieved, compensatory satisfaction seeking may occur as attention switches from birds to another element of the natural environment that is present.

It's late summer, three birders and I are out on a scouting mission to evaluate some specific areas for possible inclusion in an early fall trip. We are walking along a road during a period when no birds are being seen or heard. Ellen: "Look at that bright orange butterfly on the dark green bush directly in front of me on the other side of the ditch". She is looking through her binoculars. Others look. Ellen: "I wonder what it is". She unfolds and looks at a plastic covered identification guide to common butterflies. "Orange wings with black along the edge." Someone else says: "Gulf Flittarie.." Ellen looks at the butterfly again; "yes that's it".

Talk turns to the bright colors of the butterfly and enjoyment in seeing it. Compensatory satisfaction by shifting attention from birds to other elements in the natural environment has occurred.

**COMPENSATORY SATISFACTION BY
TERTIARY ACTIVITIES:
COMPANIONSHIP-FINDING
SATISFACTION IN AN OTHERWISE
DISAPPOINTING EXPERIENCE**

Friday is a rainy night in Alabama and I wonder about our field trip for tomorrow. I am the Field Trip Chairperson for the Metro Birding Association. Our newsletter announcement of the outing reads: "**SATURDAY SEPTEMBER 27 - HAWK WATCH - ROCK MOUNTAIN - Watching Migrating Hawks wheeling and gliding past on rising currents of air is one of the great birding experiences. Join us as we try our luck at Hawk Watching. 7:00 AM - Meet at Mc's For Pancakes**". We have permission to drive up a three-mile long private road to the top of a ridge for our watch. Late in the morning, after the sun has heated the earth, migrating hawks use

unseen rivers of warm air flowing up a ridge as their highway. While at Mc's a light rain, which will stop migration, starts to fall. Just as we leave Mc's for Rock Mountain, the morning clears, a beautiful bit of blue sky to the North east - just what we need.

Arriving at Rock Mountain about 8:45 a.m. we start looking for birds near the beginning of the road to the top. Sam Abbott: "We should be at the top about 11:30" (to allow time for the air to heat up and the hawks to come). A bit of light rain falls, then stops. About 10:30 a small flock of Broadwing Hawks soars right over us - excitement! A birder exclaims: "That's like Columbus discovering America," smiles and laughter.

I hear: "The Hawks are moving, let's get to the top". Eager birders hop in their cars, drive to the ridge top, park and begin walking to the overlook. Just then a light rain begins to fall, people seek shelter in their cars. Two birders are with me. We use the back trunk lid of my Ford Explorer as a rain shield and have drinks, cheese and crackers.

The rain varies from moderate to hard and time passes. I take an umbrella and walk down the slope a bit past a big highway trailer, with a "Recycling Pays" banner. It is for construction work on a TV tower. In the almost empty trailer are a half dozen birders sitting in lawn chairs intended for the now rained out hawk watch, eating, talking, joking and laughing. Not wanting to walk back and bring a lawn chair, I find a heavy cardboard box and sit on it. In a short while the box begins to slowly mash down. That brings laughter.

About noon the rain is still falling. The trailer crowd begins to leave. However, people speak of having a good time and ask that I schedule another trip to Rock Mountain.

The rained out Hawk Watch involved tertiary activities to gain compensatory satisfaction, birders finding alternative sources of satisfaction as expectations are disconfirmed. Birders activities of socializing by eating, sharing stories of birding experiences and other topics of conservation in the trailer are alternative means of enjoying the field trip. Such actions were ways to enjoy passing time that were removed from the

primary desires of the field trip.

EVIDENCE THAT SEEING BIRDS IS THE PRIMARY GOAL

The concepts of satisfaction seeking, activities to achieve primary goals, and compensatory satisfaction, actions to realize secondary goals are premised on the assumption that to birders seeing/hearing birds is the primary goal while other sources of enjoyment are secondary. Evidence is presented in this section of the primary goals of seeing/hearing birds.

During some three years of serving as the field trip committee chairperson of the Metro Birding Association the set of field trips for the upcoming birding season (September to April) were planned in consultation with other birders. The major consideration for each trip was the possibility of seeing birds. The major statewide birding group, The Southern State Ornithological Association has all of its three-day meetings at top birding locations across the state. While out with the Metro Birding Association it is common to be with a group of 15-20 people walking slowly along looking and listening for birds. While no birds are in view, some people are talking quietly to each other. Talk is a form of compensatory satisfaction. An announcement is heard: "Parula, water oak directly in front, right hand side, on the first large branch with moss..". All prior conversation stops, people raise their binoculars trying to see the Parula warbler. In his account of birders as a community of participants, Cocker (2001) presents an extended analysis that provides strong evidence that to birders finding and identifying birds is the essential activity of birding.

DISCUSSION

Contributions to Understanding of Satisfaction Processes

Examining satisfaction from the perspective of those participating in birding yields findings that confirm, extend and broaden existing theory.

During a birding field trip when expectations for seeing a number of "good" birds are confirmed or positively disconfirmed, the familiar disconfirmation paradigm is supported. Satisfaction with birding at Vincent Wildlife refuge is a case in point.

Current views of satisfaction/dissatisfaction beyond the disconfirmation paradigm also finds support, especially the phenomenological inquiry of Fournier and Mick (1999) and their multi-model account of ownership experiences with technological products. Those investigators find evidence of satisfaction as an active, dynamic process. Our study extends their model to birding. Fournier and Mick (1999) find that satisfaction is a dynamic, contingent process. Consumers find unexpected uses and benefits in using technologic products as the unpredictable matter of daily living unfolds. Birding is also unpredictable and contingent as birders adjust their action in seeking satisfaction as a field trip occurs. A very common contingent means of seeking satisfaction is to go to a new location during a field trip if the current location lacks "good birds" or birders become satiated with the birds at hand.

Fournier and Mick (1999) point to a social dimension of satisfaction in which the satisfaction of relevant others contribute to the individuals satisfaction and reframes satisfaction from a secluded mental calculation of expectations and outcomes to one of collective interaction among all persons affected by the product. The social dimension of compensatory satisfaction is illustrated by the rained out Hawk-watch at Rock Mountain trip with birders enjoying socializing with each other in the trailer. Collective interaction is making satisfaction possible.

To our knowledge avoiding dissatisfaction when expectation are not confirmed by the process of compensatory satisfaction is a new contribution to understanding satisfaction/dissatisfaction. The disconfirmation paradigm ties consumers to pre experience goals and expectations. Our findings suggest a model as follows. When expectations are negatively disconfirmed consumers actively seek other, second, sources of satisfaction that are possible given the contingencies of the immediate situation and consumer interests. Due to the wide

interests in nature that many birders have a common mode of short-term compensatory satisfaction when "good birds" are not currently available is switching focus from birds to other elements of the natural environment including butterflies or flowers if they are available.

Socialization as a form of compensatory satisfaction suggests dynamic, continuous, shifting of activities in satisfaction seeking. Given the immediate situation, socialization can be a "background" activity or the major activity of birders. As a background activity on field trips it is common for people to talk quietly to each other while no birds are in view. During lunch breaks, talk becomes a major activity as it was during the rained out hawk watch.

Managerial Implications

The results of our study have important implications for service failure and recovery. Service failure includes instances in which service performance fails to meet an important consumer expectation. In some instances the service provider enacts service recovery, an effort to repair the service failure. Service failure has received much attention in the literature with the general finding that service recovery reduces dissatisfaction and may even result in satisfaction (Maxham 2001, Sarel and Marmorstein 1999, Michel 2001, Spreng, Harrell and Mackoy 1995, Tax, Brown and Chandrashekar 1998, McCollough, Berry and Yadav 2000, Smith, Bolton and Wagner 1999, Mattila 2001).

The literature has concentrated primarily on the role of the service provider as the party taking action to repair the service failure. The consumer's role had been limited to voicing a concern to the service provider. A primary contribution of this article to the service failure/repair literature is in two parts. First, we offer qualitative evidence that in some situations customers act to repair service failures. *Service repair is customer, not provider driven*. Second, this article describes a process of compensatory satisfaction, which is a way that consumers construct service recovery following service failure. Compensatory satisfaction occurs when primary objectives are blocked, a service

failure. Satisfaction is sought and experienced by engaging in substitute activities.

If customer driven service repair is thought possible for a type of service, several important managerial implications are suggested. A first task is to study customer behavior and the service process to determine if customer service repair occurs or is possible. Some service failures will not be subject to customer accomplished repair. An example is no hotel room available for a customer with a reservation. Provider enacted repair is necessary.

If customer driven service repair occurs or is likely the next managerial task is to discover the service specific activities that customers can accomplish to enact repair. With respect to customer goals two categories of service repair are possible. Some service problems can be solved by customers to achieve their primary desires. However, customers may lack the knowledge to do so unless the service provider gives the customer necessary information. As an example, one of us rents a condo on the beach and was provided with a flyer with instructions for making some appliances work. The flyer gives step by step instructions for "fixing" the phone (check that the phone line is plugged into the wall jack). A managerial implication is that do it yourself service repair may be facilitated by discovery of customer knowledge and behavior.

Another set of service problems are not possible to solve in a way that the customer's primary goals are reached. Birding is but one of a number of services that are subject to contingencies beyond the control of customer or provider. A fishing trip can result in poor fishing, the home town team loses the big game, rain stops golfing during a golf resort weekend and so on. If the provider knows of or can determine the customer's secondary goals, then compensatory satisfaction may be possible. Actions may be open to the provider that will assist customers in customer driven service repair. As a case in point, I experience provider encouraged sociability among participants at the Wyoming Nature Camp. On the arrival evening, each participant is paired with someone new, learns about the new person and introduces the "partner" to the rest of the

group.

In conclusion, the concept of compensatory satisfaction has been introduced, defined and developed using an ethnography study of birding trips. Compensatory satisfaction appears when the expectations of the consumer change during the consumption process. In other words, the pre-purchase evaluative criteria are different from the post-purchase evaluative criteria. In the case of birding, the inability to obtain the sought pre-purchase criteria (of seeing a given bird) prompted a shift to secondary criteria (such as butterfly watching) or to new criteria for the post-purchase evaluation. Since new criteria may be used in post-purchase evaluation, the description, exploration and hopefully at some future time-prediction of those criteria are an important part of the understanding of the customer (dis)satisfaction experience.

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FACTORS THAT INFLUENCE A CONSUMER COMPLAINER'S RATING OF SERVICE RECEIVED FROM A THIRD PARTY COMPLAINT-HANDLING AGENCY - THE LOS ANGELES DEPARTMENT OF CONSUMER AFFAIRS

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ABSTRACT

This study sought to understand the factors that influence a consumer complainer's rating of service received from a third party complaint-handling agency in Southern California. The agency, the Los Angeles County Department of Consumer Affairs (LADCA) is an arm of the California State Department of Consumer Affairs. The Los Angeles office serves only those consumers with complaints in the Los Angeles County area. This population is unique because they have taken the necessary steps and filed a complaint with a third party complaint-handling agency. Complaint filers were randomly sampled; Spanish-speaking consumers were over sampled. Regression analysis revealed eight variables that significantly impacted service rating. Variables that had a positive impact on service rating include: being promptly notified of the case, being kept informed of the investigation and being female. Variables that had a negative effect on service rating include: being a first time user of the agency, having a higher income, being Asian, being African-American, and presence of children. Third party agencies can address these issues to improve their overall service rating. Further implications for agencies and future researchers are provided.

INTRODUCTION

Consumer dissatisfaction and complaining behavior is an area of on-going research and discussion within both academic and business worlds. As Hogarth, English and Sharma (2001) eloquently point out, research on complaining behavior has moved from looking at who complains, to looking at typologies of complainers, public versus private action, and third party complainers. Consumer complaining

behavior is activated by dissatisfaction with a product or service, yet this dissatisfaction is not enough on its own for complaining to occur. Consumers make the choice to complain when they presume the outcome will be positive and will outweigh the time and costs involved in complaining (Singh and Pandya, 1991; Strahle and Day, 1984). If complaint-handling mechanisms are cumbersome, the consumer is less likely to complain (Singh and Pandya, 1991). When they do complain, consumers are satisfied with companies' responses to their complaints only 50-60% of the time (Andreasen 1988).

THIRD PARTY COMPLAINING BEHAVIOR

Third party redress may be the next logical step when consumers are dissatisfied with company responses. Third party redress is defined as "an individual or organization who is external to the consumer who initiates redress and is not directly involved in the dissatisfying transaction" (Singh, 1988). There are three times when consumers seek third party redress actions: 1) when they have exercised all other complaint options; 2) when they perceive success of voice responses to be low; 3) when the action is not related to other complaint actions (Singh, 1989). Complainer's anxiety level about the action is instrumental in determining their decision to seek third party redress (Urisic, 1985). If consumers are not comfortable with complaining to third parties, they most likely won't do it. Another view, as purported by Liu and McClure (2001), suggests that because third party agencies do not require direct confrontation with the manufacturer or retailer, the consumer may be more comfortable using the third party.

Consumers may not understand the importance of third party agencies. These agencies

serve as mediators between consumers and businesses. Registering complaints with them is important in regulating the marketplace by disallowing business to become the authorities on complaint resolution, and ultimately taking advantage of the consumer (Best and Andreasen, 1977; Singh, 1989).

Evidence is such that complaining to third party agencies is a rare event for most consumers (Best and Andreasen, 1977; Hogarth, English and Sharma, 2001). A range of opinions on the exact numbers exists. In the 1970's, it was reported that between 7% and 12% of complainers seek third party redress (Best and Andreasen, 1977; Warland, Herrmann and Willits, 1975). In the 1990's, it was reported that approximately 37% of complainers sought third party redress while about 12% of these people complained to a consumer agency (Tipper 1997). Kolodinsky (1993, 1995) found that 5% to 8% of complainers with medical services problems and less than 8% of complainers with auto repair service problems seek third party redress. Most recently, Hogarth, Hilgert, Kolodinsky and Lee (2001) reported that 7% of consumers use third parties. Although the percentage of consumers that seek third party redress is minor, the consequences of these complaints are immense and can lead to negative results for the companies involved (Singh 1989).

As many federal government service organizations are being compelled to improve their quality of service, it becomes more important to implement continual consumer satisfaction measurement and to make improvements based on this measurement (Gauvin, Large and Guolla, 1998). Evaluation of consumer satisfaction and dissatisfaction is important to identify service problems, make improvements, and discover satisfaction levels resulting from these improvements. It is one thing to discover why consumers are complaining, and yet another to utilize this information to change processes and to make consumer satisfaction evaluation a continual part of service enhancements. Westbrook (2002) pointed out that there is very little evidence of research performed by organizations to improve customer satisfaction or reduce dissatisfaction.

Fisher, Garrett and Arnold (1997) offer

important descriptors of consumers' perceptions of information provided by one Better Business Bureau. Admirably, the study sought to discover the level of "usefulness" of information and, furthermore, solicited suggestions for improvement of services. Because the overall ratings of information provided were quite high (8.45/10), recommendations for improvement were few. In fact, the conclusions were that the BBB was doing a good job in meeting its mission.

Research in the area of third party complaining behavior is meager at best because consumers are less likely to complain to third parties. Even less is known regarding complaints to specific third parties, such as consumer agencies such as the LADCA.

STATEMENT OF THE PROBLEM

Understanding the types and characteristics of people who file complaints is an important part of a complaint handling agency's duties; it facilitates total quality management (Lam and Dale, 1999). It is especially important for the agency to understand consumer satisfaction, as well as how the case was handled and resolved, from the consumer's point of view.

This study focuses on complainers to one third party agency in Southern California, the Los Angeles County Department of Consumer Affairs. A demographic profile of third party complainers, as well as an inferential analytical look at factors influencing service rating, will be presented.

Both complaining behavior as well as personal and individual characteristics have been suggested as being important in this type of analysis (Morganosky and Buckley, 1987). Therefore, variables gleaned from the literature and identified as important in creating a model to predict service rating are discussed.

SATISFACTION AND LOYALTY

Research regarding satisfaction with third party complaint handling is scant and dated. Best and Andreasen (1977) found that 26% of third party complainers were satisfied with the outcome

of their complaint, while 51% were unsatisfied and 21% were "pending". A more recent study on consumers who complained to third party agencies about financial services revealed that 40% of complainers were satisfied with the outcome, while 20% were partially satisfied and another 40% were dissatisfied (Hogarth and English, 1997). Hogarth, Hilgert, Kolodinsky and Lee (2001) reported that third party complainers reported higher levels of dissatisfaction than those complaining via other avenues. Perceived service quality (i.e. satisfaction) affects consumer loyalty (Bei and Chiao, 2001). Loyalty may be a measure of satisfaction, since consumers will not likely revisit or reuse a service that they do not find useful. In this case, the "repeat business" keeps the agency busy, provides justifications for budgets, and keeps vendors honest.

PRIOR COMPLAINT EXPERIENCE

Results regarding past complaining behavior are mixed. A review of prior complaint experience in general, as well as third party complaining behavior is important. Hogarth, Hilgert, Kolodinsky and Lee (2001) found that using a third party was a third or fourth step in the complaining hierarchy. Therefore, third party complainers are likely to have prior complaining experience, but not necessarily third party complaining experience. However, Best and Andreasen (1977) found that only one-half of their third party complainers approached the business; thus the third party was the first action taken.

Singh (1989) noted that prior complaining experience might lead to more positive attitudes about complaining in general. Having experience with complaints increases the likelihood of complaining in the future (Singh, 1989). Conversely, Carmel (1985), looking at health services, noted that being dissatisfied in the past leads to greater dissatisfaction in the future.

It has been shown by Johnston (1998) that the greater the intensity of consumer dissatisfaction, the greater the likelihood that the consumer will complain. Additionally, the variety and number of complaint actions taken will be greater as intensity of dissatisfaction increases. We might then

assume that consumers who seek third party redress after preceding types of complaining have failed also have a higher intensity of dissatisfaction. However, Singh and Pandya (1991) found that intensity itself is not a direct catalyst for complaining behavior, but that personal and situational factors actually determine complaining behavior.

SEX

The results are unclear regarding the impact of sex on complaining behavior. Some researchers found that males are more likely than females to seek third party redress from a consumer agency (Hogarth, English and Sharma, 2001; Strahle and Day, 1984; Tipper, 1997). Others found that females are more likely than males to seek third party redress regarding complaints with transportation items, financial services, and insurance products (Duhaim and Ash 1979). Taking a different tact, Naylor (1999) reported that more females than males engaged in positive word of mouth behaviors. While 84% of respondent's were female in Naylor's (1999) study, the finding is not without merit. Huefner and Hunt (2000) reported the opposite, that females were more likely than males to engage in negative word of mouth behaviors, yet males were more likely to use their voice and retaliate in response to dissatisfaction. And finally, Garrett, Meyers and West (1997) and Carmel (1985) suggest that there are no differences by sex.

Two studies were identified that looked at the effect of sex on satisfaction with complaint outcome, and overall satisfaction, respectively. In one study, females were more likely than males to be satisfied with the handling of their complaint (Hogarth and English, 1997). Conversely, when looking at medical complaints, females exhibited lower levels of overall satisfaction (Bendall-Lyon and Powers, 2002).

AGE

Studies looking at the impact of age have produced contradictory findings. Lee and Soberon-Ferrer (1996) found that between 3 and

24% of people 65 years of age and older complain to third parties, with 9% choosing a consumer agency as the third party. Older people are more likely to seek third party redress because they have more market experience and are more confident that their dissatisfaction can be resolved (Bernhardt, 1981). In a recent study, Hogarth, English and Sharma (2001) found that complaint survey respondents were older, on average, than the general population.

Contradictory findings, that older people are less likely to complain, or that younger people are more likely to complain, have also been reported (Bearden, 1983; Warland, Herrmann and Moore, 1984). Younger people are more likely to seek third party redress (Bearden 1983; Duhaime and Ash 1979; Hogarth, Hilgert, Kolodinsky and Lee, 2001). Tipper (1997) reported that younger people are more likely to seek redress from a consumer agency, but not from a third party in general. And, finally, younger people are more likely to retaliate than older consumers (Huefner and Hunt, 2000).

EDUCATION AND INCOME

Education and income are two variables that are almost inextricably connected. The positive relationship is well proven. Consumers with higher levels of education and income are more likely to seek third party redress (Bearden 1983; Duhaime and Ash 1979). Educated consumers with higher incomes are more likely to seek redress from a consumer agency, but not from a third party in general (Tipper, 1997). Use of voice is more evident in people with higher levels of education (Huefner and Hunt, 2000; Morganosky and Buckley, 1987). Lee and Soberon-Ferrer (1996) found that more educated consumers tend to use all avenues of recourse available to them, including third party redress.

In a more recent study, Hogarth, Hilgert, Kolodinsky and Lee (2001) reported that those who complain to third party agencies tend to be less educated and have a lower income. Conversely, in separate studies, Hogarth, English and Sharma (2001) and Bei and Chiao (2001) found survey respondents were more likely to be

high school educated than the general population.

Satisfaction tends to be higher as education and income increase. Hogarth and English (1997) found that consumers who were better educated and had a higher income were more satisfied with the result of their complaint. In a more recent study, those with more than a high school education were only slightly more likely to be satisfied than those with a high school degree or less (Hogarth, English and Sharma, 2001).

RACE

Many researchers have looked at race and its impact on complaint behavior. Hogarth, English and Sharma (2001) found that the ratio of minority survey respondents in their complaint study was higher than the ratio of minorities in the general population; implying that minorities are over represented in complaint handling cases. In another study, Hogarth, Hilgert, Kolodinsky and Lee (2001) reported that minorities were more likely to use third party agencies. Past findings are best reviewed by race categories.

African American

Best and Andreasen (1977) found a slight difference between black and white complaining behavior. They found that whites complain more than blacks, regardless of socioeconomic status.

Asian

Asians are more likely to seek third party redress than non-Asians regarding low involvement products; however, they are no more likely than non-Asians to seek third party redress concerning high involvement or durable products (Foxman and Raven, 1994). Asians may feel that their complaints will be more effective when using a third party authority such as a consumer agency due to their external locus of control and belief in fatalism (Foxman and Raven, 1994).

However, when comparing South Korea to the United States as a whole, Liu and McClure (2001) found no significant differences in reporting to a third party agency. The lumping together of all

United States respondents certainly waters down the effects of race, shifting the focus to cultural differences between the two countries.

Latino

Mexican-Americans are less likely to complain than non-Mexican-Americans (Villareal-Camacho, 1983). A more recent study of complaints by Mexican-Americans to a Better Business Bureau revealed that communication problems and different concepts of time caused Mexican-Americans to seek third party redress for delay or non-delivery of goods more than for unsatisfactory service (Cornwell, Bligh and Bakus 1991).

FAMILY STRUCTURE

Marital Status

Hogarth, Hilgert, Kolodinsky and Lee (2001) reported that those who complain to third parties tend to be single. Perhaps because there is more time available, unlike the time crunch experienced by married couples with children. Huefner and Hunt (2000) reported that being married was positively related to "exiting" (i.e. abandoning the service/product without voicing dissatisfaction) in response to consumer dissatisfaction.

Presence of Children

Having young children decreases the likelihood of complaining (Kolodinsky 1993). There is an opportunity cost; when mothers take time from child care, it may influence their motivation and outcome satisfaction.

EMPLOYMENT STATUS

Two studies have reported that being employed and working an increased number of hours in labor market employment decreases public complaining behavior (Kolodinsky, 1993; Kolodinsky and Aleong, 1990). Therefore, those engaged in full-time employment might be less likely to complain as compared to those exhibiting

lower levels of employment.

MODEL PREDICTION

Using key variables reviewed in the literature, a comprehensive model to predict third party complainer's rating of service received was constructed. The impact of the following variables on rating of service received from the LADCA was tested: Reporting to another agency, using the agency for the first time, being promptly notified, being kept informed, sex, age, having at least a high school education, income, race, being married, presence of children, and being employed full-time.

RESEARCH METHODOLOGY

Data were collected from a third party complaint handling agency in Southern California, the Los Angeles County Department of Consumer Affairs. Because Southern California is one of the most diverse areas in the nation, it is particularly appropriate to look at the LADCA's consumers, because they represent a wide variety of ethnicities. The LADCA is the primary complaint handling agency for consumer-vendor complaints. They receive approximately 300,000 calls per year on their consumer hot line. Approximately 15% are Spanish speaking consumers. Additionally, they receive over 3,000 consumer-vendor complaints through the mail. Investigators who speak a variety of languages (Spanish, Tagalog, Chinese) are available to process the complaint file. Investigators work with the files until they are closed. Files are closed when the case is referred to another agency for better potential resolution, or is handled and resolved by the agency.

A two page survey was created by the researcher, in consultation with LADCA agency administrators. The survey was pilot tested and reviewed by a panel of experts. Fifty surveys were mailed out in the pilot test; twenty surveys were returned. A preliminary review of returned surveys and expert review necessitated minor modifications. After modifications were made, the survey was mailed to a random sample

(N=990) of all consumers who filed a complaint in 1998 (N=3,045). The survey was translated into Spanish, and Spanish speaking complainers were over sampled (N=178 of the 990 total) to best understand the characteristics of these consumers. The survey asked questions about the following: (complaint variables) knowledge about the agency, complaint specifics, satisfaction with service, staff, and outcome, (demographic variables) zip code, marital status, number of children, ethnicity, primary language, country of origin, time in the United States, education, home ownership, employment status, age, and income. The population receiving this survey is unique because they have taken action and filed a complaint with the appropriate third party agency in Los Angeles County. No other studies regarding this agency have been conducted.

STUDY VARIABLES

The dependent variable for this study was "service". The question asked was "Overall, how would you rate the service you received from our Department?"; possible answers were: excellent (4), good (3), fair (2) and poor (1). To best understand the factors that influenced the service rating, several independent variables were used as predictors. Independent variables were divided into complaint-specific variables, and demographic variables. Complaint-specific independent variables included: Report (Did you report your complaint to another agency? 0/1), Firsttime (Was this the first time you used our services? 0/1), Notified (Were you promptly notified of your case number? 0/1), and Informed (Were you kept informed of our investigation? 0/1). Demographic independent variables included: Sex (0=male, 1=female), Age (continuous), Hischol (Do you have a high school education or higher? 0/1), Income (Annual household income: 1=less than \$10,000, 2=\$10,000-19,999, 3=\$20,000-29,999, 4=\$30,000-39,999, 5=\$40,000-49,999, 6=more than \$50,000), Race: Asian (Asian? 0/1), Latino (Latino? 0/1), Afram (African-American? 0/1), Married (0/1), Gotkids (Do you have children? 0/1), and Empful (Employed full-time? 0/1), To

prevent multicollinearity, correlations were performed on all variables.

ANALYSES

Frequency and descriptive analyses were performed to provide a preliminary picture of the consumers being served by the agency. To investigate the impact of the (14) independent variables on the dependent variable (service), a multiple regression procedure was performed.

DESCRIPTIVE RESULTS

A total of 426 surveys were completed and returned; the overall response rate was 43%. No follow-up techniques were employed. Descriptive analyses of the complaint specific variables revealed that the average service rating was 2.82; a majority of respondents (63%) rated service good or excellent. Seventy percent did not report their problem to another agency. Eighty-three percent of respondents were first time users of the agency. A majority of consumers were promptly notified and kept informed of their cases, 79% and 58%, respectively.

Demographic findings indicate that 51% of respondents were male. The average age of respondents was 47.01 years. Average income was between \$30,000-39,999. Race broke down into the following categories: 12% African-American, 13% Asian, 35% Latino, 3% Native American, and 33% White. Fifty-three percent were married, 46% had children. Fifty-six percent were employed full-time.

INFERENCE RESULTS

Results from the regression analysis revealed eight of the fourteen independent variables had a significant impact on service rating; three had a positive effect while five have a negative effect. The overall significance for the model was .000 ($F=9.724$). (Table 2). The resulting R^2 was .689; the adjusted R^2 was .425. Corresponding beta coefficients, t-values and levels of significance are presented in Table 3.

Variables having a positive impact on service

Table 1
Descriptive Results of Third Party Complainers

	n	%
Service Rating		
Poor (1)	76	18%
Fair (2)	70	16%
Good (3)	122	28%
Excellent (4)	147	35%
Did you report your problem to another agency?		
No	299	70%
Yes	125	30%
Is this the first time using this agency?		
No	63	15%
Yes	353	83%
Were you promptly notified of your case?		
No	63	15%
Yes	336	79%
Were you kept informed of your case?		
No	114	27%
Yes	243	58%
Sex		
Male	215	51%
Female	208	49%
Age (expressed as an average)	393	47.01
Do you have a high school education?		
No	34	8%
Yes	372	87%
Income		
(1) less than \$10,000	57	13%
(2) \$10,000-19,999	67	16%
(3) \$20,000-29,999	62	15%
(4) \$30,000-39,999	53	12%
(5) \$40,000-49,999	40	10%
(6) more than \$50,000	104	25%
Race		
African-American	51	12%
Asian	54	13%
Latino	150	35%
Native American	12	3%
White	139	33%
Are you married?		
No	190	45%
Yes	225	53%
Do you have children?		
No	54	13%
Yes	197	46%
Do you have full-time employment?		
No	170	40%
Yes	238	56%

*Note: numbers may not add to 100% due to rounding and missing data

Table 2
ANOVA Table for Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	99.78	14	7.13	9.72	.000
Residual	110.68	151	.73		
Total	210.46	165			

Table 3
Multiple regression results: Factors affecting service rating

	Unstandardized Beta coefficients	SE	t
Constant	2.822	.630	4.48**
Report	-.219	.158	-1.38
Firsttime	-.653	.202	-3.23**
Notified	.469	.234	2.00**
Informed	1.164	.174	6.68**
Sex	.275	.142	1.938*
Age	.003	.007	.506
Hischol	-2.42	.263	-.917
Income	-.084	.050	-1.67*
African-American	-.435	.244	-1.78*
Asian	-.368	.221	-1.67*
Latino	.038	.197	.193
Married	.156	.170	.916
Gotkids	-.519	.195	-2.66**
Empful	.222	.168	1.33

Note: * = $p \leq .10$; ** = $p \leq .05$

rating include being promptly notified ($p=.047$), being kept informed ($p=.000$), and being female ($p=.054$). It is logical to conclude that being promptly notified and being kept informed of the on-going investigation will increase a consumer's positive feelings about the job the agency is performing. The variables Notified and Informed increased the service rating by .469 and 1.164, respectively.

Being female increased the service rating by .275 points ($p=.054$). This finding supports work by Naylor (1999) who found that females were

more likely to engage in positive word of mouth behaviors and Hogarth and English (1997) who found that females were more satisfied with the handling of their complaint. It might also reflect a difference in expectations between males and females.

A negative impact on service rating was found in the following variables: using the agency for the first time ($p=.002$), income ($p=.096$), being Asian ($p=.097$), being African-American ($p=.077$), and having kids ($p=.009$). First time users of the agency tended to rate the agency lower by .653

points. This finding is somewhat in line with Singh (1989) who found that prior complaining experience leads to more positive attitude about complaining. It might then be assumed that first time users (i.e. no prior experience) might rate service lower than non-first time users. It is also true that if a consumer has used the agency before, expectations have been adjusted. This would not be the case in first time users.

Having a higher income also decreased consumers' service rating by .084. While the resulting effect is negligible, this finding is in disagreement with past research (Hogarth and English, 1997; Hogarth, English and Sharma, 2001) that noted a positive relationship between income and satisfaction.

Minority status is often studied in complaining behavior. In this study, being Asian, and African-American reduced the service rating by .368 and .435, respectively. The result from the Asian and African-American complainers are surprising. No past studies have indicated a relationship between being Asian or African-American and exhibiting decreased satisfaction. However, as Foxman and Raven (1994) point out, Asians are afraid to "lose face", and therefore if their complaint was not resolved satisfactorily (to them), their level of dissatisfaction may be higher.

Presence of children decreased the service rating by .519 points. Kolodinsky (1993) noted that the presence of children will decrease the likelihood of complaining; noting the opportunity cost present. This opportunity cost might also carry over into the rating of satisfaction if parents do not feel that the time spent on the complaint produced an agreeable outcome.

DISCUSSION AND CONCLUSIONS

This study is in the unique position of presenting findings from one large third party complaint handling agency, the Los Angeles Department of Consumer Affairs. This population is unusual because complaining to a third party is a rare event for most consumers (Best and Andreasen, 1977; Hogarth, English and Sharma, 2001). Understanding both complaint specific and demographic factors that influence third party

complainer's rating of service received is important.

Inferential results found eight variables that significantly impacted rating of service; three had a positive impact, while five had a negative impact. Being notified and informed of the case both increased the service rating. Agencies and service professionals should not underestimate the importance of good communication with consumer complainers. Letting consumers know their problem is being looked at is an effective way to increase service rating.

Being female also increased the service rating. This could indicate that males do not perceive the handling of their complaint as fairly as females. It might also be due to the fact that males have different expectations of the agency. Keeping all consumers, especially males, aware of the progress of the complaint might be a way to increase service rating by males.

Being a first time user of the agency decreased the service rating. This could be due to the lack of familiarity with the agency, its powers, and its procedures. Past studies have indicated that prior complaining experience leads to more positive attitude about complaining, therefore, first time users may be expected to exhibit lower levels of satisfaction. While there is not a good way to assure that your clients have more exposure to complaining, a thorough explanation of what to expect might lead to more realistic expectations and, consequently, increased the service ratings.

The relationship between income and service rating found in this study is a surprising one, not in support of prior findings. The impact is negligible (-.084), and so could be a function of the distribution of income categories in this particular sample.

Race is an important issue for complaint handlers to understand. In this study, both African-Americans and Asians rated service lower. It could be that these minority groups feel unheard and, therefore, feel that service was poor. Asians especially have an external locus of control and therefore may be disheartened when others cannot meet their expectations with complaints. It is important for agencies to let all consumers know their complaints are being investigated.

Presence of children also decreased the service rating. The opportunity cost of taking time away from family activities is great. If the outcome is not satisfactory, mothers and fathers who take time to complain may rate service lower.

IMPLICATIONS

This study found eight important factors that influenced service rating. It appears, in this study, that keeping consumers informed so that they have realistic expectations and full information might be a way to assure that all consumers feel heard. Putting additional resources behind this effort would likely prove fruitful to this and other agencies. For example, a list of questions and answers that addressed projected timeline, procedures, contact information, etc. could be created and sent to consumers when their complaint is received and filed.

In addition, being sensitive to differences across cultures and sex will also provide a feeling of being better served. Having staff from a variety of cultures and backgrounds not only facilitates issues surrounding language and communication, but also helps agency administrators understand cultural issues that might affect a consumer's feelings regarding the complaint process. While some groups might be unwilling to become "squeaky wheels" other groups may be more than willing to take on that role. For example, understanding the reluctance of some groups to verbalize issues might lead to the discovery of other ways to "understand" the consumers' complaints (i.e. via e-mail or written correspondence). Having a mix of male and female complaint handlers also might help address the needs of certain consumers who feel more comfortable dealing with one sex over the other. These preferences should be investigated and honored.

Agency personnel can interpret these findings and seek to improve service to their clients. Improving service to consumers is important regardless of business type. Complaint handling agencies supported by government funds are in a unique position in that they often must maintain their "market position" to secure and justify their

need to their supervisors. Keeping their service ratings up, thus having consumers who are satisfied, increasing loyalty, is one step in the right direction.

FUTURE RESEARCH

This study looked only at data from one calendar year. Larger data sets might result in additional findings as well as patterns over time. In addition, a wider sampling of minority consumers may shed more light on differences. While Spanish-speaking complainers were over-sampled in this study, it was African-American and Asian consumers who rated service lower. A more in-depth investigation of specific reasons for rating of service for all consumers, could provide valuable information for both practitioners and researchers.

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CONSUMERS' EXPERIENCES, OPINIONS, ATTITUDES, SATISFACTION, DISSATISFACTION, AND COMPLAINING BEHAVIOR WITH VENDING MACHINES

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ABSTRACT

Despite the ever increasing presence and penetration of vending machines into consumers' lives, there have been no studies to date in the marketing and consumer behavior literature that shed light on consumers' experiences and consumption behavior involving vending machines. This study is the first of its kind to report, based on consumer survey data, consumers' usage behavior, and opinions and attitudes toward the services rendered by food and beverage vending machines. Consumer satisfaction/dissatisfaction and complaint behavior are also investigated. The results reveal that consumers consider vending machines as quite useful, beneficial, important, and meaning a lot to them - more so than TV or red wine! However, consumers generally give tepid evaluations about vending machine services, and their level of satisfaction starkly contrasts with their high involvement. Their experience with the vending machine is not up to par with comparable retail store shopping experiences. The inadequate system of requesting refunds and filing complaints, a chronic source of consumer dissatisfaction, emerged as the most serious drawback of vending machine services. Managerial implications of this and other findings, along with future research issues are discussed.

INTRODUCTION

More than two decades ago, Quelch and Takeuchi (1981) predicted that the vending machine would become one of the most important non-store marketing channels. Comparing the two million vending machines as cited in their article at that time, with the more than seven million vending machines in operation in the U.S. currently (Leaner 2002), their prediction has surely materialized. Presently, the vending

machine business is a \$41 billion industry (National Automatic Merchandising Association 2002) and one of the most pervasive retail business forms, though still low-profile.

Vending machines and many consumer products as consumer products have a symbiotic relationship. As more people have joined the workforce during the past several decades and their busy social life increasingly places more value on time and convenience, vending machines have become an indispensable part of many people's daily lives. They offer consumers a variety of products including foods, snacks, beverages, newspapers, cigarettes, laundry products, cosmetics, hosiery, personal care items, postage stamps, contraceptive devices, and even paperbacks and CDs.

Food and beverages account for about 85% of vending machine sales in the U.S., with vending machines accounting for about 20% of soft drink sales (Vending Times 2002). Vending machines also take on an ever-increasing role in serving employees in the workplace in the new economy. Since downsizing and workforce reductions have been accelerating in Corporate America, companies are increasingly reducing and replacing food service facilities and staffs with self-serving vending machines (Leisure Week 1999). Nowadays employees can find at their workplace almost any food and beverage item from pizza to frozen dinners. "Light" entrees, fresh salads, fruits, and dairy products are often part of their canteens and dining facilities.

Given the ever increasing presence and the pervasiveness of vending machines in the lives of consumers, it is surprising that there have been to date no studies in the marketing and consumer behavior literature that shed light on consumers' usage behavior, experiences, opinions, and attitudes, not to mention their satisfaction, dissatisfaction, and complaining behavior, with the vending machine services. This glaring lack

of knowledge about consumer behavior regarding vending machine service is even more surprising, considering the fact that our knowledge and understanding of consumer behavior in the retailing field have dramatically increased during the past two decades. The present study is conducted as a first step to fill such a gap in consumer behavior and non-store retailing literature.

VENDING MACHINE BUSINESS

The Value of Vending Machine Services

For Marketers. Vending machines compliment the traditional distribution channels and enable marketers to increase the reach and intensity of their retail distribution network. Because of their around the clock self-service capability, vending machines are typically placed outdoors and in unattended environments such as the corners of factories and offices, large retail stores, gasoline stations, railroad stations, hotels, restaurants, airports, bookstores, and shopping malls. Their compact size means they can fit into many places where there is not enough space for a full-sized convenience store. A strong presence in the vending machine channel helps to enhance visibility and strengthen brand recognition in the long term (cf. Phillips 1992). The greater the exposure afforded to brands via vending machines, the stronger the brand cognition and image recognition in the integrated marketing communications program. This strategy is consistent with the fact that most successful bottlers in the United States maintain a strong presence in the vending channel. With little overhead, margins are much higher for the sales made in vending machines than for those in regular retail outlets. While the profit margin of grocery stores is 1.3 percent (before tax 2000 - 2003 average (Almanac of Business and Industrial Financial Ratios 2000-2003), the profit margin of food and beverage vending business is 3.8% percent (before tax average of 1998-2002, NAMA 2003).

For Consumers. Vending machines are

mainly valued by consumers for their convenience and time saving benefit (Quelch and Takeuchi 1981). They offer consumers instant transactions without the need of intermediaries; just press what you "see and want" and the product is delivered into your hands with instant gratification. Another value of vending machines lies in the fact that they offer 24-hour availability and reasonably fresh and ready to serve products (Kotler 2003). These transactional characteristics make vending machines particularly appealing for the products that are demanded around the clock, that are of impulsive demand, that do not require sales help or need to be closely inspected before purchase, and that can be sold for relatively small amounts of cash.

Vending Machine Services Problems

Despite the many positive aspects, there are inherent drawbacks to vending machine services which may negatively affect consumers' shopping experience and the vending machine industry in the long term. First, the very nature of nonpersonal, no human contact, transactions can create unique problems that frustrate and potentially alienate consumers. Most consumers still prefer shopping in stores over shopping from vending machines. They also prefer to talk to a person before making a purchase (Trachtenberg 1994). Some consumers are not comfortable with the lack of human touch in vending machine transactions (Leaner 2002). Unlike its retail store counterpart, the machine itself cannot interactively offer consumers services accompanying a transaction, and is confined to merely dispensing the product in return for payment (even this can be a problem as discussed later in the study). When consumers are dissatisfied with their purchase, recourse is not available at all or is not as convenient as at a regular retail store. Another downside is that consumers sometimes do not feel secure because vending transactions occur in unattended and isolated environments in late hours such as on street corners in a big city or by a forlorn little motel. In addition, people become captive customers of vending machines under certain circumstances such as when no retail

outlets are available in the surrounding area or all nearby stores are closed. Products sold via vending machines are also more expensive than their counterparts available in traditional retail stores (cf: Beverage World 1992) because of their unique values as described previously and the high maintenance cost of the machine operation. All these factors contribute to consumers' negative consumption experiences with vending machine use.

Competition in Vending Machine Business

If vending machine operators do not have a clear understanding of these potential problems and fail to manage them properly, then the problems may have a damaging impact on the vending machine operator's success and the industry's continued growth in the long term. Although the vending machine business often deals with captive consumers, it faces competition just as other consumer businesses do. One of the factors that keep the competitive pressure on the small business owner segment is the low entry barrier (National Automatic Merchandising Association 2002). The low entry has created a market condition that replaces inefficient small vending machine operators with new aspiring vending machine owners constantly. There is also no let up in the competitive pressure from retail stores in the neighborhood. One industry expert advised that vending machine success hinges on offering consumers unique benefits over existing stores, either in lower costs, reliable functions, or quicker service (Learner 2002). The large, institutional segment serves academic communities, hospitals, big corporations, and office buildings. These institutions replace their vending machine operator when they consider the service and quality to be inferior. Recent improvements in food and leisure service at many colleges and universities put more pressure to vending machine operators. Students and staff make the extra effort to walk to the campus center, where they can have better choice and service of drinks or snacks, passing the vending machine if it frequently malfunctions or does not have what they want. The vending machine business is also

vulnerable to the economic down turn as are other consumer businesses. Consumer spending in vending machines decreased about 5 percent in 2001 due to the sagging economy (National Automatic Merchandising Association 2002).

THE PRESENT STUDY: MOTIVATION OF THE STUDY

Although the vending machine industry has witnessed remarkable growth and progress during the past two decades, most changes and improvements in the industry can be characterized as technology-driven, product-oriented, and financially motivated. It is important that vending machine business owners understand consumer behavior regarding vending machine use in order to develop a more customer-oriented marketing strategy, considering the various competitive forces discussed above. This will ensure continued success and allow the industry to compete more effectively with increasingly efficient regular retail stores and other forms of non-store retailers.

One of the challenges facing the vending machine industry is that the very nature of vending machine services makes it very difficult to systematically monitor machine-consumer transactions and/or collect data from consumers regarding their vending machine use in order to deal with these problems. This is especially the case because about 75 percent of the vending machine business is comprised of small-sized business owners who cannot afford such monitoring and research expertise (National Automatic Merchandising Association 2002).

Although several marketing management textbooks touch on the vending machine, their treatment of the topic is less than a page, describing the different types of vending machines, the kinds of products sold, and the technological advances of these machines (see Kotler 2003, Lamb, Hair, and McDaniel 2002; Peter and Donnelly 2003).

There have been no known studies in marketing and consumer behavior literature that have shed light on consumers' usage behaviors and experiences with vending machine services.

A better understanding could be extremely valuable for vending machine businesses in improving their ability to serve consumers more effectively and enhance the value of vending machine services to society.

This study is intended to make an incremental contribution by enhancing our understanding and knowledge about consumers' behavior with vending machine services, including satisfaction, dissatisfaction, and complaining behavior. Based on consumer survey data, this study will explore such issues as: the attributes consumers consider important and relevant for vending machine use; consumers' involvement with vending machines; what consumers think of vending machine services; how they feel about the level of service; the aspects of vending machine services they like or do not like; the level of their satisfaction or dissatisfaction with the service; the areas they want to see improvements in; the kinds of complaints they have and how they resolve those complaints. This study is exploratory and descriptive in nature rather than following a rigorous line of formal hypothesis testing because there is no prior research on vending machine services.

PRELIMINARY STUDIES

Three focus group studies were conducted to explore consumer behavior with food and beverage vending machine services. The exploratory focus group studies had several objectives: 1) to learn about consumer behavior with respect to food and beverage vending machine use, 2) to identify the attributes and benefits of vending machine services that are important to consumers, 3) to understand as much as possible what consumers think and feel about their experience with vending machines, 4) to learn about consumers' satisfaction and dissatisfaction experiences and complaining behavior with vending machine use, and 5) to gather other relevant information which could help develop measurement instruments to conduct a formal survey about consumer experiences with food and beverage vending machines.

Twenty-three participants who said they used

vending machines frequently were recruited at an academic community in the northeastern United States. Three focus group sessions were conducted by the author or a graduate who was trained in focus group studies. Each session consisted of a balanced mix of administrative personnel, faculty, and students. It was found that both student and non-student populations on campus used vending machines very frequently and women appeared to patronize them more than men. Quite a few indicated that they used vending machines almost every day. Undergraduate students used vending machines far less frequently and showed a lower level of interest in them than did non-student participants. Graduate students used vending machine services heavily because they spent a greater amount of time in their department offices and campus buildings.

The focus group studies identified the key attributes and benefits of food and beverage vending machine services: convenience, consistency and reliability of the machine's functions, accessibility (i.e., location), product variety, price, and the security at the vending machine location. It is worth noting that some participants mentioned that "they don't have to deal with people" and "vending machines are less of a hassle than going to the stores." Many of these attributes confirm previous observations and insights documented in the industry reports as reviewed in this introduction. Insights were gained on the participants' dissatisfied experiences and complaining behavior as well. Many of the participants described a variety of unpleasant and dissatisfying experiences with the food and beverage vending machine service. They also expressed various emotional reactions related to the dissatisfactory experiences that included frustration, resignation, anger, bitterness, etc. Their reactions and complaints in response to such dissatisfactions were as diverse as their emotional reactions, ranging from doing nothing, speaking to others, filling out a refund request card, calling the company, and shaking or kicking the machine. Some even confided that they swore at the machine giving them trouble. These findings were used to develop classification schemes of "complaints" and "actions taken" (to be discussed

later). Insights and other relevant information generated from the focus group studies guided the design of the comprehensive survey instrument of the main study.

THE MAIN STUDY

The Sample and Data Collection

A campus mail survey was used to collect data from a university campus in the northeastern United States from all constituents of the academic community - the administrative staff, the faculty, and the students (graduate and undergraduate). The cover page of the survey (see Appendix A) explained its purpose as part of a research project in the business school to learn of the consumers' experiences with food and beverage vending machine services on campus. Five hundred questionnaires (see Appendix B) were distributed to various units of the university - administrative offices (e.g., Admissions, Human Resources, and Registrar), academic departments (e.g., History, Marketing, and Physics), academic support units (e.g., Computer Center, Infirmary, Physical Plant), and dormitories.

A concerted effort was made to maximize the response rate. The cover page of the survey emphasized the importance of participating in the survey to improve the quality of vending machine service around campus by stating that the results of the study would be sent to the company running the campus vending machine services. The research team made contacts with the secretaries of the campus units and asked their cooperation in distributing the surveys to the people in their units. The two page survey was formatted to allow a completed survey to be folded in half, stapled, and then returned to the research team through campus mail to the address that was already printed on the lower half of the cover page. The secretaries were also asked to collect and mail the completed surveys in their division one week after the surveys were distributed. To further increase the response rate, the research team personally requested division heads to encourage their staff and members' participation in the study. Many of them actually did; some even circulated a memo

encouraging participation in the survey. The data from graduate students were collected from their academic offices rather than from the graduate student dormitories because it was found in the focus group studies that many graduate students were living off campus. Collectively, 239 surveys were returned through these combined efforts, resulting in a 47.8 percent response rate.

For undergraduate students, 300 questionnaires were distributed in dormitories. An arrangement was made so that the surveys were available in each of the dormitory offices and the student advisor in each dorm was requested to encourage students' participation. After one week, completed questionnaires were collected in the dormitory offices. Twenty seven surveys were collected, resulting in a mere nine percent response rate. The result, though disappointing, was not surprising considering the undergraduates' low interest in the vending machine as already exhibited in the focus group studies.

Excluding 15 surveys whose responses to main questions were incomplete, a final combined sample of 251 was achieved, yielding an overall response rate of 31.4 percent of the initial 800 surveys. This response rate is considered satisfactory given the very low undergraduate response rate. The sample consists of 38 percent (94) administrative personnel, 28 percent faculty (71), 24 percent graduate students (60), and 10 percent undergraduates (24). Thirty-nine percent of the sample are singles, 50 percent are married, and the remaining 11 percent fall in the other (including missing data) category and non-responses to the question. The median age of the respondents is 36 with a range between 18 and 67. Sixty-seven percent of the respondents were female and 33 percent were male, which is consistent with the focus group studies in which female participants showed a higher level of food and beverage vending machine use. The above sample demographic profile indicates that the opinions of and experiences with the vending machine use of the participants in this study reflect reasonably well those of vending machine users in the sampling frame.

METHOD AND RESULTS

Involvement with Food Vending Machine Services

Zaichkowsky (1985) defined involvement as an individual's enduring perception of how relevant an object is, based on inherent needs, values, and interests. Involvement is one of the most important constructs that affects consumers' consumption experience. Therefore, it was of high interest to know how much (or little) the participants were involved with food and beverage vending machine services. The construct has been used in the services marketing context as well as in the traditional physical marketing context. A subset of Zaichkowsky's (1985) personal involvement inventory (PII) was used to measure the participants' involvement with vending machine services. Although the PII was originally developed as a set of twenty semantic differential scale items, later research revealed its redundancy (Lichtenstein, Block, and Black 1988; Munson and McQuarrie 1987). Reduced sets of items have been shown to effectively measure the construct (Celuch and Taylor 1999, Stafford and Day 1995, Zaichkowsky 1994). Seven items were initially chosen from the PII by the author by considering their face validity and relevance to vending machine use. The seven items, then, were presented to the focus group participants for their comments on their relevance regarding vending machine use. Based on careful analysis of their comments, four items were selected to be included in the study. Due to the fact that involvement was designed to be measured in the beginning section and the space constraint of the survey, the brevity of the scale was an important practical concern. The four items are: 'useless - useful,' 'unimportant - important,' 'not beneficial - beneficial,' 'means nothing to me - means a lot to me.' Seven point semantic differential scale items (1 to 7) were used to measure the participants' responses to these items. Following Zaichkowsky, the four items were used as the anchors for responses to the question, "In general, I consider the food and beverage vending machine ____." To check whether the four item scale constitutes the uni-

dimension of involvement with vending machines, the participants' responses were submitted to the factor analysis. As expected, all four items were loaded on one factor and they accounted for 69.72% of the variance (see Appendix C for detail). The Cronbach's alpha of this four item scale was .85. The observed alpha for this four item involvement scale is considered high because the alpha is a positive function of the number of items in the composite and when the number of items is small in the composite, the alpha tends to be conservative (Churchill and Peter 1984; Lord and Novick 1968).

The results showed that means for the four items were: 5.74 for 'useless - useful,' 5.23 for 'unimportant - important,' 5.28 for 'not beneficial - beneficial,' and 5.11 for 'means nothing to me - means a lot to me.' The mean value of the four items was 5.34. Zaichkowsky (1985) theorized that the theoretical mean for all 20 scale items of the PII is "4" and that a score below 3.54 indicates the product is a low involvement item while a score above 5.55 indicates it is a high involvement product. The mean values of some selected products presented in her 1985 study are: instant coffee 3.35, mouthwash 3.7, red wine 4.2, headache remedy 4.55, color TV 4.85, laundry detergent 5.15, calculator 5.6, and automobile 6.2. A later study reported a mean value of 4.96 for laptop computers (Lee and Olshavsky 1995). It may be feasible, although not testable in this study, to think that people whose involvement with vending machines is high may have returned the survey more than those whose involvement is low.

Taken together, it was concluded that the respondents' involvement with the food and beverage vending machine service is fairly high. The participants considered vending machine services as very useful, beneficial, important, and as meaning a lot to them.

Usage and Popular Items on the Vending Machine

Although we know and observe that many people use vending machines, there is no reported statistics about the frequency of their use.

Therefore, we wanted to quantify the consumers' usage frequency. The participants were asked how many times they use vending machines during a week. On average, the participants used vending machines about 3 to 4 times ($\bar{x} = 3.43$, $sd = 2.86$) during a week. Eighty percent indicated that they use vending machines "1 - 5" times a week.

Next, analysis turned to discovering which items are popular in food and beverage vending machines. Respondents were asked to rank product types (that were identified in the focus group studies) according to how often they buy them from vending machines. Canned beverages are the most frequently purchased item, followed by a variety of snacks (including cookies, chips, candy bars, popcorn, etc.), and bottled soft drinks, respectively. Healthy foods (e.g., yogurt) and frozen foods (e.g., microwave meals) are also shown to be popular items. Hot drinks, milk, and fresh fruits (in that order) are less frequently purchased in vending machines. This result confirms previous industry reports that beverages and snacks hold a lion's share of the vending machine business. Cold beverages account for almost 30 percent and snacks account for about 26 percent of vending machine sales (Vending Times 2002).

Opinions and Attitudes Toward Vending Machine Services

First, participants' opinions about food and beverage vending machine operations were probed by asking "How would you evaluate the food and beverage vending machines operations on campus?" Two 7 point bipolar scales, 'unfavorable - favorable' and 'negative - positive' were used to measure the participants' responses. Their overall evaluation, although slightly above the neutral point ($\bar{x} = 4.17$) is a far cry from an enthusiastic response. Rather, it represents a tepid evaluation, considering participants' high involvement with vending machines. Next, their opinions and evaluations of specific aspects of vending machine operations were analyzed. These measurement instruments and mean values are presented in Table 1. In line with their

lukewarm evaluations, six of the twelve specific aspects of vending machine service operations were evaluated below the median point (4) of the scale. Three areas that received the lowest evaluations are the unavailability of filing a complaint ($\bar{x} = 2.44$), the high price of products ($\bar{x} = 3.01$), and inaccurate/no change ($\bar{x} = 3.30$). Three areas were evaluated favorably. Respondents gave high marks for the convenient location of the vending machines ($\bar{x} = 5.27$); the clean maintenance of vending areas ($\bar{x} = 4.73$) and the freshness of the items dispensed from the machine ($\bar{x} = 4.45$).

Although many of the items asked in the questionnaire may be context-specific to a particular academic community, it is reasoned that the findings are very likely to reflect consumers' experiences with food and beverage vending machine services in other campus communities, considering the similarities of the vending machine business at colleges and universities. It is also reasoned that the result would be a close representation of ordinary users' evaluations of the services at similar venues such as large office buildings, considering the fairly diverse profile of the participants.

Satisfaction/Dissatisfaction with Vending Machine Services

Participants' satisfaction and dissatisfaction with vending machine services were analyzed. First, their responses to "Overall, how satisfied or dissatisfied have you been with your experiences using the vending machines on campus?" were measured on a 7 point global scale of 'highly dissatisfied - highly satisfied.' This global measure of satisfaction has been used in past consumer satisfaction research (Lee and Leelakulthanit 1994; Oliver and Bearden 1983). The respondents felt neither positive nor negative toward their experience with the vending machine services ($\bar{x} = 4.0$, $sd = 1.46$). Next, their level of dis/satisfaction with the vending machine service in general, not limited to their on-campus vending machine experience, was analyzed. They were asked, "Overall, how satisfied or dissatisfied have you been with your experiences using vending

Table 1
Evaluations and Opinions of Vending Machine Services

<u>Items*</u>	<u>Mean (SD)</u>
The vending machines are 'inconveniently - conveniently' located.**	5.27 (1.53)
The areas in which vending machines are located are 'dirty - clean.'**	4.73 (1.55)
Products dispensed from the machines are 'stale - fresh.'	4.45 (1.44)
The bill changing machines 'never - always' function properly.	4.39 (1.90)
The vending machines 'never - always' function properly.	4.18 (1.40)
The range of product types available in the machines is 'narrow - wide.'**	4.01 (1.57)
The variety of available choices for each product type in the machines is 'poor - excellent.'	3.81 (1.45)
Security in the areas where vending machines are located is 'poor - excellent.'	3.62 (1.59)
The nutritional information on the items in the vending machine is 'difficult - easy' to read.	3.61 (1.90)
The vending machines 'never - always' require exact change.	3.30 (1.36)
The prices of products in the vending machine are 'expensive - inexpensive.'	3.01 (1.53)
The available means in which you can file a complaint are 'unsatisfactory - satisfactory.'	2.44 (1.65)

* In the survey, the bipolar adjectives were anchored on a 7 point scale which was presented separately to respondents from the question itself. For example, Question: "The vending machines are _____ located."

Response: 'inconveniently 1 2 3 4 5 6 7 conveniently'

** These questions were reversely phrased in an effort to minimize potential pattern responses, and hence the means of those items were converted to make them comparable to the means of other items.

machines in general: on campus and off campus?" Their responses on the same global scale ($\bar{x} = 4.31$, $sd = 1.34$) indicate that their experience with the vending machine service in general is slightly better than their experience with the vending machine service on campus. Taken together, the results indicate that the level of services consumers experience with vending machine use is not sufficiently satisfactory in light of the benchmark standard of consumer satisfaction reported by Jones and Sasser (1995). They reported that when measured on a 1 (completely dissatisfied) to 5 (completely satisfied) scale, satisfied consumers (4) are six times more likely to defect than completely satisfied consumers (5). They concluded that in today's highly competitive marketing environment, even satisfaction is not sufficient. Therefore, this result indicates that food and beverage vending machine business owners, especially the on-campus operators, must improve their services and operation. Further analysis revealed the interesting fact that there are negative correlations between the participants' satisfaction and their involvement with vending machines ($r = -0.30$, $p = .001$ for general

satisfaction; $r = -0.28$, $p = .01$ for on campus satisfaction). The higher the degree of involvement with vending machines, the greater the degree of dissatisfaction with the vending machine service.

Comparison of Vending Machine and Retail Store Shopping Experiences

The vending machine represents one of the most important alternative distribution channels to traditional retail store for consumers, especially for food and beverage items. Therefore, it is especially useful to find out how consumers compare their shopping experience with vending machines to their shopping experience for similar products at traditional retail stores. Although retail stores and vending machines offer different kinds of benefits and consumers may use different shopping criteria, consumers are likely to be able to make an overall comparative evaluation, considering that retail stores are the closest substitute for vending machines for food and beverage items and the two compete at the core benefit level (Kotler 2003). Therefore, this

Table 2
Vending Machine Shopping vs. Store Shopping

"How would you compare the above feeling with your equivalent shopping experiences at regular retail stores?"*

<u>Scale</u>	<u>Percentage</u>
1. much worse	14.6
2. somewhat worse	25.5
3. slightly worse	17.8
4. about the same	27.1
5. slightly better	4.0
6. somewhat better	4.0
7. much better	<u>6.9</u>
	100% (total 247)

* This refers to the overall satisfaction/dissatisfaction with the vending machine experience in general that was asked in a preceding question (see Appendix B).

comparative evaluation will help vending machine operators diagnose the level of their services and operation. The respondents were asked how their shopping experiences with vending machines compare to their comparable shopping experiences at regular retail stores. Responses were measured on a 7 point scale of 'much worse' (1) to 'much better' (7). It was revealed that their satisfaction with vending machines is lower than the satisfaction they experienced at regular retail stores ($M = 3.2, sd = 1.65$).

As shown in Table 2, only 10.9 percent considered their vending machine experience 'better' than their equivalent retail store experience, whereas 43.3 percent thought their vending machine experience was 'worse' and 27.7 percent considered the two shopping experiences to be the same. It was also determined that the more the respondents were involved with vending machines, the more negatively they viewed their experience with vending machines as compared to their comparable retail store shopping experiences ($r = -0.16, p = .012$). This finding is consistent with the

participants' generally negative or lukewarm experiences with vending machine services. Therefore, it is concluded that consumers' shopping experience with vending machines is not up to par with comparable shopping experiences in retail stores.

Dissatisfying Experiences with Vending Machine Services

There are many anecdotes and personal experiences which attest that vending machines give rise to a host of problems for their users. This study is intended to identify and document such dissatisfying experiences and incidents regarding food and beverage vending machine use. The participants were asked to describe an occasion in which they had a negative experience with a vending machine. Two hundred forty-four out of two hundred fifty-one participants responded to this open-ended question with 189 respondents (77%) indicating the incident took place on campus and 55 (23%) indicating the incidents took place off campus. One hundred

Table 3
Dissatisfying Experiences with Vending Machine Services

<u>CATEGORIES</u>	<u>FREQUENCY</u>
1. <i>Machine Malfunction</i> <ul style="list-style-type: none"> • The machine took money but did not dispense the desired item. • The product got stuck in the machine. • The machine repeatedly rejected dollar bills. • The machine gave incorrect or no change. • Coins got stuck in the machine. • The machine dispensed an incorrect item. • No change was returned when an item was not available. • A can of soda opened inside the machine, making a mess. • A finger got hurt on a vending machine which had a faulty coin return lever. 	109
2. <i>Inadequate or No System of Requesting Refunds and Filing Complaints</i> <ul style="list-style-type: none"> • Refunding required unreasonable amounts of effort. • Stale items could not be exchanged. • Complaint cards were not available. 	63
3. <i>Lack of Responsiveness to Complaints</i> <ul style="list-style-type: none"> • The Vending Services Office was not responsive to complaints. • Never got any response after mailing out a refund card. • Didn't get the refund that they said they would process when I called. 	37
4. <i>Poor Quality of Food Items in Vending Machines</i> <ul style="list-style-type: none"> • The food item was stale. • Food quality was abominable. • When school was not in session, milk was spoiled. • Apples were bruised. • Peaches were wrinkled. 	20
5. <i>Inadequate Service with Vending Machine Operations</i> <ul style="list-style-type: none"> • Preferred items were out of stock in the vending machine. • Many items were not stocked in the vending machine. • No bill changer was available in the vicinity. • No napkins or paper trays were available at the vending machine site. 	11
6. <i>Others</i>	4

forty-eight (61%) indicated the incident happened within the past year, indicating the experience is relatively fresh in their memories. The high proportion of respondents (97%) to this question suggests that the negative feelings arising from the incidents were strong. Respondents' descriptions were classified into five broad categories: 1) various kinds of machine malfunctions and defective vending machines; 2) the inadequate system of refund request and filing complaints 3) the vending machine operators' lack of

responsiveness to users' complaints; 4) quality of food items offered in the vending machine; 5) the various inadequate service aspects surrounding vending machine operations.

Next the respondents' emotional status at the time of the incident they had described was probed, asking "how did you feel when you were faced with the situation just described?" Their responses were measured on two 7 point scales of 'very frustrated' (1) to 'not at all frustrated' (7) and 'very angry' (1) to 'not at all angry' (7). The

means were 1.96 (sd = 1.18) for 'frustrated' and 2.30 (sd = 1.25) for 'angry.' It is evident that the respondents experienced very strong negative emotions in relation to the incidents.

Complaining Behaviors

As described previously, vending machines give rise to a host of problems and frequently frustrate users. To discover what kinds of complaining actions the users take when they experience problems, respondents were asked, "what action did you actually take regarding the problem with the vending machine you just described?" A list of alternatives was provided that had been identified in the focus group studies.

The respondents were told to check more than one item if appropriate. Research has shown that some consumers take multiple complaining actions (Blodgett and Granbois 1992, Huefner and Hunt 2000), as was confirmed in the focus group studies. Table 4 presents various complaints actions and descriptive statistics of the actions the respondents took. The complaint actions are grouped into no action, private action, negative word of mouth, exit, public action, and redress seeking action categories. As shown in the table, users reported various complaining behaviors. The private form of complaining behavior, "pounded or banged the machine out of frustration or anger" is ranked first (19.4%), closely followed by no action (18.9%). There may well be various motives behind this action. If such an act is out of simple emotional venting, it may not be a complaint action. However, if the intention was to leave behind a physical sign of displeasure to the vendor by inflicting physical damage on the machine, such an act is clearly a form of private complaint action. Another prevalent type of complaining was negative word of mouth by "talking to other people about the incident" to express their frustration with the incident (18.3%). Sixteen percent of the respondents stopped using the machine that gave them trouble (exit). Some respondents engaged in a public form of complaining either by "posting a note of warning on the machine for others" (5.4%) or by talking to the available personnel on site or a nearby office

(5.8%). Some determined consumers actually took "redress seeking complaining actions." They filed their complaint and asked for a refund by filling out a refund request form and mailing it (13.1%). A small number of people took pains in calling the company to lodge their complaint and ask for a refund (3.1%).

Comparable Retail Store Complaints

Since many consumers have dissatisfying experiences with various small retail store purchases similar to ones made with vending machines, we were very interested in finding out how the respondents would have reacted if they had experienced a similar incident in a traditional retail store. The question "if you had the same kind of experience at a regular retail store, were you likely or unlikely to have taken some action? (e.g., ask for a refund, ask for a replacement, complain to the service clerk)" was asked. The respondents' reactions to this inquiry were measured on a 7 point scale of mostly likely (1) - not likely (7). The overall mean is 1.91 (sd = 1.56) which is much lower than median point of 4. This may help us understand why the respondents expressed strongly negative emotions at the time of the incidents as described previously. That is, considering that they most likely would have complained to the store employee if they had such an incident (or a similar one) in a store, it is natural that their frustration and/or anger were intense because nobody was on site to complain or no system of remedy was available. Further analysis with the mean values broken down into the complaint action categories offers additional insight. The mean values presented in the last column of Table 4 reveal the pattern of correlations between the complaint actions they took and the likelihood of taking remedy seeking actions in stores. That is, as the respondents' complaint actions regarding vending machines move from no action, to private action, to public action, to remedy seeking actions, the likelihood of their taking remedy seeking actions at regular retail stores also gets higher. The oneway ANOVA showed that the means were significantly different ($F = 2.50$, $df = 8$, $p = 0.017$). This may

Table 4
Summary of Complaint Actions Taken

COMPLAINT ACTIONS	VENDING MACHINES			RETAIL STORES		
	Frequency	Percentage	Rank	If it happened in a store*		
				\bar{x}	(sd)	frequency
<i>No Action</i>						
Did nothing	85	18.9%	2	2.44	(2.04)	55
<i>Private Action</i>						
Pounded or banged the machine out of frustration or anger	87	19.4	1	2.44	(1.91)	27
<i>Negative Word of Mouth</i>						
Talked to people about the incident and/or warned them of it	82	18.3	3	1.61	(0.96)	28
<i>Exit</i>						
Stopped using the vending machine that caused them trouble	72	16.0	4	1.91	(1.59)	46
<i>Public Action</i>						
Posted a note on the machine warning others	24	5.4	7	1.50	(1.23)	6
Talked to available personnel on site or at a nearby office	26	5.8	6	1.36	(0.50)	14
<i>Redress Seeking Action</i>						
Filled out and mailed a Refund Request Form	59	13.1	5	1.51	(1.12)	13
Called the company to complain	14	3.1	8	1.62	(1.12)	13
	449**	100%				

* If you had the same kind of experience at a regular retail store, were you likely or unlikely to have taken some action?

1 (most likely) - 7 (not likely)

** Since the participants were allowed to check more than one item, the total frequency is greater than the sample size (n = 251).

suggest that there are certain personal traits that influence individuals to take different types of complaint actions when they experience dissatisfying incidents. Day, Grabicke, Schaeztle, and Staubach (1981) proposed that an individual's "propensity of complain" influences a dissatisfied consumer's complaining behavior.

Vending Machine Company's Responses to Customer Complaints

To find out how vending machine operators responded to the customers' complaints, respondents were asked whether they received a satisfactory remedy from the vending machine service company for their complaint. Among the 99 respondents who had taken a redress seeking complaint action against the company (i.e., those who had checked one of the items under Redress Seeking Actions in Table 4), only 28 people

(22%) indicated that they received a satisfactory remedy. This figure does not compare positively with the previously reported comparable figures. Strauss and Hill (2001) reported that among the consumers who complained through e-mail to the retailers and manufacturers in the U.S., 47 percent received responses and 26 percent received redress. Moore, Maxwell, and Barron (1996) found that 39 percent of consumer complaints received responses and 29 percent received an apology or explanation from the retailers in Britain. This finding explains why the lack of responsiveness to complaints is high on the users' complaint list and underlines the importance of improving the availability of and the handling of refund requests and complaints.

Improvements Users Suggested. It would be of great interest for vending machine operators to be aware of the suggestions consumers have for

Table 5
Suggestions for Improvements*

SUGGESTED ITEMS	FREQUENCY
1. Offer a wider variety of items.	53
2. Offer more healthy and nutritious items.	42
3. Improve refund and complaint processes.	35
4. Reduce prices.	22
5. Improve the mechanical functioning of the machines.	19
6. Increase the number of vending machines and available locations.	14
7. Improve attendant services.	13
8. Improve maintenance of machines.	11
9. Improve the quality and freshness of items carried.	10
10. Improve the convenience of vending machine locations.	8
11. Introduce new technology to vending machines.	6
12. Others	6

* Some respondents listed more than one suggestion, each of which was counted as a separate item.

improving vending machine services. They were asked: "what kinds of improvements on vending machines would you like to suggest to the vending machine service company to serve you better?" The respondents offered many useful, legitimate, and interesting suggestions. A number of wide ranging suggestions are grouped into ten categories based on the contents of the comments. These categories and their frequencies are presented in Table 5. Although respondents mentioned all five types of the dissatisfying experiences discussed previously, the scope of their suggestions is much broader and reveals many areas that do indeed need attention of vending machine operators. Topping the list is the respondents' desire for a wider variety of food and beverage products carried in vending machines. Next is their desire for healthier and more nutritious items available. Improvements in refund request and complaint filing is the third item. This particular problem, which received the worst evaluation in the survey, has consistently been identified as the most serious drawback of vending machine services in this study. Respondents also suggested that the prices of

products sold in vending machines be reduced. As indicated, prices received the second lowest evaluation. Consumers would also like to have more vending machines available, as well as an improved level of service and maintenance. Other suggestions include higher product quality, more convenient locations, and enhancement of technology.

DISCUSSION

Despite the ever-increasing presence and pervasiveness of vending machines in consumers' lives, there have been no studies in marketing and consumer behavior literature that have investigated consumers' consumption experiences with vending machines. This study reported the first empirical findings on consumers' usage behavior, opinions, attitudes, satisfaction, dissatisfaction, and complaint behavior regarding the services rendered by food and beverage vending machines.

The results show that the consumers' involvement level with vending machines is higher than with many products that have long

been a part of consumers' daily lives at home such as TV, coffee, laundry detergent, and red wine. Consumers recognize vending machines as quite useful, beneficial, and important. Their frequent use of a variety of food and beverage products in vending machines, indicates the value of vending machines in their lives. These findings testify that the vending machine has actually become one of the most important non-store marketing channels as Quelch and Takeuchi (1981) predicted more than two decades ago. The vending machine industry should develop strategies to preserve and solidify these invaluable assets, the high consumer involvement and patronage. At the same time, the industry needs to look at those problem areas exposed in this study and incorporate consumers' suggestions for improvements, for its continued growth and expansion.

Compared with the high consumer involvement and patronage, vending machine services received only tepid evaluations in many areas. While consumers' evaluations were positive in location convenience, cleanness of vending machine sites, and freshness of items bought, their opinions about many other aspects were not as positive. Consumers were highly critical of the refunding request and complaint filing procedures, product prices, and machine functional problems. Satisfaction and dissatisfaction data reveal that consumers are not sufficiently satisfied with their vending machine experiences. This finding should be taken as a serious warning sign that the food and beverage vending business owners must improve their operation and services. Consumers' unfavorable comparison of their vending machine experiences to their shopping experiences at retail stores combined with their dissatisfying experiences confirm the seriousness of these lukewarm consumer evaluations and lower satisfaction level. Only about 11 percent of consumers consider vending machine shopping to be more satisfying than their comparable store experience. Vending machine operators must enhance the consumer's desire for shopping with vending machines by addressing the problems identified in the study.

The three areas in which consumers were most greatly dissatisfied as revealed in this study are all

intertwined. Machine malfunctions result in the loss of money; users are frustrated with the inadequate system of requesting refunds and filing complaints; and those who do ask for a refund or complain either do not receive a satisfactory remedy from vending machine operators or get no response to their complaint all together. One of the clearest findings that emerged from this study is that consumers become very frustrated and angry when there is a lack of or no existence of a system at vending machine locations that would allow them to solve these problems. This appears to be a continuing source of frustration, anger, and dissatisfaction.

The weakest part of vending machine transactions is that the machine alone handles all aspects of a transaction with no human contact or interaction. Most of the consumer dissatisfactions and complaints identified in this study probably would have never occurred or might have been easily resolved if a service person was at hand. However, this no-human contact is the very essence of the vending machine business and cannot be corrected. Although the level of service or communication at vending machine sites will not match the face-to face interactions in stores, proper accommodations at vending machine sites can significantly mitigate these problems. Providing refund request cards or envelopes in which the user is allowed to briefly describe the nature of the incident/complaint, the amount of money lost, and the mailing/contact address, or merely posting a 1-800 phone number(s) to call would be sufficient in addressing most of the consumers' problems. However, it is very surprising to discover that these relatively simple procedures are not in place at so many vending machine sites. The results of this study have confirmed the previous findings that a lack of proper procedures contributes to dissatisfaction and negative word of mouth (Blodgett, Granbois, and Walters 1993, Tax, Brown, and Murali 1998). It is important to note that when consumers have no recourse or venue for complaining or remedying their problems, their intensely negative emotions of frustration and anger would lead some consumers to engage in retaliatory actions including vandalism (Huefner and Hunt 2000).

Vandalism has actually been one of the vending machine industry's most prevalent problems and is a chronic source of economic damage to vending machine operators (Fitzell 1991, Sfiligoj 1994). In conclusion, the provision of complaining procedures and a refunding system at vending machine sites should be one of the most immediate areas of improvement from both managerial and economic perspectives. It is also important for vending machine operators to be far more responsive to consumer complaints to enhance the consumers' perception of procedural justice. It is unsettling that among those who took a formal complaint action, only 22% reported that they received a satisfactory remedy by the vending machine service company.

The present study identified various forms of complaining actions that vending machine users take. Most of them are private forms of complaining actions along with mild forms of public complaining actions, including negative word of mouth. Although a relatively small proportion of users (16%) took formal complaint actions, this proportion is much higher than the complaint ratio of about 10% reported by Technical Assistance Research Programs (1986). This is a clear indication that users are highly involved with vending machines and that the level of user dissatisfaction with vending machines is high.

Although the present study is primarily descriptive, intriguing findings regarding consumer involvement warrant more careful investigations about its role in consumer satisfaction and dissatisfaction in service marketing settings. It was found that the more the consumers are involved with vending machines, the more dissatisfied they are with vending machine services, and the more negatively they rate their experiences with vending machine shopping in comparison to similar retail store shopping experiences. It is postulated that when the level of vending machine service is low as found in this study, highly involved consumers who use vending machines more will be more sensitive to dissatisfying experiences than low involvement consumers. By the same logic, when the level of service quality is high, highly involved

consumers are more likely to experience a higher level of satisfaction than less involved consumers. Empirically testing these propositions will offer new insight into the relationship between satisfaction/dissatisfaction and involvement in services marketing. Celuch and Taylor (1999) have suggested that involvement research holds the potential for increasing our understanding of customer-service relationships, as well as offering insights to service marketing practitioners.

Although this research is the first empirical study that has shed light on consumer behavior with vending machine services, the study has some limitations. This study is based on a sample from a single academic community. Although academic and office locations account for about 37 percent of food and beverage vending machines, there are other important venues such as manufacturing and warehouse facilities (35 percent) and retailing sites (12%) (National Automatic Merchandising Association 2002). More empirical studies with such vending machine venues need to be conducted to discover similarities and differences among them. That will help us get a more comprehensive view of consumer behavior and experiences with vending machine use. Since the present study only dealt with the food and beverage vending machine, consumer experience with other types of vending machines (cigarettes, music CDs, and sundries/toiletries, whose shares in the vending machine business are growing) needs to be investigated in future research.

Despite these limitations, the present study makes contributions to non-store marketing and consumer behavior literature by shedding light on various aspects of consumer behavior with food and beverage vending machines, including satisfaction, dissatisfaction, and complaining behavior.

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**Appendix A
 Cover Letter and Instructions**

A SURVEY
 ON
 THE EXPERIENCE WITH FOOD AND BEVERAGE VENDING MACHINES

Dear Participant:

The marketing research team in the School of Business is conducting a consumer satisfaction study. Please take a few moments to complete the attached survey. The study is about your experiences with food and beverage vending machines, including the ones around campus. The result of this study will be made available to the company that operates vending machines on campus. Thus, your participation in the survey is very important in improving the vending machine service around campus. Please be assured that your responses will be confidential and anonymous. If you have any questions about the study, call Professor Dong H. Lee, School of Business, at xxx-xxxx. Thank you very much for assisting us in this study.

P.S.: Please return your completed survey by Campus Mail. Fold the survey in half and staple it. The return address is already printed on the lower part of this page. We would appreciate your returning the survey as soon as possible - hopefully within 5 days.

**Appendix C
 Factor Analysis of Four Involvement Items**

<u>Variables</u>	<u>Factor Loading</u>	<u>Communality</u>
Useful	.718	.515
Important	.873	.762
Beneficial	.868	.753
Means to me	.871	.758

Eigenvalue (Sum of Square): 2.79

Percent of Variance: 69.72

Unrotated one factor was extracted by principal component analysis.

Appendix B
Questionnaire*

Please circle the number on the scale below that best indicates your feelings.

In general, I consider the food and beverage vending machine:

- | | | | | | | | | |
|---------------------|---|---|---|---|---|---|---|-------------------|
| Useless | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Useful |
| Unimportant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Important |
| Not Beneficial | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Beneficial |
| Means nothing to me | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Means a lot to me |

Approximately, how many times do you use vending machines during a full week: *on campus and off campus?* _____ time(s) (e.g., 0, 1, 2, 3,)

- 1 2 3 4 5 6 7

Please rank these product types according to how often you buy from vending machines. Put a 1 next to the one you buy most often, a 2 for the second most often, and so forth.

- | | | | |
|----------------------|---|---------------------------|------------------|
| ___ Bottled beverage | ___ Fruits (e.g., apple) | ___ Milk | ___ Health foods |
| ___ Canned beverage | ___ Snacks (e.g., cookies, chips, candy bars, popcorns) | | |
| ___ Hot drinks | ___ Frozen foods (meals) | ___ Other; Specify: _____ | |

How would you evaluate the vending machines *operations* on campus? (food and beverage)

- | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|-----------|
| Unfavorable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Favorable |
| Negative | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Positive |

Below is a set of statements about the vending machines service on campus. Please circle the number from the scale that indicates your opinion most accurately.

1. The vending machines are _____ located.
 Conveniently 1 2 3 4 5 6 7 Inconveniently
2. The areas in which vending machines are located are _____.
 Clean 1 2 3 4 5 6 7 Dirty
3. The prices of products in the vending machine are _____.
 Expensive 1 2 3 4 5 6 7 Inexpensive
4. The range of product types (see question B) available in the machines is _____.
 Wide 1 2 3 4 5 6 7 Narrow
5. In general, the variety of available choices for each product type in the machines is _____.
 (e.g.: brands, flavors, low fat vs. regular, low sugar, low calorie, chicken burrito vs. hamburger)
 Excellent 1 2 3 4 5 6 7 Poor
6. Products dispensed from the machines are _____.
 Stale 1 2 3 4 5 6 7 Fresh

**Appendix B (cont.)
Questionnaire**

7. The vending machines _____ function properly.
Always 1 2 3 4 5 6 7 Never
8. The bill changing machines _____ function properly.
Always 1 2 3 4 5 6 7 Never
9. The vending machines _____ require exact change.
Always 1 2 3 4 5 6 7 Never
10. The nutritional information on the items in the vending machine is _____ to read.
Difficult 1 2 3 4 5 6 7 Easy
11. Security in the areas where vending machines are located is _____.
Poor 1 2 3 4 5 6 7 Excellent
12. The available means in which you can file a complaint are _____.
Unsatisfactory 1 2 3 4 5 6 7 Satisfactory

Overall, how satisfied or dissatisfied have you been with your experiences using the vending machines on campus?

Highly Dissatisfied 1 2 3 4 5 6 7 Highly Satisfied

How satisfied or dissatisfied have you been with your experiences using vending machines in general: on campus and off campus?

Highly Dissatisfied 1 2 3 4 5 6 7 Highly Satisfied

How would you compare the above feeling with your equivalent shopping experiences at regular retail stores?

much worse somewhat worse slightly worse about the same slightly better somewhat better much better

What kinds of improvements on vending machines would you like to suggest to the vending machine service company to serve you better? List suggestions if you have any.

Think about an occasion in which you had a negative experience with a vending machine whether it was an on-campus or off-campus incident.

1. Please describe the situation very briefly.

This happened _____ on-campus; _____ off-campus in _____ (year).

2. How did you feel when you were faced with the situation just described? Circle the number that best indicates your feelings.

Very Frustrated 1 2 3 4 5 6 7 Not at all Frustrated

**Appendix B (cont.)
Questionnaire**

- Very Angry 1 2 3 4 5 6 7 Not at all Angry
3. If you had the same kind of experience at a regular retail store, were you likely or unlikely to have taken some action? (e.g., ask for a refund, ask for a replacement, complain to the service clerk)
- Most Likely 1 2 3 4 5 6 7 Not Likely
4. What action did you actually take regarding the problem with the vending machine you described? You can check more than one item if appropriate.
- (1) Did nothing
- (2) Pounded or banged the machine out of frustration or anger
- (3) Talked to people about the incident and/or warned them of it
- (4) Stopped using the vending machine that cause the trouble
- (5) Posted a note on the machine warning others
- (6) Talked to available personnel on site or nearby office
- (7) Filled out and mailed a Refund Request Form
- (8) Called the company to complain
- (9) Other: *Please describe.* _____
5. If you checked item (7) or (8) (if you did not, skip this question), did you get a satisfactory remedy? Yes No

The information you provide here will help us to understand the results of this study better. Please be assured that your responses are anonymous and confidential.

Status: Freshman Junior Graduate Staff
 Sophomore Senior Faculty Other

Residence: On Campus Off Campus

Sex: Male Female

Marital Status: Single Married Other

Age: _____

Thank you very much for your participation.

* The original survey included a number of other questions that are not presented here because they were not relevant to the present study. However, the sequence of questions presented here is the same as in the original questionnaire.

MEASURING *AFFECTIVE RESPONSE TO CONSUMPTION* USING RASCH MODELING

Alexandra Ganglmair, University of Otago
Rob Lawson, University of Otago

ABSTRACT

The historic conceptualization of satisfaction has been criticized in recent years as emotions and affect gained an increasingly important position in marketing (Bagozzi, Gopinath and Nyer 1999; Erevelles 1998). This paper describes the development of a scale to measure *Affective Response to Consumption (ARC)* using Rasch Modeling. The concept is an extension to satisfaction that has arisen out of both assessment of literature in satisfaction and attempts to address problems in measuring satisfaction.

Rasch Modeling (Rasch 1960/80) is introduced as a measurement technique that is particularly suited for *ARC*, where items need to differ significantly in the intensity of the concept they represent. The final scale consists of 13 items ranging from *impressed* to *euphoric*. The newly developed scale distinguishes respondents with highly positive experiences, where commonly used scales, such as the Delighted-Terrible scale (Andrews and Withey 1976), fail to discriminate.

BACKGROUND: CONCEPTUALIZING *ARC*

Historically, satisfaction was conceptualized as a cognitive construct (Westbrook 1989), with Oliver's (1980) expectation-disconfirmation paradigm being regarded as the dominant model (Fournier and Mick 1999; Halstead, Hartman & Schmidt 1994). In the mid 1990s, research had started to not only criticize the overwhelming dominance of this paradigm (Hunt 1993) but also increasingly investigated affective antecedents of satisfaction (e.g. Brockman 1998; Dube-Rioux 1990; Evrard and Aurier 1994; Oliver 1994,1992,1989; Mano and Oliver 1993; Westbrook 1989; Westbrook and Oliver 1991; Wirtz, Mattila and Tan 2000).

In the last few years, a number of studies have been conducted that re-examine established

satisfaction research, especially regarding the difference between satisfaction and other emotional post consumption responses (Gardial, Clemons, Woodruff and Burns 1994; Fournier and Mick 1999; Giese and Cote 2000, Nyer 1998). Growing evidence points towards satisfaction itself being an emotional consumption response, and "not merely a consequence of other emotions" (Nyer, 1998, p.62). Conceptualizing satisfaction as a consumption emotion is not new but was proposed in the early 1980s by Day (1983) and Sirgy (1984) and has recently received renewed attention. Giese and Cote (2000) as well as Gardial et al. (1994) found that consumers swap *satisfaction* for other, highly emotional words when talking about their experiences. Bagozzi, Gopinath and Nyer (1999) make this point very clear when they question the difference between satisfaction and other positive emotions by stating that: "The centrality of satisfaction in marketing studies is perhaps more due to being the first emotion to receive scrutiny in postpurchase behavior research than to constituting a unique, fundamental construct in and of itself (p.201)".

The debate about satisfaction as a cognitive or emotional construct is sometimes confused because when using self-reports like questionnaires, responses to questions about different emotions will always be cognitive. *Emotional feeling* or *affect* occurs when one becomes consciously aware of activities of the emotional system in the brain, which are necessary to process written questions (LeDoux 1996, Cacioppo and Bernstein 1999). Growing evidence, (Gardial et al. 1994; Fournier and Mick 1999; Giese and Cote 2000, Nyer 1998) suggests that satisfaction, happy and pleased etc. belong to the same group of terms commonly referred to as *emotions*. If satisfaction is conceptualized as an emotional response, just like e.g. happy, all terms related to these affective state could be measured on one dimension. As we will measure these emotional states using self-reports we will refer to

them as *emotional responses* or *affect* in order to credit the cognitive process involved.

In line with the above-mentioned research, Ganglmair and Lawson (2002) have conceptualized *Affective Response to Consumption (ARC)*. *ARC* is a construct measuring emotional responses with satisfaction being regarded as one of a large number of possible unfavorable/favorable responses to an experience. This conceptualization enables the inclusion of stronger affective states and shifts the emphasis from the linguistically relatively weak word satisfaction, as derived from the Latin *facere* – to do or make and *satis* – enough (Schumm 1999), to a multitude of positive affects that are found in post-purchase/post-experience situations (Fournier and Mick 1999; Gardial et al. 1994; Giese and Cote 2000). Investigating *ARC* emphasizes the diversity amongst consumers.

ARC is concerned with the dimension that relates to unfavorable-favorable consumption experiences (Ganglmair and Lawson, 2003). Although the unidimensionality of emotions (in psychology) and satisfaction/dissatisfaction (in marketing) has been questioned (Larsen, McGraw and Cacioppo 2001; Mackoy and Spreng 1995; Maddox 1981; Swan and Combs 1976), results have been inconclusive. Studies show that mixed emotions are mainly experienced in very complex situations (Larsen et al. 2001) e.g. when moving out of college. The ability to cope with mixed emotions is also limited in Western cultures and likely to be avoided (Festinger 1957; Williams and Aaker 2002). It is further not certain whether respondents think of the same attributes when answering two-dimensional satisfaction/dissatisfaction questions (Mackoy and Spreng 1995) and a number of results presenting support for two-dimensional conceptualizations have been shown to represent statistical artifacts and measurement error (Green, Goldman and Salovey 1993). While it is not denied that mixed emotions can be experienced, this seems to be an exception, rather than the norm (Larsen et al. 2001). Russell and Carroll (1999) come to the conclusion that “for theories about affective feelings, bipolarity is a reasonable assumption” (p.25).

Variations of the Differential Emotions Scale

(Izard 1977) or Pleasure-Arousal-Dominance scale (Mehrabian and Russell 1974) are frequently used to measure emotions in marketing. These two scales were developed to measure the entire range of fundamental emotions and responses to environmental stimuli, respectively, with negative emotions being dominant in both scales. Emotions are further likely to be context specific, with different emotions being of different importance depending on the context in which they are used (Richins 1997). Richins (1997) states “emotions that arise in the context of intimate interpersonal relationships are likely to differ from the emotions experienced when buying a pair of shoes” (p. 129).

The Consumption Emotion Set (CES) was developed in order to provide a set of emotions that cover the entire space of frequently experienced consumption emotions including e.g. worry, shame, envy or peacefulness. *ARC* on the other hand is only concerned with emotions that relate to the unfavorability/favorability of consumption experiences. It started with the term *satisfaction* and includes only items that show more or less favorable expression.

The Delighted-Terrible scale (D-T scale) (Andrews and Withey, 1976) is conceptualized along the same dimension as *ARC* but tries to cover the entire range of experiences from rotten to delighted with seven items. As it frequently produces skewed results, a re-examination and extension of this scale towards more positive terms is warranted.

WHY RASCH MODELING SUITS A CONCEPT LIKE *ARC*

Research into scales for measuring satisfaction has been limited, with work done more than 20 years ago by Oliver and Westbrook being the most cited sources for scales (Oliver 1981, 1980; Westbrook 1980, Westbrook and Oliver 1991).

The limited attention to measurement issues in satisfaction research and marketing in general is surprising, as calls encouraging research into these issues have been made in regular intervals (Babin and Griffin 1998; Hunt 1977; Jacoby 1978; LaBarbara 1984). As with a majority of social

sciences, the Classical Test Theory (CTT) is the leading measurement paradigm in marketing (Embretson 1996; Hambleton 1991; Salzberger, Sinkovics and Schlegelmilch 1999), with Churchill's (1979) classical article on *A Paradigm for Developing Better Measures of Marketing Constructs* being the most influential paper for scale development in the marketing discipline.

Currently used scales to measure satisfaction, which are rooted in CTT, regularly show limited discrimination as well as a strong negative skewness (Diener 1984; Diener and Fujita 1995; Peterson and Wilson 1992; Szymanski and Henard 2001). Peterson and Wilson (1992) remark that "virtually all self-reports of customer satisfaction possess a distribution in which a majority of the responses indicate that customers are satisfied ... (and) the modal response to a satisfaction question is typically the most positive response allowed" (p.62). This characteristic of satisfaction scales has been mentioned in passing by several authors e.g. Halstead et. al 1994; Oliver 1981 (cited from Peterson and Wilson, 1994). Attempts to overcome these shortcomings have been limited. ARC extends and complements satisfaction by trying to overcome the inherent skewness in the latter concept in order to provide additional information about respondents traditionally found in the most positive answer category.

The current paper investigates a method for scale development based on an alternative measurement paradigm. Rasch Modeling (Rasch 1960/80) has been widely used in educational measurement and only recently received interest in other social sciences (Embretson and Reise 2000) and marketing in particular (e.g.: Salzberger 2000, Salzberger et al. 1999; Soutar and Cornish-Ward 1997; Soutar and Monroe 2001). Although Georg Rasch, a mathematician and statistician, developed his model in an educational context, he explicitly mentions that measurement problems encountered in medicine, psychology, technology, economics, sociology, linguistics etc. led him towards the development of the Rasch Model (Wright 1980).

Rasch Models belong to the family of latent trait models, which are concerned with measuring an unobservable, latent, variable. One is interested

in the underlying attribute of a person that a measurement score reflects (Ryan, 1983). The model tests whether a single latent trait actually underlies a number of questions that are conceptualized to comprise a unidimensional scale. It further establishes where respondent's are positioned on this latent variable. The underlying attribute of interest can be any latent trait e.g. the level of algebra knowledge a student possesses (in an educational setting) or the amount of Affective Response to Consumption a consumer experienced (in a satisfaction or marketing setting).

Rasch Modeling aims to introduce rigid rules of measurement - similar to physics - into social sciences (Wright 1997). The technique is regarded as a probabilistic alternative to the deterministic Guttman scaling (Andrich 1982; Salzberger et al. 1999; Wright 1997) with the probabilistic qualities of Rasch Models helping to overcome disadvantages of the latter scales, which tend to work quite well for objective information, but produce messy results when the phenomenon of interest is not concrete (DeVellis 1991). Rasch Modeling is based on a mathematical model dealing with the "probabilistic relation between any item's difficulty and any person's ability" (Bond and Fox 2001, p.199]:

$$P_{vi} = \exp(B_v - D_i) / [1 + \exp(B_v - D_i)]$$

where

P_{vi} = probability of person v , given their level of ability, answering correctly

(e.g. as predicted by the model) to item I

B_v = Location of person v on Rasch scale and

D_i = Location of i th item on Rasch Scale.

While extensive discussions of the classic approach and Rasch Modeling can be found elsewhere (e.g. Andrich 1988; Bond and Fox 2001; Embretson 1996; Embretson and Reise 2000; Fischer and Molenaar 1995; Lord, 1980; Lord and Novick 1968; Nunnally and Bernstein 1994; Wright and Stone 1979) the following discussion is limited to aspects of Rasch Modeling and differences between the new technique and CTT that are important when applied in the context of measuring *ARC*.

With Rasch Modeling “A person having greater ability than another should have the greater probability of solving any item of the type in question and similarly, one item being more difficult than another one means that for any person the probability of solving the second item correctly is the greater one” (Rasch 1960/80, p.117). In a marketing context, the term difficulty can be replaced by the amount of a specific content an item stands for e.g. how hard it is to endorse the item, how extreme the item is. Ability can be translated into the characteristic of the person e.g. the person’s innate level of *ARC*.

Linking back to the research traditions of Guttman and Thurstone (Andrich 1988; Engelhard 1990), Rasch Modeling requires differences in the items representing a construct in question (Salzberger et al. 1999; Salzberger 2000; Wright and Stone 1979). The researcher is explicitly asked to generate items covering different intensity levels (Andrich 1988; Salzberger 2000; Salzberger et al. 1999; Wright and Stone 1979) as Rasch Modeling emphasizes that the entire breath of the construct is under investigation.

Rasch Modeling thereby differs from the CTT. The latter relies heavily on the principle of correlation with factor analysis and Coefficient alpha being important reliability indices (Churchill 1979). The use of these quality indices has received considerable critique as it encourages the inclusion of items that tap similar aspects of the construct (Salzberger 2000; Smith 1999; Steinberg and Thissen 1996).

The Rasch Model, as a probabilistic Guttman model, computes item and person fit in relation to the model (Wright 1977), with the items’ observed fit to the model being taken to investigate unidimensionality (Soutar and Monroe 2001). Rasch Software, such as RUMM 2010 (Andrich, Sheridan and Luo 2001), projects items and respondents onto the same dimension and provides indices and visual displays to investigate whether items spread sufficiently along a continuum rather than clumping towards one point of the dimension.

Scales used currently to measure satisfaction show a limited discrimination (Peterson and Wilson 1992) which suggests that only a point on the dimension rather than the entire continuum is

being measured while the overwhelming use of the most positive answer category illustrates that this point is on a moderate point on the continuum of emotions felt towards a consumption experience (Ganglmair and Lawson 2003).

Rasch Modeling represents a simple, yet mathematically elegant approach (Rasch 1960/1980) for scale development. While composite scales might be formed in CTT in order to combine e.g. pleasure and arousal (to measure emotional valence and it’s intensity) Rasch Modeling establishes such a scale in one scale development process. This process might only appear more complex due to its unfamiliarity to a majority of marketing researchers.

DEVELOPMENT OF A SCALE TO MEASURE *ARC*

In the current scale development process, it was of particular importance not to rely on terms that are used in the marketing literature, as potentially important areas and intensity levels of satisfaction might not be included in existing research. Terms used in the consumer satisfaction literature were therefore merely a starting point for an extensive item collection process. Taxonomies of emotions from the psychology literature have been used to complement existing terms from the marketing literature.

The Delighted-Terrible scale (D-T Scale) (Andrews and Withey 1976), which has shown favorable results in comparison studies of satisfaction scales (Westbrook 1980) served as a starting point for item generation, as it includes seven different words that are available for expressing different levels of affective response. Only six of these words were investigated in greater detail, as the seventh – *mixed* - was considered too vague. *Contented* and *pleased* have been described as synonyms of satisfaction (Oliver, 1989; Oliver, Rust and Vakri 1997) and *contented* will be an additional starting point for further item development (*pleased* is already included from the D-T scale).

In order to gain a large variety of related words, three differently structured thesauri (Kirkpatrick 1987; Chapman 1992; McCutcheon

1995) were used. Not all thesauri contain the words that have been chosen to seed the investigation and if necessary the terms closest to the ones mentioned above were used. All words within the categories in question were noted for possible inclusion in the scale.

A classic taxonomy of emotions (Shaver et al. 1987) and a categorizations study of emotions (Storm and Storm, 1987) formed the input from the psychology literature. Shaver et al. (1987) paper on Prototypes of Emotion provided words clustered under: *joy*, and under *anger*. In Storm and Storm's (1987) case the items were either part of the category *positive terms without interpersonal references, negative terms related to shame, sadness, and pain*, or *negative terms related to anger, hatred, or disgust*. (For a detailed list on all items please contact the first author.)

After coding and alphabetically sorting the items as well as deleting double entries and different grammatical forms of the same term, 715 words were available for further investigation. Three judges with qualifications in English were presented with an introductory letter and the list of words. The letter briefly outlined the aim of the research and asked judges to mark all items that an average New Zealander would possibly use as response to the question: "*How do you feel about your experience with an excursion train ride*", as

the data collection was going to take place in the last 15 minutes of a 4 hour excursion train ride from Dunedin, New Zealand. The item selection by independent judges was necessary, as the original list contains a large variety of terms, some of which were clearly not suitable as an answer to the above question.

The judges were further asked to rate the chosen items on a five point intensity scale from strongly positive to strongly negative. This rating should provide verification that judges considered the items in a similar way and provided the researchers with an overview of items that have the possibility to address the positive end of the scale.

Twenty-nine words were chosen by all three judges. The indication of direction and intensity of the terms chosen can be seen in Table 1. The three judges rated the items in question very similarly, which reinforces that these terms convey the same meaning, and serves as a first reliability check. The selected list of words can be split into 19 positive and 10 negative terms. This is considered a suitable mix of items, as a large number of positive and very positive items is called for in the item pool for a scale measuring *ARC* in order to provide respondents normally found in the most positive answer category with other options to express their positive feelings.

Table 1
Items Chosen by Three Judges Including Direction and Strength

Term	Frequency of rating					Term	Frequency of rating					Term	Frequency of rating				
	++	+	+-	-	--		++	+	+-	-	--		++	+	+-	-	--
superb	3					fine		3				disappointed					3
over the moon	3					delighted		3				discontented					3
in 7 th heaven	3					pretty good		3				indifferent					3
fantastic	3					impressed		3				unhappy					3
exhilarated	3					happy		3				displeased				2	1
euphoric	3					pleased		3				dissatisfied				2	1
magnificent	2	1				satisfied		3				unsatisfied				2	1
great	2	1				relaxed		2	1			appalled					3
enthralled	2	1				okay		1	2			rotten					3
fabulous	2	1										terrible					3

Of particular interest is the rating of items that are currently used in satisfaction scales. The D-T scale (Andrews and Withey 1976) contains 5 of the terms that can also be found in Table 1. These are *delighted, pleased, satisfied, dissatisfied, unhappy and terrible*. While the judges rated the negative items *unhappy* and *terrible* on two different intensity levels (negative and strongly negative, respectively) all positive terms were rated on the same intensity level, namely positive. This emphasizes two characteristics of currently used scales: It shows that scales developed in CTT contain items of similar intensity (Salzberger 2000; Wright and Stone 1979), and it reinforces that currently used satisfaction scales lack the inclusion of items that reflect feelings reserved for people who have a very positive experience. Existing scales therefore encourage the use of the extreme answer category, as there are no really strong items available that might discriminate between respondents who had a positive, and those who had a very positive experience.

ANALYSIS AND RESULTS

The data collection took place on an excursion train around Dunedin, New Zealand. The first researcher approached passengers during the last twenty minutes of a four-hour train ride. Acceptance to participate was exceptionally high due to the personal approach, with hardly anyone declining to fill in the questionnaire. Four-hundred-and-twenty-three questionnaires were distributed and collected, 419 of which could be used for further analysis. The questionnaire contained the following question:

How do you feel about your experience with the Taieri Gorge railway? Please consider every word and tick all those that describe your feelings about the experience.

Each of the 29 items as chosen by the judges was presented in a box that could be ticked by respondents (binary variables). The demographic profile matched the typical passenger on the train with an average age of 48 years. Almost half of the respondents (48%) were New Zealanders, 27%

Australian, 11 % British and a further 11% were from other countries (mainly USA and the Netherlands).

A preliminary examination using a Guttman pattern showed that only 16 out of 419 respondents ticked any of the negative items. The limited expression of negative affect is likely to be a characteristic of the underlying experience: a holiday excursion train ride that puts people generally in a neutral to positive mood. Negative items had to be eliminated, as the limited number of responses did not justify a quantitative analysis.

The computer software RUMM 2010 (Andrich et al. 2001) was used for data analysis. A first run including the 19 remaining variables revealed that certain items did not fit the unidimensional pattern. These items were gradually removed, similar to a backward stepwise regression (Soutar and Ryan 1999). After removing six items (*okay, pretty good, relaxed, fine, satisfied, pleased*) a point was reached where further elimination of items did not significantly improve the overall characteristics of the scale.

Rasch Modeling enables the projection of the distribution of items and persons onto the same dimension. Figure 1 illustrates the location of items along the dimension of *ARC* as well as the location of respondents. It shows that items and respondents are well spread across the *ARC* scale, with a standard deviation of 1.99 and 1.95 (see Table 2) for items and respondents respectively. This implies that the current scale holds a great deal of information about different experiences respondents had with the excursion train.

The person separation index is an index of internal consistency, similar to Cronbach's alpha (Peck, 2000). The index, ranging from 0-1, stands for "the ratio of true variance to observed variance based on the estimates of a person ability B" (Andrich, 1982, p. 98). The person separation index of the *ARC* scale was 0.844 and the overall powers of the test-of-fit were *good*. The unidimensionality of *ARC* is examined through the items observed fit to that expected by the model (Soutar and Cornish-Ward, 1997) using a χ^2 test. A significant χ^2 test (0.000144) was deemed acceptable (Salzberger 2002) as the relatively large sample size leads to over-sensitivity

Figure 1
Person Item Distribution

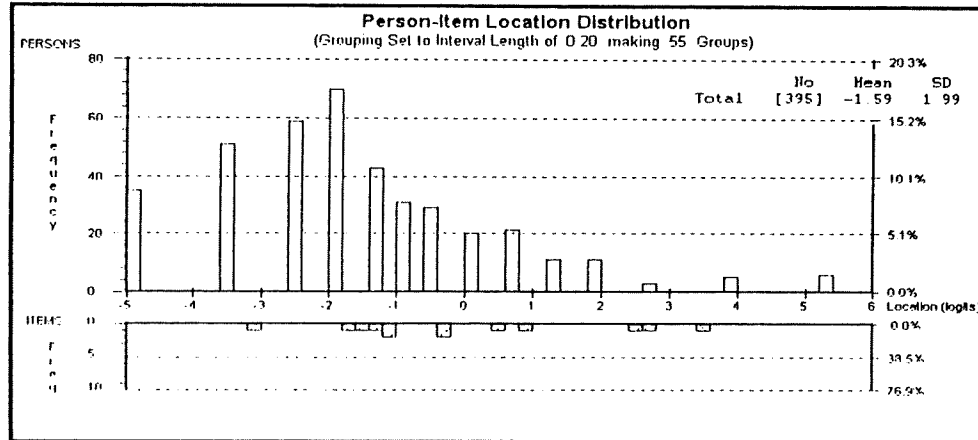


Table 2
Summary Characteristics of Scale

	Items		Persons	
	Location	Std. Error	Location	Std. Error
Mean	0.00	-0.36	-1.59	-0.24
Std. Deviation	1.95	1.35	1.99	0.51
Item-Trait Interaction: $\chi^2 = 118.932$ (DF = 65, $p < 0.001$)			Person Separation Index: 0.844	

Table 3
Individual Item-fit

Item	Location	χ^2 Probability
impressed	-3.02	0.06
happy	-1.66	0.001
great	-1.48	0.20
fabulous	-1.23	0.08
magnificent	-1.09	0.15
delighted	-1.04	0.34
superb	-0.38	0.01
fantastic	-0.34	0.01
enthralled	0.47	0.06
exhilarated	0.93	0.67
in 7th heaven	2.50	0.08
over the moon	2.79	0.95
euphoric	3.54	0.87

of that statistic and the scale still fits to a satisfactory extent (Peck 2000). Table 2 shows summary characteristics of the *ARC* scale. The mean location of items is commonly fixed to 0. A negative mean location of persons indicates that the respondents found the items included in the final scale relatively hard to endorse (see also Figure 1) which was expected, given the extreme answer categories chosen. A large standard deviation indicates that items and respondents were spread over the entire width of the concept investigated. Small errors are further encouraging.

Table 3 shows the location of the items along the *ARC* continuum (in logits) and their fit. The items are in order of un-likelihood of endorsement e.g. *impressed* stands for the lowest intensity, while *euphoric* represent the highest intensity of *ARC*. All items show an acceptable fit. Although

Table 4
Probabilities for Endorsement

Group Number	G 14	G 13	G 12	G 11	G 10	G 9	G 8	G 7	G 6	G 5	G 4	G 3	G 2	G 1
Groupsize in %	1	1	1	3	3	5	5	7	8	11	18	15	13	9
<i>impressed</i>	100%	100%	100%	99%	99%	98%	97%	93%	89%	84%	75%	61%	38%	14%
<i>happy</i>	100%	100%	99%	97%	95%	91%	91%	77%	68%	56%	43%	29%	14%	4%
<i>great</i>	100%	100%	99%	97%	94%	90%	89%	74%	64%	52%	39%	25%		
<i>fabulous</i>	100%	99%	98%	96%	92%	87%	87%	69%	58%	46%	33%	21%		
<i>magnificent</i>	100%	99%	98%	95%	91%	85%	85%	66%	54%	42%	30%			
<i>delighted</i>	100%	99%	98%	95%	91%	85%	84%	65%	53%	41%	29%			
<i>superb</i>	100%	99%	96%	91%	83%	74%	73%	49%	37%	27%				
<i>fantastic</i>	100%	99%	96%	91%	83%	73%	73%	48%	36%	26%				
<i>enthralled</i>	99%	97%	91%	81%	68%	55%	54%	29%	20%					
<i>exhilarated</i>	99%	95%	87%	73%	57%	43%	43%	20%						
<i>in 7th heaven</i>	94%	80%	57%	37%	22%									
<i>over the moon</i>	93%	75%	50%	30%										
<i>euphoric</i>	85%	59%	32%											

(Probabilities > 50% printed black / probabilities > 20% have a grey background)

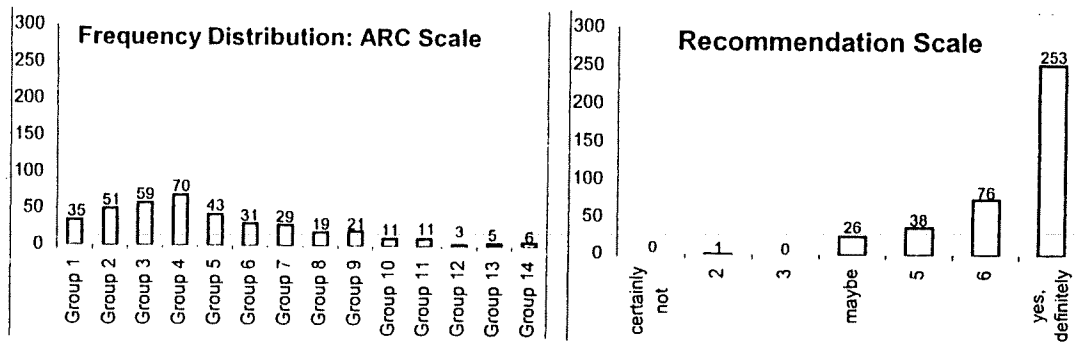
happy has a χ^2 probability below the proposed cutoff value of $p < 0.01$, removing this variable from the scale does not considerably alter the characteristics of the entire scale regarding unidimensionality and reliability (Salzberger 2002). On the other hand, the variable holds a considerable amount of information as its position on the *ARC* scale is close to the average person location (*happy* -1.66, average person location -1.59 see Table 2 and 3). No significant ($p < 0.01$) main effect was found that would suggest that answers were biased in terms of age groups, gender, education or nationality.

Rasch Modeling uses probabilities to describe the endorsement for each item by groups of respondents. The 14 groups on the *ARC* scale can therefore be described according to the probability of agreeing to ('ticking') each item. As can be seen in Table 4, the members of group 14 (G 14) show the highest intensity of *ARC* and the group consist of respondents with the best experience, while group 1 (G 1) shows the lowest intensity on *ARC* and is least impressed with the experience as measured on the scale.

COMPARISON WITH EXISTING SCALES

In order to establish whether the newly developed *ARC* scale discriminates stronger between respondents than currently used satisfaction scales, comparisons of group-membership between the *ARC* scale (14 groups), and ratings on the D-T scale (Andrews and Withey 1976), as well as two seven-point scales measuring bipolar satisfaction (1=completely unsatisfied, 7=completely satisfied) were carried out. An ANOVA was computed, with the group location as derived from RUMM 2010 (Andrich et al. 2001) as the factor variable and answers to the other three satisfaction scales as dependent variables, in order to see whether respondents at different locations in the *ARC* scale differ significantly in their response behavior of conventionally used scales. Although both ANOVA results were significant at a level of $p < 0.01$ a post-hoc test (Bonferroni) revealed that all differences occur between the 3 lowest rating groups (= Group 1, 2 and 3 in Table 4). The top 11 groups in the *ARC* scale do not differ significantly in their response to any of the two conventional

Figure 2
Frequency Distribution of ARC and Recommendation Scale



scales and show a mean rating of 6.3 on the two scales. This result clearly shows that the newly developed *ARC* manages to discriminate at the positive end of the experience, where conventional scales fail to detect differences.

ARC was further tested against a 7-point scale measuring the likelihood to recommend the trip (1= certainly not, 7= yes, definitely) using the same testes as above. Once again, Anova and Bonferroni produced significant results with all differences in the 3 lowest *ARC* groups. At closer inspection, potential doubts regarding the predictive capabilities of *ARC* can be disregarded. As can be seen in Figure 2 the recommendation scale is highly skewed, with 64% of all respondents choosing the highest available category (7= yes definitely), and fails to discriminate. One possible explanation could be that this recommendation scale does not distinguish between respondents who actively plan to go and recommend the experience and those who will only recommend if they are directly asked – a difference similar to the one between Market Mavens and Opinion Leaders as discussed by Feick and Price (1987). Further research will have to identify a predictive scale or collect longitudinal data to re-examine this phenomenon and establish the behavioral consequences of the *ARC* scale.

LIMITATIONS

This paper does not claim to present a generalizable scale to measure experiences. Rather it explores the suitability of a specific method of scale development – Rasch Modeling – in a satisfaction/post-consumption emotion context. Further, *ARC* is not intended to replace current satisfaction measurement but expand and complement satisfaction measurement when more information is required about respondents who are using the highest possible answer category of the satisfaction scale.

Future research will apply this scale development approach to different kinds of consumer experiences, as well as in different cultural settings. After multiple applications and replications in various contexts, a selective number of items might be detected that is inherent in all settings and therefore build the core of a generalizable *ARC* scale, while it is fully expected that there will always be different experiences and cultural-specific terms that add to the understanding of the relevant context.

In order to arrive at a scale that shows acceptable unidimensionality characteristics, a number of items that were conceptualized as forming the middle ground of the *ARC* continuum had to be eliminated – particularly noteworthy are *satisfied* and *pleased*, as they have traditionally been key terms. It is suggested that these terms fall

out because they can be regarded in two different ways, e.g. someone might tick *satisfied* and mean *at least satisfied* (positive connotation) while another respondent might tick the same item and mean *just satisfied* (negative connotations). Further research will investigate how variables that cover the middle ground of *ARC* should be treated, in order to add information about respondents who find themselves at this part of the continuum. The removal of negative variables is due to the nature of the experience measured. Additional service experiences or products will have to show if negative affect can be added to the scale.

CONCLUSION

ARC was conceptualized as a scale to measure unfavorable/favorable consumption emotions, especially at the very positive end of the dimension. One of the main tasks the scale to measure *ARC* set out to accomplish was to discriminate between respondents on the most positive end of commonly used satisfaction scales. *ARC* has shown it can achieve a considerable differentiation amongst those people who have traditionally used the highest answer category possible. The very low membership at the top *ARC* groups is expected, as a lot of people are satisfied but not that many experience extremely positive emotions. Further research will have to find if members of the most positive *ARC* group will also be more likely to recommend the experience and/or repurchase/re-experience.

It is reassuring to see that the final *ARC* scale, as derived from Rasch Modeling, orders the items very similarly to the earlier indication the judges made on a five point scale, while adding a lot of additional information at the higher end of the construct. This result shows that items were interpreted by both groups in the same way.

Overall, the *ARC* has shown to be a promising extension to conventional satisfaction scales. It shifts the emphasis from one term – *satisfaction* – to a variety of positive emotions and adds valuable information about respondents at the higher end of the continuum where traditional scales failed to discriminate.

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THE NATURE OF THE IMPORTANCE-SATISFACTION RELATIONSHIP IN RATINGS: EVIDENCE FROM THE NORMATIVE DATA OF THE NOEL-LEVITZ STUDENT SATISFACTION INVENTORY

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ABSTRACT

The nature of the relationship between importance and satisfaction in consumer ratings was studied on an aggregate basis using the published national normative data from the last five annual surveys of student satisfaction conducted by the Noel-Levitz organization. The average importance and the average satisfaction ratings for 11 scales of the Student Satisfaction Inventory (SSI) were correlated. For three of the four college types (private 4-year, 2-year, and career), there was a linear relationship to the data, so that attributes with higher average satisfaction ratings also had higher average importance ratings. Conversely, when the mean importance and mean satisfaction ratings on the 11 attributes were plotted for the 4-year public colleges, there was a V-shape to the distribution, such that attributes with low average satisfaction and attributes with high average satisfaction received higher average importance ratings than the attributes with mid levels of satisfaction. These results indicate that both linear and non-linear associations between satisfaction and importance are possible. The V-shaped relationship occurs if the range of satisfaction is unrestricted whereas the linear relationship is observed when the range of expressed satisfaction is truncated.

INTRODUCTION

Although the notion is still controversial (Salisbury, Branson, Altreche, Funk, and Broetzmann, 1997; Scrabec, 2000) it is now more commonplace to view the student as a "customer" (Browne, Kaldenberg, Browne and Brown, 1998; McCollough and Gremler, 1999) and consequently the measurement of student satisfaction is currently considered by some administrators to be just as crucial in higher education as it is in other areas of commerce (e.g.,

Hom, 2002; McCollough and Gremler, 1999). However, there is considerable disagreement in the field of consumer behavior about what constitutes customer satisfaction and the best means of assessing it (Babin and Griffin, 1998; Brady, Cronin, and Brand, 2002; Yuksel and Rimmington, 1998). Moreover, since education is a service, it is an intangible, and therefore assessing satisfaction with education is probably an even more difficult undertaking than if it were a product (see Parasuraman, Zeithaml and Berry, 1985).

Many colleges and universities continue to craft their own customized, homegrown instruments to assess student satisfaction, but a number of commercially produced measures are available. The primary advantages of standardized surveys are that (a) they are developed on some theoretical basis, (b) they typically provide benchmarks (norms), and (c) the psychometric properties of the instruments have been studied. The major drawbacks are cost and the reduction in ability to customize the survey.

The two most popular comprehensive standardized satisfaction measures in higher education are the Student Opinion Survey (SOS) published by American College Testing (ACT) and the Student Satisfaction Inventory (SSI) marketed by Noel-Levitz, a consulting firm specializing in higher education. Miller (1997) compared the two instruments, finding them to be very similar in their objectives and content, but different in item format. On the SOS, students indicate only their satisfaction with an attribute, whereas on the SSI students report their satisfaction as well as the importance of the issue being rated. Relative to the SOS, the SSI is a longer scale (33 minutes versus 20 minutes to complete) and it is also costlier according to Miller. The SOS allows for more detailed benchmarks than the SSI.

The importance-rating component of the SSI

is featured by the Noel-Levitz organization as a major strength of the instrument. A promotional brochure for the SSI contains the headline "Avoid This Mistake!" with the following text: "Using a traditional satisfaction survey, a Midwest institution once learned that parking access was dissatisfying to its students (a common complaint), and subsequently decided to build a multimillion dollar parking structure. But once it was built, the structure did little to increase satisfaction overall. The problem? The availability of parking really didn't matter very much to students. While they agreed that parking was a problem, it was of little importance when compared to other campus issues they believed were far more important." The brochure goes on to say: "With the Noel-Levitz satisfaction-priorities surveys, you can avoid these types of mistakes. You can launch and promote your initiatives boldly, knowing that what you do will matter to your students."

This same point is reiterated in the 2002 National Student Satisfaction Report (Noel Levitz, 2002), which presents the aggregate results based on the institutions participating in the annual survey: "Traditionally, colleges and universities have measured one dimension of student satisfaction only. However, for greatest impact and accuracy, satisfaction should be viewed within the context of student expectations (levels of importance). For example, the quality of food service and the use of student activity fees repeatedly surface as areas of high dissatisfaction for students. But when asked to indicate the importance of these areas to their overall educational experience, students rate food service and activity fees relatively low" (p.1).

Noel-Levitz contends that the importance and satisfaction ratings should be used to classify a college's services into the quadrants of a "Matrix for Prioritizing Action", namely : (a) high importance-high satisfaction, (b) low importance-low satisfaction (c) high importance-low satisfaction, and (d) low importance-high satisfaction. According to Noel-Levitz, the corresponding actions to be based on these quadrants are: (a) strengths to be featured in promotional literature, (b) opportunities to

examine areas with low status, (c) key challenges that require immediate correction, and (d) areas from which it might be possible to divert institutional resources to areas of higher importance. This type of classification system is common in marketing, with Barsky and Labagh (1992) using the following terminology for these quadrants: (a) critical strengths, (b) potential threats, (c) key challenges that require immediate correction (risk/opportunity), (d) insignificant strengths. Kotler (2000) calls the corresponding quadrants: (a) keep up the good work, (b) low priority (c) concentrate here, and (d) possible overkill.

In addition, the SSI's publisher indicates that the satisfaction and importance ratings can be used to calculate gap scores between importance and satisfaction. By subtracting the satisfaction rating from the importance rating, a *performance gap* is determined for an attribute. The gap is purported to indicate how well the institution performs relative to student expectations --- the larger the gap, the worse the performance. Some users of the SSI also compute weighted satisfaction scores by multiplying the satisfaction rating by the importance rating to come up with an overall satisfaction index, although the publisher does not explicitly endorse this procedure.

Undeniably, the importance-satisfaction framework, with its great intuitive appeal, has numerous proponents (Attarian, 1995; Geva and Goldman, 1991; Guadagnolo, 1985; Hawes and Rao, 1983; Martilla and James, 1977; Shin, and Elliott, 2001). It also seems to be a major selling feature of the SSI, frequently being identified as the reason why the SSI was selected over its competitors (e.g., University of Kentucky, 1995). While it seems like just plain common sense to include an importance rating given that dissatisfaction with a service that is unimportant has less severe repercussions than dissatisfaction with an important service, there is a body of research questioning this practice (Blood, 1971; Crompton and Love, 1995; Danaher, 1997; Dorfman, 1979; Kraut and Ronen, 1976; Mobley and Locke, 1970; McFarlin and Rice, 1992; Peter, Churchill, and Brown, 1993; Staples and Higgins, 1998; Yuksel and Rimmington, 1998).

The following concerns have been voiced about the inclusion of importance ratings in a satisfaction questionnaire: (a) it increases the burden for the respondent (b) consumers tend to rate almost every attribute as important, (c) the stated importance may not be what actually drives consumer behavior, (d) people implicitly weigh the importance of an issue when forming their satisfaction rating so it is already part of the satisfaction rating, (e) importance can be easily judged by the magnitude of the correlation between satisfaction on a given attribute and the overall satisfaction score or some other bottom-line measure, and (f) integrating the importance and satisfaction data in a gap score poses statistical problems.

Relying on gap scores can be frustrating. In a study using the SSI, Elliot and Healy (2001) assessed the validity of the gap scores in predicting overall satisfaction and found results that were contrary to the gap theory. In the regression equation using gaps the strongest predictor (Beta =.36) was "student centeredness," which was of low importance (8th of 11) and high satisfaction (4th of 11), falling into the action matrix quadrant that calls for diversion of resources from that dimension to more important issues. Conversely, "safety and security" had average ratings that placed it 3rd in importance and dead last in satisfaction (11th of 11), resulting in the highest gap score, yet it had a relatively minor role in the multiple regression (Beta =.07). The article does not report the simple inter-correlations between predictors, so one can't tell if part of the reason for this result may be the nature of the inter-correlation of the predictors, but this study nonetheless demonstrates the perils of relying on gap scores.

There are no published studies using the SSI on the value of weighting satisfaction by importance, but the literature on this topic suggests that this practice may be futile. Despite its intuitive appeal, with a few exceptions (e.g., Furukawa, 1975; Hsieh, 2003), weighting satisfaction by importance in other contexts has generally been unproductive (Crompton and Love, 1995; Quinn and Mangione, 1973; Rao and Kelkar, 1997; Sarveswara, 1974; Waters and

Roach, 1971; Yuksel and Rimmington, 1998).

Interestingly, even though they acknowledge that importance weights fail to improve the explanatory power of a satisfaction index, some researchers nonetheless feel that importance ratings should be included in a satisfaction survey because the combination makes the results more diagnostic and actionable, allowing the manager to prioritize areas in need of improvement (Crompton and Love, 1995; Rao and Kelkar, 1997; Yuksel and Rimmington, 1998). For instance, Yuksel and Rimmington (1998) write: "We caution that although weighting importance does not add to the explanatory power of the models, we are not recommending that the importance dimension be discarded. Knowing the importance ascribed to service attributes may still be useful for managers."(p. 70). Supporters of importance ratings, like Barsky and Labagh (1992), contend that the matrix can serve as a "planning tool" and a "strategic control instrument."

The issue of whether direct or imputed importance has the greater validity is still open to debate. Studies addressing this point are few in number and their results are mixed. The literature suggests that stated importance ratings and derived importance (i.e., inferred from the size of the correlation between satisfaction on an attribute and overall satisfaction) can produce different interpretations of the importance of various facets, depending in part on how the overall satisfaction question is phrased (Chu, 2002; Kraut and Ronen, 1976; Roszkowski and Ricci, in press; Soper, 1980; Wanous and Lawler, 1972).

Even the more basic question regarding the nature of the relationship between importance and satisfaction judgments is not fully understood. There is some evidence that people may employ heuristics to form their importance and satisfaction ratings. Three relationships between importance and satisfaction have been proposed: (a) independence (small or no correlation), (b) linear relationship, and (c) non-linear relationship. Under a linear model, satisfactory attributes are rated as important (or more important) and dissatisfactory attributes are rated as unimportant (or less important). The non-linear model proposes a V-

shaped distribution in which very dissatisfactory and very satisfactory attributes are rated as important while the attributes with mid-level satisfaction are rated as less important. In other words, in this model only attributes that are considered important can lead to satisfaction or dissatisfaction.

The issue of importance-satisfaction association has been addressed in the literature two ways. In the first approach, conducted at the person level, the importance and satisfaction scores of each individual in a sample are correlated. A correlation is conducted for each attribute and the average correlation across attributes is then calculated. The second approach, which relies on aggregated data, involves first computing the average importance and the average satisfaction for each item in the sample and then correlating the mean importance and mean satisfaction for each item. In the first approach, the subject (case) is the person, whereas in the second approach the subject (case) is the survey item or question.

Most of the early literature on the nature of the relationship between importance and satisfaction comes from research on job satisfaction. In one of the first studies to consider this matter, Schaffer (1953), examining the issue at the individual level, found correlations between importance and satisfaction that were as high as +.71 when positive and -.45 when negative in direction. Such results cause one to question the independence of the two constructs. More recent studies are based on consumer satisfaction research. For example, Wessels, De Witte, Weiss-Lambrou, Demers and Wijnhuizen (1998), employing a Dutch version of QUEST (the Quebec User Evaluation of Satisfaction with Assistive Technology), reported correlations between importance and satisfaction that only ranged between 0.15 and 0.41 for each of the 24 items on a 6-point scale, which the authors took to mean that a "distinction between these two aspects, 'importance' and 'satisfaction', is meaningful." They view their data as supportive of the independence of the two constructs. However, Wessels et al did not consider the possibility of a non-linear relationship to their data.

The few studies that have looked at the issue

from both the individual and the aggregate perspective found that the resultant correlations are higher using the aggregate approach. For example, Roszkowski and Ricci (in press), employing a customized survey devised by a college's student government association, collected data on 25 specific attributes regarding services rated for both importance and satisfaction. The Pearson correlations between importance and satisfaction, computed using the 126 students as subjects, ranged from 0 to .61, with an average of about .23. At the aggregate level, where the 25 items served as the subjects, the Pearson correlation between the average importance ratings and the average satisfaction ratings equaled .40. However, when the data at the aggregate level were plotted with satisfaction on the abscissa and importance on the ordinate, there was a V-shape pattern to the plot. In other words, two linear lines could be fit to the distribution. The left side of the V (low satisfaction) had an associated Pearson correlation of $r = -.53$ whereas on the right side of the V (high satisfaction), the $r = +.76$. Separately, each correlation was stronger than the $r = .40$ derived for the entire set of 25 items considered together.

Roszkowski and Ricci's results were consistent with those of Friedlander (1965) who studied the relationship between average job satisfaction and average job importance ratings. Friedlander reported that the linear correlation between mean importance and mean satisfaction scores on 73 pairs of ratings was only .11. However, if the satisfaction data were dichotomized on the median, and separate satisfaction-importance correlations were computed for the dissatisfied and the satisfied portions of the distribution, the correlations increased to -.36 and +.51, respectively. Dachler and Hulin (1969) similarly observed a V-shaped relationship between job satisfaction and job importance on 16 characteristics rated with a 5-point Likert scale, but not if satisfaction was measured with a five item cumulative point adjective check list. Also working with job satisfaction ratings, Borg (1991) found both a linear and a V-shaped distribution in his data, depending on the domain being analyzed.

Table 1
Number of Respondents to the Student Satisfaction Inventory by Year of Survey and School Type

Institution Type	Year				
	1997- 1998	1998- 1999	1999- 2001	2000- 2001	2001- 2002
Private	75,486	85,514	92,409	77,483	94,606
Public	37,725	46,087	54,884	35,763	42,722
Two Year	37,357	55,571	82,852	83,851	82,370
Career	3,383	8,927	10,450	13,290	15,622

Perhaps the discrepant findings across studies are a function of sampling error and the unreliability of the measures. Conceivably, by using a reliable instrument and very large samples, more consistent results would be observed. An opportunity to explore this issue on this basis exists using Noel-Levitz's annual reports summarizing the scores of institutions that are using the SSI, an instrument with known psychometric properties and a large database of respondents.

METHOD

Questionnaire

Three versions of the SSI are published: (a) 4-Year College and University, (b) 2-Year Community, Junior and Technical College, and (c) Career and Private School. On each version, the items are rated for importance and satisfaction (7-point scale) and produce 12 scales. Nine scales are common to all three instruments: Campus Climate, Campus Support Services, Concern for the Individual, Instructional Effectiveness, Registration Effectiveness, Responsiveness to Diverse Populations, Safety and Security, Service Excellence, and Student Centeredness. The Junior and Technical College version and the Career and Private School version also contain the following three scales: Academic Advising Effectiveness, Academic Services, and Admission and Financial Aid Effectiveness. The three scales unique to the 4-year College and University version are:

Academic Advising Effectiveness, Campus Life, Recruitment and Financial Aid Effectiveness. Importance ratings are not collected on Responsiveness to Diverse Populations, so this domain was not considered in the present analysis.

Psychometric data on the SSI (Schreiner and Juillerat, 1993), available from the publisher, indicates that: (a) Cronbach's coefficient alpha equals .97 for importance and .98 for satisfaction scores, (b) the three-week, test-retest reliability coefficient is .85 for importance and .84 for satisfaction. A study by Obiekwe (2000) also found the SSI to be internally consistent.

The Data

The normative data reported in the 2002 National Student Satisfaction/Priorities Report served as the basis for the analysis. (The report is available online at <http://www.noellevitz.com/library/research/satisfaction.asp#ssi>). Average importance and average satisfaction scale scores for academic years 1997-98, 1998-99, 1999-2000, and 2001-02 were used. Data are reported by four types of institutions: four-year private colleges and universities, four-year public colleges and universities, two year institutions, and career schools (see pages 9-12 of the document). The sample sizes used to compute these means are very impressive (see Table 1).

Procedure

The 2002 National Student Satisfaction/

Priorities Report (Noel-Levitz, 2002) presents five-year trends on the four school types participating in their survey. A mean importance and a mean satisfaction rating are indicated for 11 of the 12 scales for each school type at each year. These data, taken from the Noel-Levitz report, were analyzed at the aggregate level with the 11 items serving as the subjects.

The first step consisted of the computation of a Pearson correlation between the mean satisfaction rating and the mean importance rating using the 11 satisfaction -importance pairs. This was done for each year and each school type, resulting in the 20 correlations that labeled "full set." Next, the 11 data points (pairs of mean satisfaction -importance ratings) within each of the 20 full data sets were rank-ordered from lowest to highest on the basis of the satisfaction ratings. The intent was to create two subgroups for each full set: a low(er) satisfaction subgroup and a high(er) satisfaction subgroup. However, because of the odd number of items, a split into two even halves was impossible, so the decision was made to include the 6th ranked data point in each of the two halves. These two halves were labeled as "lower half" satisfaction and "higher half" satisfaction. Pearson correlations were then run between average importance and average satisfaction within each subgroup using the 6 attributes in each subgroup as the subjects. In other words, for each year of the 5 years of data on each of the 4 school types, 3 correlations were computed; (a) full set (11 data pairs), (b) lower half satisfaction scales (6 data pairs), and (c) higher half satisfaction scales (6 data pairs).

RESULTS

The resulting coefficients are listed, respectively, under the headings of full set, lower half satisfaction, and higher half satisfaction in Table 2. It is instructive to begin the analysis by focusing on the Pearson correlation coefficients for the 11 data points considered together in the same analysis (i.e., full set). First of all, one should observe that all correlation coefficients are positive in direction. Secondly, the reader should note that there is remarkable consistency over the

five years in how well a Pearson correlation described the relationship between satisfaction and importance within each of the four types of institutions.

However, the Pearson correlation was not equally effective in describing the relationship within each college type. In all five surveys, the Pearson importance - satisfaction correlations were strongest in the careers schools (average $r = .79$), followed by the two-year colleges (average $r = .64$), and the private schools (average $r = .60$). The differences between these three types of schools were not large, but all three differed substantially from the public college category, which was a clear outlier with an average (five-year) importance - satisfaction correlation of only .19. What is particularly intriguing is that the same rank-order on the magnitude of the importance-satisfaction correlation occurred for each and every one of the five administrations of the SSI, namely, (1) career school, (2) 2-year college, (3) 4-year private, and (4) 4-year public.

Ignoring the split-half subgroups, it would be tempting to conclude that there is a strong relationship between importance and satisfaction for all school types except the 4-year public college, where there seems to be independence between satisfaction and importance. If one realizes that the Pearson tests for linear relationships, this rush to judgment must be tempered, and further probing at the subgroup level needs to be conducted. When the full set data are compared to the split data, the differences between the full set and the halves are not remarkable, except for the 4-year public college category. There, the Pearson importance-satisfaction correlation coefficients in each one of the two halves are larger than the corresponding correlation in the full set. Moreover, within the 4-year public institution category, all the correlations in the lower satisfaction subset are negative in direction, whereas in the higher satisfaction subset, they remain positive. In the other three categories of school types, the correlations in both subgroups within each set remain positive in direction.

The presence of the negative satisfaction-importance correlations for the lower satisfaction

Table 2
Pearson Correlations between Mean Importance and Mean Satisfaction on the SSI Scales by Year of Survey and Institution Type

Institution Type	Satisfaction Rating	Year					<i>M</i>	<i>SD</i>
		1997-1998	1998-1999	1999-2001	2000-2001	2001-2002		
Private	Full Set	.64	.62	.59	.58	.57	.60	.03
	Lower Half	.20	.23	.99	.40	.38	.44	.32
	Higher Half	.94	.89	.44	.80	.77	.77	.20
Public	Full Set	.22	.19	.18	.20	.17	.19	.02
	Lower Half	-.43	-.43	-.40	-.37	-.37	-.40	-.03
	Higher Half	.80	.49	.54	.54	.38	.55	.15
Two Year	Full Set	.67	.64	.65	.65	.57	.64	.04
	Lower Half	.66	.60	.67	.67	.54	.63	.06
	Higher Half	.58	.51	.47	.46	.79	.56	.14
Career	Full Set	.85	.76	.76	.83	.73	.79	.05
	Lower Half	.84	.70	.91	.81	.60	.77	.12
	Higher Half	.06	.29	.82	.12	.34	.33	.30

half and positive correlations for higher satisfaction half suggests the presence of a V-shape to the scatterplot, which was confirmed by graphing the data and inserting best-fit regression lines. For illustrative purposes, the 1997 average satisfaction and importance ratings for the private and the public institutions are depicted in Figure 1. For 4-year private schools, a single regression was fit into the full set (11 data points), whereas two regression lines are plotted for the 4-year public schools (one for the left half of the full set and the other for the right half of the full set, that together form a V).

I sought an explanation for these findings by examining the distribution of satisfaction ratings in the four institutional types. Table 3 reports the lowest average satisfaction rating, the highest satisfaction rating, as well as the difference between them (i.e., the range). It is notable that the 4-year public college category differs from the other three college classifications by having the broadest range in every one of the five surveys.

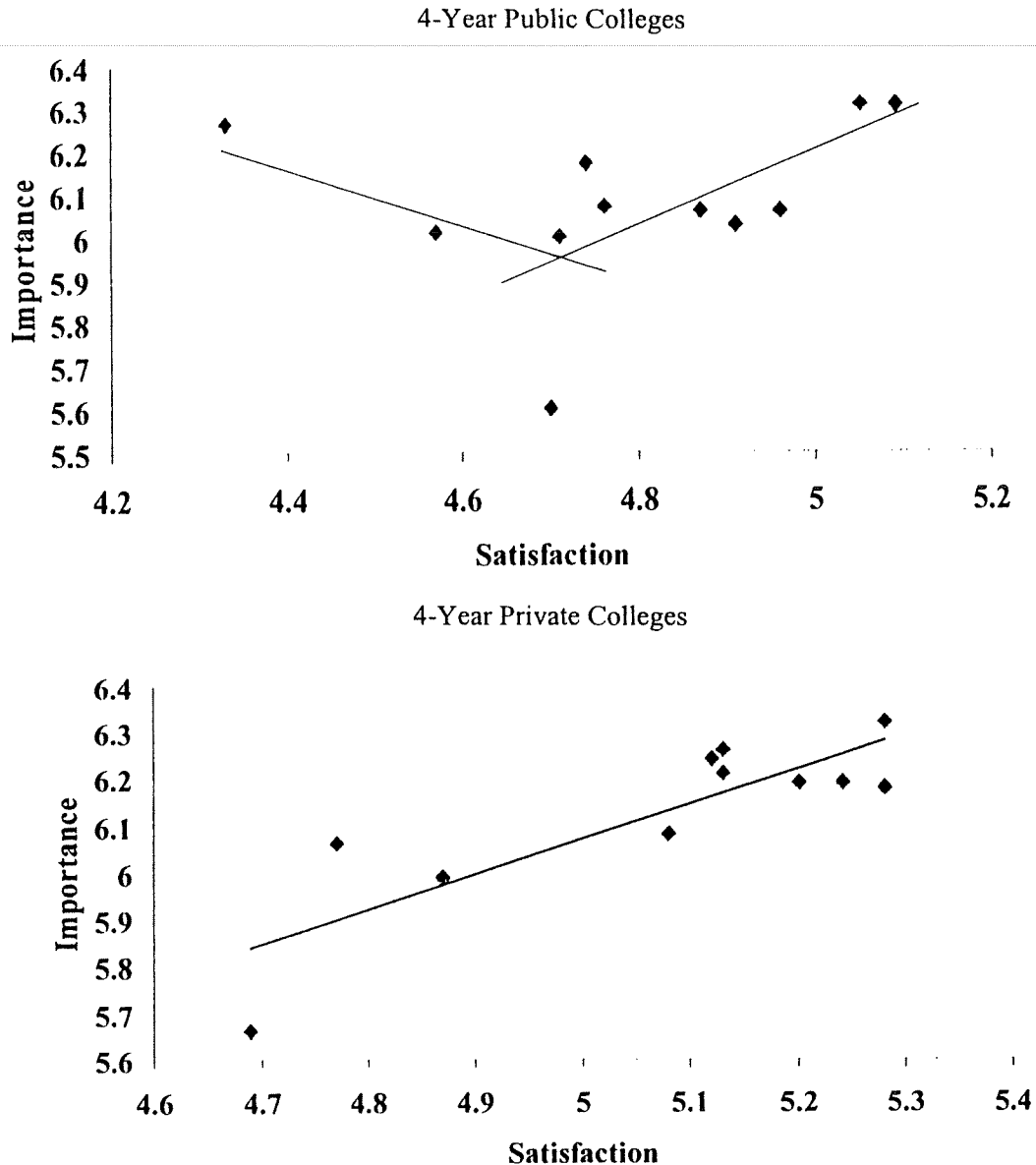
The range I believe provides the answer as to why the public school data showed a V-shaped distribution between satisfaction and importance, whereas the other three school types had a linear

distribution between these two ratings. That is, the public school distribution is less truncated, having more values falling toward the negative end of the satisfaction continuum, so that both sides of the V are represented. In the other three school types, the satisfaction ratings lean more toward the satisfactory end, and so only the right side of the V emerges.

DISCUSSION

The aim of this study was to determine the nature of the relationship between ratings of importance and ratings of satisfaction. The data from the national norms of the SSI clearly show that there exists an association between average importance ratings and average satisfaction ratings, so that it is inappropriate to view them as totally independent dimensions. If the range of satisfaction ratings is fairly wide, it is probable that there will be a V-shape to the scatterplot of average satisfaction and average importance ratings. If the ratings are truncated, however, a linear pattern will be observed because only one side of the V is visible. For the three groups providing mainly satisfactory ratings of the 11

Figure 1
V-Shaped and Linear Relationships between Satisfaction and Importance



attributes, the relationship is linear, so that the attributes with higher satisfaction also get higher importance ratings. That is, only the right side of the V could be seen because there were not enough negatively rated attributes. In the fourth group, which produced more attributes with lower satisfaction ratings, the relationship is a bit

more complex, adhering to the V-shaped distribution. In other words, attributes with either low satisfaction or high satisfaction are assigned high importance relative to attributes with middle levels of satisfaction.

Viewed this way, the contradictory results from previous studies on the nature of the

Table 3
Range of Average Satisfaction Ratings on the 11 SSI Scales by Year of Survey and Institution Type

Institution Type	Satisfaction Rating	Year					<i>M</i>
		1997-1998	1998-1999	1999-2001	2000-2001	2001-2002	
Private	Minimum	4.72	4.71	4.66	4.64	5.64	4.87
	Maximum	5.35	5.28	5.24	5.18	6.33	5.48
	Range	0.63	0.57	0.58	0.54	0.69	0.60
Public	Minimum	4.33	4.38	4.30	4.29	4.36	4.33
	Maximum	5.09	5.09	5.14	5.04	5.09	5.09
	Range	0.76	0.71	0.84	0.75	0.73	0.76
Two Year	Minimum	4.77	4.82	4.79	4.81	4.80	4.80
	Maximum	5.30	5.30	5.24	5.26	5.30	5.28
	Range	0.53	0.48	0.45	0.45	0.5	0.48
Career	Minimum	4.69	4.59	4.67	4.64	4.52	4.62
	Maximum	5.28	5.28	5.28	5.25	5.21	5.26
	Range	0.59	0.69	0.61	0.61	0.69	0.64

satisfaction importance relationship in satisfaction surveys are not really conflicting and can be easily reconciled. When the range of satisfaction is constricted, a linear relationship will exist. When the range of satisfaction across attributes is wide, a V-shape will be seen. Thus, the shape of the relationship between importance and satisfaction depends on the range of satisfaction in the sample. In the analysis of the SSI norms, the school types that did not conform to the V distribution of satisfaction-importance ratings showed a positive linear relationship (i.e., the right side of the V), which was probably due to the fairly positive ratings that all the attributes received. Although it was not observed here, it is conceivable, that if all ratings are severely dissatisfactory, only the left side of the V will be evident (i.e., negative correlations).

It is also noteworthy that in the data with the V pattern, the magnitude of the relationship between satisfaction and importance on the left side of the V was lower relative to the strength of the relationship on the right side of the V. At the aggregate level of analysis, this finding was also noted by Friedlander (1965) and Roszkowski and Ricci (in press). Likewise, Schaeffer (1953), working at the individual level, observed higher

positive correlations than negative correlations. Apparently, there is greater correspondence between importance and satisfaction than between importance and dissatisfaction. From this perspective, it should be mentioned that some evidence exists to suggest that satisfaction and dissatisfaction are distinct constructs rather than opposite poles of the same one (Babin and Griffin, 1998).

The major potential limitation of this analysis is that the correlations were conducted at the aggregate level, which are sometimes termed "ecological correlations." The shortcoming is that aggregated data do not necessarily reveal information about the relationships at the level of the individual. Inferring individual behavior from aggregate data is risky because an ecological fallacy results if the relationship detected at the group-level (aggregated data) fails to conform to the relationships discovered at the individual level. While Robinson (1950) warned researchers to never use aggregate data to infer individual relationships, more contemporary literature on this topic (e.g., Schwartz, 1994) is less dogmatic, cautioning the analyst of the possibly (but not necessarily) flawed conclusions that may be drawn.

Since I do not have access to the individual-level data in the Noel-Levitz database on the SSI, it is impossible for me to determine if the pattern of satisfaction and importance associations is the same or different at the more microscopic level. However, the nature of this aggregate relationship deserves attention in its own right (see King, 1997), even if no inferences are made to individual raters' behavior, because this analysis demonstrates that even without assessing importance directly, one can still draw some inferences about the importance of a particular attribute to the *group* based on the *group's* average satisfaction level. In most instances, the corrective actions to be taken on the basis of a satisfaction survey will be based on the group data. Recall that it is the mean ratings that are the basis for the "Matrix for Prioritizing Action."

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EVENTS OF 9/11/2001: CRISIS AND CONSUMER DISSATISFACTION RESPONSE STYLES

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ABSTRACT

Research investigating customer complaining behavior has typically focused on the customer's reactions to a dissatisfying purchase. Complaining behavior is usually measured either after (a) having the subject reflect back on an actual dissatisfying experience that they had, or (b) exposing subjects to experimental stimuli in which they encounter "artificial" dissatisfying situations. In the current study we focused on measuring—within three weeks—actual complaining behavior that occurred following purchase or non-purchase in an unusual or crisis situation (gas price gouging and the events of 9/11) and compared the types of complaining behaviors to the types of complaining behaviors reported by Singh (1990). Our results indicate that complaining response styles are indeed different given such a situation. For example, our sample indicated a larger percentage of passives and voicers and a lower percentage of irates and activists than did the Singh (1990) study. In general, it would appear that an unusual or crisis situation does result in a different dissatisfaction response style.

INTRODUCTION

September 11, 2001 was a day of great tragedy, concern, and uncertainty for the United States and for the world. Just hours after terrorists crashed airliners into the World Trade Center, the Pentagon, and rural Pennsylvania, prices of essential services including gasoline, rental cars, and hotel rooms increased dramatically and spurred consumer anxiety (O'Reilly 2001).

Nationwide, consumers experienced wildly fluctuating gas prices with the price of gasoline increasing two dollars per gallon in some locations (Naughton 2001). Lines at gas stations were up to 30 cars long and many station owners feared their supplies would be quickly depleted (Sofradzija and Green 2001).

In the aftermath of the terrorist attacks, the public was angry - not only about terrorism, but also because businesses appeared to have exploited anxiety and chaos for profit (State Journal Register 2001). Price gouging at the pump was a common topic of conversation on news shows, in homes, and at offices. As consumer frustration levels increased, government agencies were called upon to take action. Several states began looking for violations of existing price gouging laws (State Journal Register 2001). In Illinois, Attorney General Jim Ryan filed a civil suit on behalf of Illinois consumers. Officials in other states took similar action under applicable state laws.

The unique circumstances created by the September 11th terrorist attacks and their aftermath provided the context for our study of consumer complaint behaviors in response to gas price charges in a crisis situation. The element of national tragedy/disaster and its effect on complaining behavior makes this study distinct. What changes in identified complaint behavior could be expected following events of September 11th magnitude?

BACKGROUND

A review of literature pertaining to complaining behavior reveals a dedicated effort to

more fully understand types of complaining behavior and the factors that contribute to that behavior. Complaining behaviors have been profiled, as well as described and attributed to a number of factors.

Perhaps the most promising typology of consumer dissatisfaction response styles has been proposed by Singh (1990). Singh examined these typologies in relation to demographic characteristics, as well as episode-specific variables, the most important being the nature of product or service involved. The typology identified four response styles including: passives, voicers, irates, and activists. In Singh's study, *passives* comprised 14% of the sample and were characterized as the least likely to complain about a dissatisfying experience to anyone - friends or family, the retailer, or third parties. Thirty-seven percent of the sample was classified as *voicers*, those most likely to complain to the retailer. The third group, *irates*, comprised around 21% of respondents. The *irates* were the group most likely to engage in negative word of mouth communication, switch patronage, and complain to the retailer. The final group of 28% was termed *activists* and depicted as "consumer activists" who complain for the greater social good.

Repurchase intentions, perceptions of fairness, and feelings of purchase regret have also been studied in prior research that examined complaining behavior (Clemmer and Scheneider 1996; Tsiros and Mittal 2000). Importantly, the events of 9/11 provided an unprecedented opportunity for a "real world" measurement of these variables under conditions where situational duplication is near impossible. Such a crisis situation may result in different relationships among these variables than that reported in prior research as well.

A key approach that prior research has utilized to understand consumer-complaining behavior is attribution theory. For example, in a 1984 study, Folkes found that consumer perceptions of fault in a product failure situation ultimately influence the consumer's response. Folkes (1984) further reported that complaining behavior might depend on the perceived stability and controllability of the purchase situation. Following the terrorism

events, the uncertainty of the day undoubtedly left consumers with questions regarding both the stability and controllability of the situation. These and other issues related to attribution are discussed further in the next section.

This study centers on consumer dissatisfaction responses in times of crisis. More specifically, this study's aim was to examine Singh's (1990) typology in greater detail under circumstances of national tragedy and near state of emergency.

METHODOLOGY

The typology developed by Singh (1990) has established a strong framework for further study of complaining behaviors under different purchase conditions. The body of knowledge available regarding complaints and complaining behavior is extensive, yet relatively untested in events of natural disaster, crisis, or national emergency. In the current study, we examine characteristics related to demographics, attributions, complaint behavior, and episode-specific factors. The following sections discuss the categorical variables and measurements used in the study.

Measures

The measures used in the study were largely constructed for this particular research project. The actual questions used for the latent constructs and their measurement scales are included in the Appendix.

Demographic characteristics

General patterns of complaining behavior have been established relative to demographic characteristics, in particular age and income. In studies conducted with U.S. consumers, younger and higher income individuals typically complain more and display common complaining behaviors to family and/or friends, the retailer, or third parties (Zaichkowsky and Liefeld 1977; Moyer 1984). However studies conducted using consumers in Singapore and in a business-to-business context have identified different demographic patterns (Dart and Freeman 1994,

Feldman, Miyamoto, and Loftus 1999). With this in mind, basic demographics including age, income, and gender were included in the survey to see if the unusual circumstances surrounding the study would change the propensity of certain consumers to complain.

Attribution

This study assesses attribution principles by identifying where consumers placed the blame for the gas pricing issues of September 11th. Respondents were asked to rate the following entities' responsibility in determining the price of gasoline on 9/11: oil companies, media reports, petroleum companies, local gasoline stations, terrorist activity, consumer panic, or government agencies. Respondents were allowed to assign blame to each factor independently. Importantly, these entities were expected to differ in terms of locus of control (for example, consumer panic was thought to be more internal than petroleum companies) and controllability (for example, petroleum companies were thought to have greater controllability than government agencies) (Folkes and Kiesler 1991). We thus assessed the aforementioned entities' perceived responsibility in determining the price of gasoline on 9/11.

Complaint Behavior

Singh's (1990, pg. 80-81) typology identified distinct groups based on the target (or lack) of consumer complaints. These targets were incorporated into the current study with minor modifications. *Passives* are the group of consumers who display below average tendencies to complain. In this study, the passives were classified as those consumers who did not complain to anyone - friends/family, the retailer, or a third party. We classified those who complained to friends and family as *voicers*. This tendency is consistent with word-of-mouth behaviors as identified by the Technical Assistance Research Programs report (TARP) (1981). *Irates* displayed their displeasure by not only complaining to friends/family, but to the retailer as well. Finally, the *activists* are

respondents who complained to friends and/or family, the retailer, and a third party such as the government or media.

Episode Specific Factors

Since our study was based on experience rather than prediction, we had the opportunity to measure related variables not discussed in Singh (1990). Respondents were asked to indicate if they had purchased gasoline on September 11. Some questions were then asked of those respondents who did engage in the purchase act that were not asked (due to a lack of relevance) of respondents who didn't purchase gasoline on that date. These questions include a three-item measure of regret (e.g., "I regret my decision to purchase gasoline on September 11th"), two items assessing perceived fairness of gas prices (e.g., "Considering the circumstances, the price I paid for gasoline was fair"), a two-item measure of reputation (e.g., "This gasoline station location has a good reputation"), and a two-item measure of repurchase intentions (e.g., "I will definitely purchase gasoline from this gas station location in the future").

As part of the current study, we attempted to gain additional insight into consumer regret, which was recently examined in regard to complaint behaviors by Tsiros and Mittal (2000). In the two studies they conducted where the relationship between regret and complaining behavior was examined, Tsiros and Mittal failed to find a significant relationship. In their research however, Tsiros and Mittal only measured one type of complaining (i.e., complaining to the manufacturer), whereas the current study examines several different types of complaint behavior (i.e., complaining to friends or family, complaining to the retailer, complaining to third parties). Moreover, the context of the current study includes the presence of price gouging and other unusual events, factors that may moderate the relationship between regret and complaint. In addition to the regret measure, repurchase intentions of respondents were also assessed to determine if regret experienced from one incident translates into a change in future behavior. Tsiros

and Mittal (2000) found a negative relationship between regret and repurchase intentions in the two studies where they examined that relationship, such that higher regret lead to lower repurchase intentions.

The circumstances surrounding gasoline purchases on September 11, 2001 were unique. The dramatic price increases experienced by some were expected to result in significant complaining behavior. Price gouging – and even the reports of price gouging – could produce changes in how consumers reacted and/or complained. Although what constitutes price gouging is debatable, states are developing laws that identify price gouging as at least a 10% increase in price (Tranum 2002; *Associated Press Newswires* 2001). In the current research, respondents were asked to recall the typical amount paid for gasoline over the previous few months. They were then asked to recall the amount paid on September 11th. We then calculated the percentage difference between the “typical” price and the price of gasoline following the 9/11 tragedy. It was believed those consumers who perceived a higher degree of price gouging would be more likely to actively engage in complaining behavior.

In related studies, prior research has indicated that customer satisfaction is influenced by perceptions of equity and fairness (Clemmer and Schneider 1996). Customers expect fairness in terms of equity, price, treatment and quality. Indeed notions of fairness are central to customers' perceptions of satisfaction with products and services. Specific to this context was price fairness and its immediate impact on complaint behavior. We wanted to assess the extent of price increases and variations and relationships to fairness and repurchase intentions.

Data Collection

Subjects recruited by university students provided data for the study. By design, the data were collected in three “waves” over a period of ten days, beginning September 18, 2001 and continuing through September 28, 2001. Importantly, some of the respondents in our study had purchased gasoline on September 11, 2001,

while others had not purchased gasoline on that date.

Student participation in the project was voluntary and extra credit was given for obtaining questionnaires. The students were allowed to complete one questionnaire themselves, and then collect three additional surveys from non-students. No other restrictions were placed on the respondent pool. All subjects were asked for their name and contact information so that participation could be verified. A random sample of respondents was contacted and all verified they had indeed completed the questionnaire.

A total of 978 usable questionnaires were collected and included in the analysis that follows. Questionnaires were returned from 479 respondents who had purchased gasoline on 9/11, while 499 questionnaires were received from respondents who did not purchase gasoline on 9/11. The sample consisted of a relatively equal number of males and females, and considerable variance across age and income. The percentage breakdown of the sample across these demographic variables is presented in Table 1.

Table 1
Demographic Profile of the Sample

Variable	Percent
Gender	
Female	52.7
Male	47.3
Age	
16-20 yrs.	17.6
21-24 yrs.	26.6
25-34 yrs.	12.7
35-44 yrs.	10.8
45-54 yrs.	25.6
55-64 yrs.	4.7
65+ yrs.	2.0
Income	
Less than 20,000	25.0
20,000 - 39,999	20.7
40,000 - 59,999	16.3
60,000 - 79,999	13.7
80,000 - 99,999	9.8
100,000 or above	14.5

As discussed above, all respondents were asked questions regarding general driving

behavior, gasoline purchase habits, and purchase behavior on September 11th. Also, these respondents were asked whether they complained to friends and family, the gasoline retailer, the media, or an official agency.

RESULTS

Comparison of Overall 9/11 Sample with Singh (1990)

Using descriptions similar to those of the four complaining response types identified by Singh, 333 passives (34%), 522 voicers (53.4%), 104 irates (10.6%), and 19 activists (1.9%) were classified in the 9/11 sample. The number and percentage of respondents classified by Singh and those classified by our data are presented in Table 2. In addition to the overall classification, we divided our respondents into purchase and no purchase categories. This information is also presented in Table 2.

All four groups were represented - both among those respondents who did and did not purchase gasoline on September 11th. A Chi-square test revealed that the distribution of the four groups was significantly different between those who purchased gasoline and those who did not purchase ($\chi^2(3)=38.32$, $p<.01$). In the "did purchase" group, 135 were passives (28.2%), 254

were voicers (53%), 76 were irates (15.9%), and 14 were activists (2.9%). In comparison, there were 198 passives (39.7%), 268 voicers (53.7%), 28 irates (5.6%), and 5 activists (1%) that did not purchase gasoline.

Consumers Who Bought on 9/11: Differences in Characteristics, Evaluations and Other Behaviors Made by the Four Complainer Types

Recall that we had asked several questions regarding regret, fairness, and repurchase intentions to only those consumers who bought gas on 9/11. In this section, we present differences across the four complainer types in demographics and evaluations. Of note, there were no significant differences in gender composition or in the assignment of blame for the price increases (i.e., attributions) across the four complainer types.

Age

We conducted a Chi-square test, using age and the four complaining types as variables. The resulting Chi-square value is significant ($\chi^2(18)=29.2$, $p<.05$). A larger percentage of activists were older relative to the other three groups.

Table 2
Classification of Respondents

		Singh	9/11 Sample	9/11 Sample Who Purchased Gasoline	9/11 Sample Who Did Not Purchase
Passives	Freq.	66	333	135	198
	%	14	34.0	28.2	39.7
Voicers	Freq.	171	522	254	268
	%	37	53.4	53.0	53.7
Irates	Freq.	97	104	76	28
	%	21	10.6	15.9	5.6
Activists	Freq.	131	19	14	5
	%	28	1.9	2.9	1.0
Total		465	978	479	499

Income

We conducted a Chi-square test, using income and the four complaining types as the two variables, and obtained a significant Chi-square value of ($\chi^2(15)=34.01, p<.01$). Passives consisted of the greatest percentage of high-income respondents, while voicers and irates had a greater percentage at lower income levels.

Amount paid on 9/11 above normal

A one-way ANOVA test was conducted to assess differences in the percentage amount paid "above the typical price" across the four complaining types. The test revealed a significant difference ($F=9.76, p<.01$). Post hoc Scheffe contrasts indicated that there was a significant difference between passives, voicers, and irates. Specifically, passives reported paying less inflated prices than did irates ($p<.01$) or voicers ($p<.05$). Furthermore, voicers paid significantly less than irates ($p<.01$).

Fairness

A one-way ANOVA test was conducted to assess differences in fairness across the four complaining types. The test revealed a significant difference ($F=26.59, p<.01$). Post hoc Scheffe contrasts indicated that there was a significant difference between passives and all other groups ($p<.01$ across all group comparisons). Passives perceived greater price fairness than each of the other three groups.

Reputation of gas company

A one-way ANOVA test was conducted to assess differences in the perceived reputation of the gas company across the four complaining types. The test revealed a significant difference ($F=11.14, p<.01$). Post hoc Scheffe contrasts indicated that there was a significant difference between passives and all other groups (all $p's<.05$). Passives perceived the gas company to be more reputable than each of the other three groups. In addition, voicers perceived the gas

company to be more reputable than irates ($p<.05$).

Regret

A one-way ANOVA test was conducted to assess differences in regretting purchasing gas on 9/11 across the four complaining types. The test revealed a significant difference ($F=19.17, p<.01$). Post hoc Scheffe contrasts indicated that there was a significant difference between passives, voicers and irates (all $p's<.01$). Voicers and irates were much more likely to experience regret than passives.

Repurchase Intentions

A final one-way ANOVA test was conducted to assess differences in repurchase intentions across the four complaining types. The test revealed a significant difference ($F=12.185, p<.01$). Post hoc Scheffe contrasts indicated that there was a significant difference between passives and all other groups (all $p's<.01$). Passives were more likely to repurchase from the same gas station than the other three groups. Also, voicers were more likely to repurchase from the same location than irates ($p<.05$). Voicers were marginally more likely to repurchase from the same location than activists ($p<.10$). A summary of the demographic profile and behavioral characteristics of the four complaining types is presented in Table 3.

Passives

These respondents paid the least above normal, were the most likely to believe price was fair, believed the reputation of the gas company was good, would repurchase in the future and were the least likely to regret their purchase decision. They were the second oldest age group and the highest income group.

Irates

Irates paid the highest price above normal and were the most likely to regret their purchase. On reputation of gas station, fairness of the gas price

Table 3
Thumbnail Sketches for the Four Response Groupings

<u>Passives</u>	<u>Irates</u>
On average paid 12% above normal (the least amount)	On average paid 35% above normal (highest)
Second oldest age group (35-44)	Young adults (25-34) same as voicers
Highest income group (\$60,000-\$79,999)	Lowest income group (\$20,000-\$39,999)
Most likely to indicate would purchase in the future (mean 4.34)	Third most likely to indicate would purchase in the future (mean 3.56)
Most likely to believe price was fair (mean 4.05)	Believed price was not fair (about equal with activists, mean 2.71)
Most likely to believe reputation of gas company was good (mean 4.22)	Indifferent with regards to reputation of gas company (mean 3.45)
Least likely to regret purchase (mean 1.64)	Most likely to regret purchase (mean 2.88)
<u>Voicers</u>	<u>Activists</u>
On average paid 21% above normal (similar to activists)	On average paid 24% above normal (similar to voicers)
Young adults (25-34) same as irates	Oldest age group (45-54)
Middle income group (\$40,000-\$59,999)	Middle income group (\$40,000-\$59,999)
Second most likely to indicate would purchase in the future (mean 4.00)	Least likely to indicate would purchase in the future (mean 3.31, but similar to irates)
Second most likely to believe price was fair (mean 3.07, but significantly lower)	Believed price was not fair (about equal with irates, mean 2.68)
Second highest in belief of reputation of gas company (mean 3.92)	Indifferent with regards to reputation of gas company (mean 3.32)
Third least likely to regret purchase (mean 2.61)	Second least likely to regret purchase (mean 2.26)

Repurchase intentions, fairness, reputation, and regret scores were based on five point scales, where higher scores indicate greater repurchase intentions, greater perceived fairness, better perceived gas company reputation, and more regret for having purchased gas on 9/11.

and future gas intentions they were very similar to activists. They tend to be the same age as voicers, but reported the lowest income levels.

Voicers

These consumers were higher than the passives, but lower than the irates in terms of the amount above normal they paid. They were second most likely to believe the price was fair, the reputation of the gas company was good, and

they would purchase again in the future. They were third of the four groups in their reported level regret of buying, but did not differ significantly from activist or irates. They were the same age as the irates, but more likely to be in a higher income category.

Activists

Activists reported paying only slightly more than the passives for their gasoline purchase, yet

were the least likely to indicate they would purchase from this station in the future. They were similar to the irates and voicers in terms of fairness, reputation of the gas company, and regret. They were the oldest age group and similar to voicers in terms of income.

DISCUSSION

The events of September 11th were not a situation that could have ever been created in an experimental or fictitious setting. While the actual tragedy occurred in a concentrated geographic area, the ramifications resonated on a nationwide basis, even on a worldwide basis. Television coverage 24 hours a day and the dramatic nature of the events heightened the interest and involvement level of everyone - purchasers and non-purchasers alike. In comparison, most other studies have examined complaining behavior through either scenario-construed hypothetical situations or having respondents reflect on a personal purchase situation. These situations recalled by individual survey subjects were not universal nor were they particularly remarkable. Thus, the conditions and perhaps results of the current study are unique.

Interestingly, the distribution of the percentages across the four groups differs substantially from the distribution of the four groups reported by Singh (see Table 2). The differences in distribution may be attributed to several factors.

Most apparent is the much higher percentage of passives contained in the 9/11 sample. This may reflect the feeling of many consumers that these were extraordinary circumstances. Thus, the price increases were frustrating, but somewhat expected given the events. The same assumptions could be made regarding the decreased incidence of irates and activists in our study. Irates and activists may have perceived little recourse was available given the general chaos that existed in the market and government institutions. Overall, then, it appears that crisis situations "shield" both firms and third parties from some of the direct negative consumer backlash that would occur under normal circumstances. It is hoped that

future actions initiated by firms and third parties under crisis situations that may cause hardship to some are clearly needed or are appropriate given the nature of the crisis.

We also found over 50% of our respondents complained to family or friends (voicers), a percentage markedly higher than in the Singh study (1990). This increase could be due to the enormity of both public and private attention given to the 9/11 events. Conversation in homes, workplaces, public venues, and media coverage, focused on the terrorism attacks and the surrounding events, including the significant increases of gas prices. Individual consumers spent hours glued to news coverage on television and the Internet, and they checked-in with family and friends repeatedly for personal updates. The increased incidence of complaining could also be attributed to the visibility of gas prices. This increased visibility may well be due to large signage and volume of attention in recent years due to large price increases, among other reasons.

Clearly, the complaint behaviors of purchasers and non-purchasers are different. Note that while the percentage of voicers stayed the same whether or not the respondent purchased gasoline, the percentage of passives was much higher in the group who did not purchase gasoline. Correspondingly, the non-purchasers included fewer irates and activists. Again, the publicity and high visibility surrounding gasoline prices and waiting lines at service stations was apparent to and affected even non-buyers. It is interesting to note that five of the respondents who did not purchase gasoline still took the time to complain to friends and family as well as a third party source). This is truly evidence of the "activist" mindset.

The relationship between purchase regret and complaint behavior has only recently begun to be studied (Tsiros and Mittal 2000). The current research extends that investigation by examining the relationships among different types of complaining behavior (i.e. complaining to friends, complaining to third parties, complaining to retailer) and regret. People who were voicers (complained to friends and family only) and irates (people who complained to friends and family as

well as the retailer) were more likely to report regret regarding their purchase than passives (people who complained to no one). Regret between voicers and irates was not found to differ significantly. People who were irates (complained to friends and family as well as the retailer) were no more likely to experience regret than activists (complained to friends and family as well as a third party source).

Fairness and price paid above normal play significant roles in complaining behavior in our study. Clearly passives (those who did not complain) paid the least amount above normal and correspondingly were the more likely to feel that the price was fair. This only makes sense. Interestingly, voicers (complained to friends and family) were the next most similar to passives on both these variables. Irates (complained to the retailer), who paid the most, were more similar to activists in terms of fairness. It would seem that price paid is related to perceptions of fairness and may serve to trigger more intense or action-oriented complaining behavior.

FUTURE RESEARCH

There are many possibilities for expansion of research from this study and that of the relationship between price gouging and complaint behavior. Specifically, as the nation experiences war and more uncertainty, what changes in behavior could be expected to occur? Do consumers see a difference between a planned event, such as war, and a surprise event like that of a terrorist attack or natural disaster?

We are also in the process of examining how consumer perceptions of the gasoline prices on September 11, 2001, may depend on the attributions of blame for the price increase on that date. Prior research investigating the fairness of price increases has found that consumers believe firms are entitled to increase prices for products in cases where the underlying costs for those products has increased, but not when there is no justifiable reason for the price increase (Kahneman, Knetsch, and Thaler 1986; Urbany, Madden, and Dickson 1989). The reasons that consumers perceived to cause the price increases

on September 11, 2001 probably influenced their perceptions of fairness of gasoline prices on that date. Since the actual causes of the price increases on 9/11 were ambiguous, we are investigating whether the *perceived* cause of the price increase influenced consumer perceptions of price fairness.

Certainly this study is only a small step toward a more thorough understanding of complaining behavior. However, we believe the study of actual behavior resulting from a "real world" encounter widely experienced by consumers is a notable contribution to this literature stream.

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Appendix
Measures Included in the Study

Items Used to Assess Attribution

How responsible do you feel each of the following was in determining the price of gasoline on 9-11-01?

	Not at al Responsible	Little Responsible	Somewhat Responsible	Responsible	Very Responsible
Oil shortage	1	2	3	4	5
Media reports	1	2	3	4	5
Petroleum companies	1	2	3	4	5
Local gas station	1	2	3	4	5
Terrorist activity	1	2	3	4	5
Consumer panic	1	2	3	4	5
Government agencies	1	2	3	4	5

Items Used to Assess Complaint Behavior

Did you complain about the price of gasoline on 9-11-01 to:

- Your friends or family? Yes/No
- The gasoline retailer? Yes/No
- The media? Yes/No
- Any official agency? Yes/No

Items Used to Assess Episode Specific Factors

Regret	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I regret my decision to purchase or not purchase gasoline on 9-11-01	1	2	3	4	5
I am sorry that I purchased or did not purchase gasoline on 9-11-01	1	2	3	4	5

I should have made a different
decision regarding the purchase of gas on 9-11-01 1 2 3 4 5

Fairness of Prices

Considering the circumstances,
the price I paid for gasoline was fair 1 2 3 4 5

Compared to others who bought
gasoline that day, the price I paid was fair 1 2 3 4 5

Reputation

This gasoline station location has a good reputation 1 2 3 4 5

This gasoline company has a good reputation 1 2 3 4 5

Repurchase Intentions

I will definitely purchase gasoline
from this gas station location in the future 1 2 3 4 5

I will definitely purchase
the same brand of gasoline in the future 1 2 3 4 5

SATISFACTION WITH TOURS OF A FRANK LLOYD WRIGHT BUILDING

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ABSTRACT

Visitors to the Gordon House by Frank Lloyd Wright were asked to complete a survey about their experience at the House. Included in the instrument were questions about previous experience with house museums and with Frank Lloyd Wright buildings, about their expectations of the House, and about their overall satisfaction with their visit. By means of cross tabulations, correlations, and ANOVA, relationships to consumer satisfaction were compared against several factors including two of the most commonly studied antecedents, level of involvement and the disconfirmation of expectations. These two antecedents, however, were found to have little or no predictive value. Cross tabulations and correlations showed that the level of satisfaction with the greeter and docent, the amount of time spent in the House, and the rating given the appearance of the house, however, had significant positive effects on overall satisfaction. The findings of this study are discussed and implications suggested for the management of tourist sites.

INTRODUCTION

Background

A reawakening of interest in American history, especially in Midwestern and Western U.S. history, has manifested itself recently in many forms, one of which is tourism and travel within the United States. In the state of Oregon tourists have been traveling recently to the one building in the state designed by Frank Lloyd Wright (1867-1959), the Gordon House. The new owners of this property made application in 2000 for a permit to raze it because they wanted to build their dream house. Fortunately, the architect hired to design the new house alerted the architectural community that the Gordon House was about to be

destroyed. A dramatic last-minute campaign by architects, designers, and historians saved the house from demolition. This *ad hoc* group found funding and loans and arranged to divide the House into four parts and move it 25 miles away to a demonstration garden open to the public. It was then re-built and opened to the public in 2002.

Frank Lloyd Wright died 44 years ago, but public interest in his buildings and unbuilt designs is still high (Storrer, 1993). His associates and disciples at Taliesin Fellowship near Phoenix and at Taliesin in Wisconsin still practice architecture in the style established by Wright in the early and mid-twentieth century. Both of these Wright architecture firms host thousands of visitors each year, as do most tourist sites in the United States designed by Wright that are open to the public.

In the year since it was opened, the Gordon House, now at the Oregon Garden in Silverton, Oregon, has hosted more than 26,000 visitors who paid for self-guided or docent-led tours. In addition, many more visitors have walked along the path around the House to view it from the outside. These visitors have come from more than 45 states and 14 foreign countries.

The Gordon House, designed by Wright for Conrad and Evelyn Gordon in 1956 but not built until 1964, five years after Wright's death, is considered one of the best examples of the genre Wright named Usonian (for United States of North America). These houses, featured in an article in *Life* magazine in 1938, were designed of inexpensive and native materials and were intended for families of moderate income, at the time considered to be \$5,000-\$6,000 per year. Of course, most clients who hired Wright to design a home for them had much higher incomes. Because of a limited farm income, Mr. Gordon wrote a letter to Mr. Wright after receiving the initial plan for his house and requested that Wright cut the cost of the house by 25%, which Wright did by means of reducing the square footage and removing some details (Woodin 2002).

One group, the Gordon House Conservancy Board, oversees fund-raising and administers the interiors and furnishings, the interior and exterior refurbishing and maintenance, and the landscaping. But it is the responsibility of the Director of the House and the Oregon Garden Board to provide visitor amenities, publicize tours of the House, and arrange special events, meetings, and conferences.

As overseers of the Gordon House, the Board of the Oregon Garden requested the visitor survey reported herein. The Board studied the results of this survey carefully for indications of aspects of the tours and of the House itself that could be improved, such as adding more furniture, repairing the wood siding and interior trim, improving the signage, improving the landscaping, and expanding the scope and time of the docent tours.

The Board had already determined that a delicate balance must be struck between the amount of visitor traffic that the House can support without degrading the structure, surfaces and floors, on one hand, and increasing income from tours by increasing patronage or increasing the entry fees, on the other. A disadvantage of raising the cost of the tours is that experiencing one of Wright's Usonian houses would be available only to those willing and able to spend more money.

One of the goals of the extensive educational program developed by the Board is to provide low-cost tours for school groups and other organizations. In the brief existence of the House at the Oregon Garden, the volunteer docents have provided, among other special services, tours in German, tours for blind visitors, and special tours for architecture and interior design students from universities in the area.

Previous Research

Satisfaction with the built environment has been addressed in several studies, including one exploring disconfirmation of expectations (Caughey, et al. 1998) and one studying level of involvement (Caughey, et al. 1995); but visitor satisfaction with tours of buildings is an area not well studied. A search of the literature about house

museums yields published work about maintenance, publicity, docent training, and preparation of buildings for public use (Coleman 1933; Wiederhold 2000); but little has been reported about visitor satisfaction with the tour experience and with the buildings themselves.

Interest in studying leisure activities and the consumers thereof has increased as marketing of those services has become more common. Recent studies have addressed consumer reaction to tours of a natural area open to the public (Webb and Hassall 2002) and the various motivations of seniors who travel for pleasure (Astic and Muller 1999). Pioneering work on level of involvement has been done and then further refined by Zaichkowsky (1985, 1994), among others, and was recently explored again by Celuch and Taylor (1999). Williams and Anderson (1999) explored consumer delight as performance, and they explored the concept that delight may result from product/service performance, an issue alluded to in the responses of some subjects in the present study. It has often been observed that satisfaction with goods cannot be measured in the same ways as satisfaction with services. Several scholars conducted research about those differences, and early observations about many of those differences were made by Zeithaml (1981).

The present objective was to examine the effect of expectations and level of involvement on the satisfaction of visitors to the Gordon House. The preliminary proposition explored was that the visitors' expectations and level of involvement would be related to their overall satisfaction with their visit. The general goal of the study was to apply satisfaction theory to the built environment, specifically to the Gordon House by Frank Lloyd Wright.

Research Hypotheses

In addition to exploring the relation between overall satisfaction and level of involvement, and overall satisfaction and the disconfirmation of expectations, the researchers developed several hypotheses:

H1: If visitors reported positive expectations

of their visit, they would report greater overall satisfaction with their experience at the Gordon House.

H2: If visitors indicated a relatively high level of involvement (5 or 6 on an adjusted scale of 1-6), they would report a greater level of overall satisfaction.

H3: If visitors came exclusively to see the House, rather than to see the Garden, or the Garden and the House, they would report a greater level of overall satisfaction with their visit.

H4: Visitors who reported a greater level of satisfaction with their volunteer docent would report a greater level of overall satisfaction.

METHOD

Instrument

A survey instrument (See Appendix) consisting of 17 questions and 6 demographic items was administered to visitors to the Gordon House by volunteer greeters during late August and early September 2002. One hundred fifty eight valid questionnaires resulted. One hundred subjects were rewarded with a coupon for a Marion berry smoothie from the snack bar nearby. Written informed consent was obtained from all respondents.

Sample

Of the 158 respondents, 58.22% (n=92) were women and 38.60% (n=61) were men, with 3.16% (n=5) not responding. The ages of the respondents were: 24 and under --4.43% (n=7); 25-34 years--9.49% (n=15); 35-44 years--7.59% (n=12); 45-54 years--22.15% (n=35); 55-64 years--30.37% (n=48); and 65 and over--21.52% (n=34). The educational level of the respondents was reported as follows: high school --11.39% (n=18); some college --25.94% (n=41); college degree --30.37% (n=48); advanced degree --27.21% (n=43); and no reply --5.06% (n=8).

Analysis

For the purposes of this study, expectations were operationalized as expectations either positive, neutral, or negative, expressed about the exterior and about the interior of the House. To measure true expectations, this survey could have been administered to visitors before they saw the House, but that was not feasible. There was a great deal of publicity about the grand opening of the Gordon House both in print and on TV, so some visitors would have had expectations about it based on the media coverage. In order to analyze the results, researchers formed a variable based on the responses to the two open-ended questions about expectations. Respondents' answers to question four, about the exterior, and five, about the interior, were coded by researchers as positive (3) if they expressed positive expectations (e.g. "Hoped it would be in a lovely setting like most Wright houses."), neutral (2) if they expressed neither positive or negative expectations (e.g. "I didn't really know what to expect."), or negative (1) if they expressed negative expectations (e.g. "I expected some degree of age and decay."). Coding by researchers was completed separately and the few points of incongruence were discussed and resolved. Final coding was unanimous.

To measure level of involvement, responses to three questions were considered. Variable three, level of involvement, was obtained by combining responses to questions eight, ("Have you visited other house museums?"), nine ("Have you visited any other buildings designed by Frank Lloyd Wright?"), and ten ("Have you visited the Gordon House before?"). Responses were coded as positive (2), or negative (1). Responses to these three questions were given equal weight and were collapsed into a single variable. It may be expected that question nine would be given more weight since respondents would have to travel much farther to answer positively, therefore they could be considered more involved. However, their involvement is likely more with the cult of personality around Wright, rather than involvement with a modest personal home. Additionally, at the time of the study the condition of the newly opened Gordon House did not

compare favorably with that of other Wright buildings that have been long time public attractions.

Independent variables used were as follows:

Variable 1: responses to an open ended questions about visitor expectation of the exterior and interior of the House from questions four and five, coded as a range from 6 (positive responses to both questions) to 2 (negative responses to both questions)

Variable 2: responses about visitor involvement from responses to questions 8, 9, and 10, coded as a range from 3 ("no" to all three questions) to 6 ("yes" to all three questions)

Variable 3: responses about visitor involvement from question 15, about the attraction visitors came to see, coded as 3 (the Garden), 2 (the House), or 1(both)

Variable 4: responses to question on visitor satisfaction with docent, from question 7, coded as responses from 1 ("Not at all satisfied"), through 5 ("Very satisfied")

Cross tabulations were completed to give researchers a summary of the data between the levels of overall satisfaction and the independent variables. Table 1 gives the result.

Pearson Correlation was computed to examine the relationships between the independent variables 1, 2, 4 and overall satisfaction. An alpha level of $p=.05$ was used for all tests. See Table 2.

An ANOVA was computed to test the difference in means of satisfaction between the groups of those who came to see the Garden ($M=3.60$, $s=1.106$), the House ($M=4.13$, $s=1.100$) or both ($M=4.26$, $s=0.931$) in Variable 3. There was a significant difference among the three groups, $F(2,155) = 6.416$, $p=.002$. However, a post hoc Bonferroni comparison showed that while the difference between those who came to see the Garden and those who came to see both Garden and House was significant ($p=.002$), there was no significant difference between those who came to

see the House and either those who came to see the Garden ($p=1.00$), or those who came to see the Garden and the House ($p=.125$).

Additional study variables were compared to overall satisfaction as follows:

Variable 5: responses to time spent in the House, from question 14, coded as number of minutes visitor reported

Variable 6: responses to question on visitor satisfaction with greeter, from question 6, coded as "Not at all satisfied," (1), through "Very satisfied," (5)

Variable 7: responses to question on the likelihood that visitor would return to the House, from question 11, coded as "Not at all likely," (1), through "Extremely likely," (5)

Variable 8: responses to question on visitor rating of the general appearance of the House, from question 13, coded as "Not good" (1), through "Very good" (5)

Pearson Correlation was computed to test the strength of the relationships between the independent variables 5 through 8 and overall satisfaction. An alpha level of $p=.05$ was used for these tests. See Table 3.

RESULTS AND DISCUSSION

Significant correlations with overall satisfaction were found for five variables as follows:

Variable 4: the level of satisfaction visitors reported with the docent, ($r=.453$, $p=.000$, $n=147$)

Variable 5: amount of time visitors reported they spent in the House ($r=.462$, $p=.000$, $n=155$).

Variable 6: the level of satisfaction they reported with the greeter ($r=.444$, $p=.000$, $n=156$).

Table 1
Crosstabulation of Levels of Overall Satisfaction with Variables 1 through 4

		Overall Satisfaction					
		1	2	3	4	5	Total
V1- Expect.	1	0	1	1	3	4	9
	2	0	0	2	4	3	9
	3	3	1	7	10	10	31
	4	0	0	2	4	4	10
	5	0	0	1	3	2	6
	6	1	3	6	12	25	47
Total		4	5	19	36	48	112
V2- Involv.	3	1	2	0	1	3	7
	4	0	2	8	10	28	48
	5	4	1	12	31	29	77
	6	0	2	9	7	8	26
Total		5	7	29	49	68	158
V3- Involv.	1	3	3	10	18	8	42
	2	0	3	3	5	12	23
	3	2	1	16	26	48	93
Total		5	7	29	49	68	158
V4- Sat. Doc.	1	1	0	0	0	0	1
	2	0	1	0	0	0	1
	3	1	3	3	3	1	11
	4	0	0	7	15	6	28
	5	2	2	14	30	59	107
Total		4	6	24	48	66	148

Table 2
Correlation of Overall Satisfaction and Variables 1, 2, and 4

Overall Satisfaction	V1	V2	V4
Pearson Correlation	.115	-.089	.453*
Significance (2-tailed)	.228	.266	.000
N	157	157	147

* Correlation is significant at the 0.05 level.

Table 3
Correlation of Overall Satisfaction and Variables 5 through 8

Overall Satisfaction	V5	V6	V7	V8
Pearson Correlation	.462*	.444*	.400*	.373*
Significance (2-tailed)	.000	.000	.000	.000
N	155	157	155	154

* Correlation is significant at the 0.05 level.

Variable 7: the likelihood that they would return to the House ($r=.400$, $p=.000$, $n=155$).

Variable 8: their rating of the general appearance of the House ($r=.373$, $p=.000$, $n=154$).

Some hypotheses were supported, while others were not.

H1: If visitors reported positive expectations, they would report greater overall satisfaction with their experience at the Gordon House. The results of this study, however, indicate that positive expectations were not predictive of overall satisfaction. No significant relationship was shown by correlation between overall satisfaction and the six categories of expectations ($r=.115$, $p=.228$, $n=157$). Therefore this hypothesis was not supported.

H2: If visitors indicated a relatively high level of involvement (5 or 6 on an adjusted scale of 1-6), they would report a greater level of satisfaction. Twenty-six respondents indicated a high level of involvement (6 on the adjusted scale), and 77 indicated a level of 5, for a total of 103. No significant correlation was observed between overall satisfaction and the combined involvement variable ($r=-.089$, $p=.266$, $n=157$). However, the overall reported level of involvement was rather high. H2, however, was not supported.

H3: If visitors came to see the House, rather than to see the Garden, they would report a greater level of overall satisfaction with their visit. Twenty-three respondents came to see only the Gordon House, 42 came to see the Oregon Garden, and 93 came to see both the House and Garden. There was no significant difference between those who came to see the House and either those who came to see the Garden ($p=1.00$), or those who came to see the garden and the House ($p=.125$). Therefore, H3 was not supported.

H4: Visitors who reported a greater level of satisfaction with their volunteer docent would report a greater level of overall satisfaction than those who reported a lower level of satisfaction. One hundred seven respondents reported that they were very satisfied (4 or 5 on a scale of 1-5) with the docent. There was a positive relationship ($r=.462$, $p = .000$, $n=147$) between the respondents' overall satisfaction and their satisfaction with the docent. Therefore, H4 was supported.

CONCLUSIONS AND IMPLICATIONS

It cannot be concluded from the present findings that expectations or level of involvement had a relationship to visitors' overall satisfaction with their experience at the Gordon House. However, certain implications for the management of this and other tourist sites emerged. The quality and preparation of the volunteer docents and greeters, the amount of time visitors spend in the

House, the type of tour taken, and the rating given the general appearance of the House all appeared to have relationships to visitors' overall satisfaction.

Suggestions for further research include measuring visitors' expectations about the House before they see it. Another useful question to be included in future instruments would be the extent to which respondents are involved with architecture in general, including previous study and hobby-level interest, as well as profession. In addition, in an effort to aid the Board of the Oregon Garden and similar organizations in their future marketing efforts, the professions of visitors could be surveyed.

The need for more such tourist sites of architecturally significant buildings throughout the United States is increasing. Most house museums and other voluntary education activities emphasize the education of children. With the recent elimination of most arts programs in public schools, special tours such as this one are becoming more important in the education of youth. Because the present study took place during summer, no school groups visited. But surveying members of tour groups from schools, retirement homes, and similar organizations could improve future experiences for groups. In addition, longitudinal studies could examine the relationship to exposure to the work of famous architects and children's future involvement with the built environment and historic preservation, or even their eventual career decisions.

The results of the present study contribute to consumer satisfaction literature by providing a new application of two of the common antecedents of satisfaction, level of involvement and expectations.

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APPENDIX GORDON HOUSE SURVEY

1. How did you find out about the Gordon House? Check all that apply.

- friend
 newspaper
 sign in Oregon Garden

THE COMPLAINING CUSTOMER: A SERVICE PROVIDER'S BEST FRIEND?

Gillian Naylor, University of Nevada Las Vegas

ABSTRACT

This research investigates how firms handle customers' complaints. We examine the fundamental question of how, or whether, firms respond to consumer complaints. Specifically, we examine services, as services present a unique challenge for marketers. The human element of service delivery creates many opportunities for failure. In this research we wanted to not only study complaint responses in the services industry, but also compare responses to published response rates to customer product complaints. Our examination, across a multitude of service industries, reveals response rates that are both low and slow. Our results are not encouraging. Service firms are clearly missing out on opportunities to repair problems and build relationships with their customers.

INTRODUCTION

There are many theoretical models that address consumer complaint behavior (Singh, 1988; Singh and Widing, 1991; Blodgett and Granbois, 1992; Boote, J. 1998). The ultimate goal of these models should be to benefit firms by providing knowledge about the attitudes and behaviors of current and future consumers. Firms who heed, and respond appropriately to, consumer complaints can increase satisfaction (Durvasula, Lyonski and Mehta 2001), ensure higher repurchase intentions (Halstead and Page, 1992) and prevent customers from switching (Fornell and Wernerfelt, 1987). A complaint provides the firm with the opportunity to change an annoyed customer into a loyal one (Hart, Heskett and Sasser 1990). Consumer complaints should be an invaluable source of information used to make strategic and tactical decisions (Kasouf et al., 1995) and develop a customer-focused culture (Plymire, 1991). While the aforementioned models provide a theoretical understanding of the consumer complaint behavior, the more

fundamental question of how, or whether, firms respond to consumer complaints has received less attention. Of particular interest, is how service complaints are handled.

BACKGROUND

Services present a unique challenge for marketers because the opportunities for failures are greater. The people element of service delivery allows less control of the production process. The elements that separate services from products all represent potential areas for failure. Heterogeneity means that the friendly helpful employee in one encounter could be a rude and unhelpful in another encounter. Within and across employees and customers, service experiences can differ. Perishability of services means the ruined nights' stay at a hotel due to noisy neighbors can't be returned. Joint production and consumption of services means the customer who is unhappy with the dressing on their salad but didn't tell the waiter to put it on the side, will have an impact on their own service experience and potentially the experience of others consuming the service at the same time. The intangible nature of services creates supply and demand issues. Showing up at Wally-World to find it closed for annual maintenance means the customer is very unhappy. They can't go down the street to find the 'product' elsewhere. Intangibility also creates potential miscommunication of what a service entails.

Given the increased pitfalls with services, marketers should be more interested in listening to the customer to ensure quality service delivery. To aid firms in developing methods to listen to customers, Berry and Parasuraman (1997) present a quality information system. The need to listen to customers is clearly established and the tools to aid firms in listening have been developed. Firms should be improving their handling of customer complaints because reasonable complaints from consumers should be highly valued. Instead it appears service providers are losing ground. Tax,

Brown and Chandrashekar (1998) found the majority of consumers were not always satisfied with the way their complaint was handled. They found customers could be unhappy with the outcome of the complaint, the procedure of the firm, or the interaction with the firm. More recently, Jane Spencer reports in the Wall Street Journal almost 30% of customers have experienced a serious problem that led to them feeling rage over the way their situation was handled. The study also reported 62% of respondents wanted to vent, but only 1% got the opportunity.

From those who reach the point of rage to those who are more reasonable, there are many types of complainers and complaints. Voicers, as defined by Singh (1990), complain to a firm but are still willing to continue patronage with the firm. They do not engage in negative word-of-mouth or seek third-party resolution; they believe in the system. Zeithaml and Bitner (2000) suggest voicers are a firm's best friends. They let the firm know when there is a service problem and are willing to give the firm a chance to fix the problem. Given the current perception of increased service failures this research was motivated by the desire to see just how much service firms value their 'best friends'. In sum, when they are faced with reasonable customers with reasonable complaints do they show that they care, and when do they care?

METHOD

Data Collection Overview

To examine the complaint handling behavior of service firms, data was garnered from a class project assigned to undergraduate and MBA Services Marketing students. Students were required to write a letter to a service provider with whom they had experienced a problem. Students without complaints were given an alternative assignment. The specific instructions were to write a letter to a service provider outlining a complaint or concern, request resolution and to make sure the letter was well written. Responses were tracked over the course of a semester.

Responses received after 13 weeks are neither known nor included in this study.

Letters were coded by industry, number of contact sources provided, response time, request type (apology/ explanation or remuneration), request size (< \$10, < \$100, < \$1000), contact from the firm (no contact, contact no resolution, contact with promise of future resolution, resolution upon contact). Those who were contacted were surveyed on their satisfaction with the outcome of the complaint.

Back to The Drawing Board

After two semesters it became apparent that there were problems with the project. The response rate was under 20 percent. Internet research revealed an article addressing firms' grievances with customers' complaints. Firms asserted they could not respond because information was often incomplete. The article stressed the firms didn't know how to resolve and/or didn't know how to contact customers. Specifically firms requested a clear description of the problem, a proposed remedy and clear, current and legible contact information.

Assignment requirements were revised. Instructions were that the service problem and resolution had to be clearly articulated and the students must be realistic with the resolution; students could not ask for free service for minor service problems. If monetary reimbursement was not appropriate, students were asked to request an apology, or seek a response to a question regarding the handling of a service problem. Multiple means of contact were required. Students were requested to provide an email, phone number and mailing address. The response rate was more than doubled with these changes.

Where There's a Will There's a Way

Overall, 49 out of 103 (48%) individuals received responses from their firms within 12 weeks of sending a letter of complaint. Interestingly, providing additional methods of contact didn't affect likelihood of contact (Table 1). Fifty three percent of individuals who

Table 1
Number of Contact Sources Provided by Contact

Sources of contact provided	Never Contacted	Contacted	Total	Percent contacted
1 source	7	8	15	53%
2 sources	1	12	13	92%
3 sources	54	29	75	39%
Total	54	49	103	Chi = 13.2 Sign. .002

provided only one means of contact, received a response from the firm. In contrast, only 39% of people who provided three means of contact received a response. The sample of individuals who provided only one or two means of contact, however, was a small proportion (27%) of the total sample. In sum it appears if there is a will there is a way. If the firm was interested in making contact, they did.

Contact By Industry

Whether consumers are satisfied or dissatisfied with how their complaints are handled varies significantly by service industry (Andreasen and Best 1977; Berry and Parasuraman 1991). Given these findings, we examined whether responsiveness by firms to customer complaints varied by service industry. There were significant differences by industry (See Table 2). Airlines, who are regulated, responded to 15 out of 16 complaints. In contrast, retailers responded to only 27% of letters (4 out of 15). Excluding airlines, the response rate was 39%. This result compares dismally to Martin and Smart (1988) who reported an 86% response rate to complaint letters to a product goods firms. Next we examined the timeliness of responses. Similarly, Clark, Kaminski and Rink (1992) report a 77% response rate for complaint letters about branded products.

Letters were mailed in a batch to have control over the send date. There were two incidents in which responses were received the day after the letters were sent. Both were sent to local fast food

restaurants. Overall, responses were not very timely. Response times ranged from one day to twelve weeks. (See Table 3). Fifty-nine percent of firms that responded, did so within three weeks. The mean response time was over 4 weeks. In comparison, Martin and Smart (1988) report a mean response time of 21 days for their study of product complaints. Our study differs, however, across several dimensions. First, our study utilized services. More failures should be expected because of the nature of services (heterogeneity, joint production/consumption, intangibility and perishability). Second, our complaints were about specific service incidents/failures that would need to be investigated by the firm. We requested a response that addressed the specific service incident. The additional time might be due for the need of the service provider to research the problem and provide a specific response.

As anticipated there were significant differences across service industry. Of the firms who responded, retailers responded in an average of 1.5 weeks. In contrast, automotive repair firms took an average of seven weeks (See Table 4). The complexities of the problems across industries account for some of this discrepancy. For example, complaining about a slow, or wrong, order at a fast food restaurant is easier to respond to than investigating whether auto repairs were necessary or done correctly.

Table 2
Contact by Industry

Industry	Never Contacted	Contacted	Total	Percent Contacted
Fast food	11	9	20	45%
Airlines	1	15	16	94% ¹
Restaurant	10	8	18	44%
Retailer	11	4	15	27%
Automotive	18	9	27	33%
Other: insurance, bars, car rentals	3	4	7	57%
Total	54	49	103	Chi = 18.84 Sign. .002

¹ Regulated industry

Table 3
Response Times

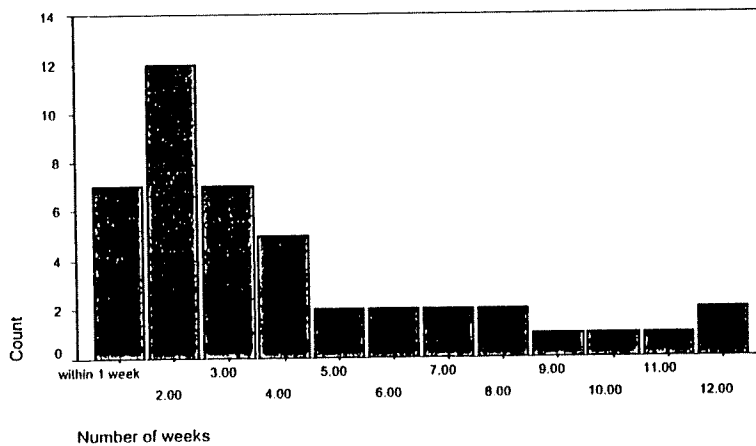


Table 4
Response Time by Service Industry

Service Industry	Weeks to Respond
Fast food	3 weeks
Airline	3.5 weeks
Restaurant	4 weeks
Retailer	1.5 weeks
Automotive	7 weeks
Other	4 weeks
F = 2.54, Sig. of F 0.044	

Table 5
Response by Industry

	Fast food	Airlines	Restaurant	Retailer	Automotive	Other	
No response	11	1	10	11	18	3	54
Insulted			1	1	1	1	4
Contact no resolution	2	3			4	1	10
Contact promised resolution	4	7	3			1	15
Contact with resolution	3	5	4	3	4	1	20

How They Responded (Promised) By Industry

Responses by the service firms were categorized by how the firm responded. Some firms contacted the customer prepared to resolve the problem. Other firms made contact promising they would get back to the customer to resolve the matter. Promising to investigate, and then get back to customers, was a common response for airlines. This is likely due to the regulation of the industry. Other firms made contact but did not offer a resolution to the issue at hand. For example, many customers received form letters that thanked them for communicating with the firm. The letter did not address the problem or offer any future contact.

Four responses were coded as 'insults'. These responses were so egregious that the customers experienced anger. Details of these complaint appear in the 'hall of shame' section. (See Table 5)

What Do They Want?

We can conclude from our study that lacking contact information did not contribute to firms' failure to respond to customer complaints. We also know that within our sample, clarity of the problem and/or resolution is not an issue. Only letters with clearly articulated problems were included in the study. Next, we turned to what our customers requested. Perhaps our low response rate was due to what customer wanted

from the firm. Seventy percent of the customers asked for an apology or answer to a question about service policy. For example, a customer outlined rude service he had received at a restaurant. He let the firm know he wanted them to be aware of the problem and asked for someone to apologize for the service failure. Other customers made firms aware of service problems and then asked for the firm to make contact to let the customer know about their service policies. For example, a customer had observed an employee reduce a deaf customer to tears with their obdurate behavior. The customer explained the situation to the firm and asked about the firm's policies in regard to handicapped customers. No remuneration was sought.

Thirteen percent sought monetary reimbursement for less than \$10; 12% sought under \$100. Six percent of customers sought up to \$1000 to correct service problems they had experienced. These included a customer who had improperly completed automotive work that created additional automotive problems. Another customer was given incorrect information about utilizing free airline tickets thus having to buy tickets at the airport on the day of the scheduled flight.

Sorry Seems to be the Hardest Word...

Contrary to expectations the response rate was lowest for those who asked for an apology, or explanation. Only 18% of those asking for an apology, or explanation, received a response. In

Table 6
Satisfaction of Customers who were Contacted

	Outcome Satisfaction	t / Sig.
Request resolved	1.604	12.26 / 0.00
Weeks to resolve	-.097	-2.15 / 0.00
Level of resolution	.414	2.47 / 0.00
R ² = .765		F = 47.74 / 0.00

contrast 31% of those asking for less than \$10, 25% of < \$100 and 33% of < \$1000 received a response. There was not a significant difference by amount sought. Fear might be driving the low response for the non-remuneration group. Firms might be afraid that if they admit to a problem, they will open themselves up to litigation.

Impact on Outcome Satisfaction

Not surprisingly, those who were offered resolution of their service problem reported higher outcome satisfaction than those who were contacted, but were not offered a resolution (4.2 vs. 1.98). We also examined whether outcome satisfaction is higher if the monetary remuneration is higher, and whether the time to respond to the complaint impacts satisfaction (See Table 6). As expected, the longer it took the firm to respond to the customer the lower the satisfaction. Level of response from the firm also had a significant impact on satisfaction. Those who resolved larger monetary problems were more satisfied.

The Hall of Shame

Responses from several firms need to be mentioned for responses that added insult to injury. Four situations were most notable. First, in 'what did you expect?' the complaint was about film processing done by a local discount store. There was damage to the roll of film that left a streak on all the pictures. The student wrote a letter to the retailer. The retailer forwarded the letter to the film development firm. The firm's response: What did you expect if you use a

discounter to process your film? Our response: What would the retailer do if they knew of this reaction from a firm to whom they are giving their business?

Second, in "You're trying to cheat us" a student wrote to a restaurant about a recent incident of bad service while dining with friends. The student had not made the reservation and had paid cash. Orders were mixed up and brought out at varying times. The party had brought up the problem to the server at the time. The server was rude and uninterested in addressing the complaint. A letter to the restaurant resulted in an accusation of lying. The restaurant responded that they had neither a reservation in the complainants name nor a credit card receipt. As such, they concluded she was lying to get free service.

Third, in 'we're never wrong', a student gave a credit card when reserving a rental car. When she turned in the car, she paid with cash. She received a receipt for her cash payment. When she received her next credit card statement, there was a full charge for the rental car. She wrote the rental car agency and enclosed a copy of the receipt for the cash payment. Their response was that they didn't make a mistake; they told her that her card was not charged (despite enclosing evidence to the contrary).

Fourth, "one size doesn't fit all" was all too common. Numerous students received a generic response letter that did not specifically address their concern. The letters tended to thank the person for writing and offer appreciation for future patronage. In one instant, the letter appeared to be a mimeograph. Of those students who knew what a mimeograph was, they were surprised to

discover that mimeographs were still in use in this century.

Actions Speak Louder Than Words...

Unfortunately, the sample included in this analysis was very small. Of the 104 customers who sent letters that met the criteria, 49 customers heard back from the firm. Of these 49 customers, 20 were offered resolution, 25 were contacted but no resolution was offered within the twelve-week period and four were insulted. Of the 20 customers who received a response specifically addressing their problem, 13 asked for an apology or explanation, four for less than \$10, one for less than \$100 and 2 for less than \$1000.

In our study customers were compelled by course credit to write a complaint. One is left to speculate the impact on satisfaction when the response is less than desired if the customer wrote a letter on his or her own initiative. Although many service firms promote an attitude of caring, their actions belie their words. When firms do not respond to complaining customers, they fail the customer twice: first by having the service failure; second by not responding, or responding inadequately, to the customer. Customers with unresolved issues are likely to use the firm's services less and will want to warn others (Fornell and Wernerfelt 1987). In contrast, if the complaint is handled satisfactorily repeat intentions are likely to be higher (Gilly and Gelb 1982).

Studies show that only 5% to 10% of unhappy customers complain (Dube and Maute, 1996) and that more than half of customers who complain feel worse about the company's service delivery after complaining (Hart, Heskett, and Sasser, 1990). Our results show firms are clearly missing out on opportunities to build relationships with their customers. If the 5% to 10% of complaining customers get similar responses to our customers, 1% to 2% (20% of the 5% to 10%) will have their problem resolved.

This research was motivated by the desire to see just how much firms value their 'best friends'. The original questions addressed were 'do firms care' and 'when do they care?' Our results do not

reflect that firms care. Too many firms did not respond at all, or responded in a manner viewed negatively by the customer. As to when they cared, firms were more willing to respond to customers' requests for monetary remuneration than to offer an explanation or apology.

Services are complex and subject to failures because of the human element. Also, good service delivery relies on both the firm and the customer. The added challenges of delivering quality service should motivate service firms to encourage complaints then respond and react to them. In our sample, too many firms did not take advantage of the opportunity to learn from customers' experiences. Overall, the results were discouraging, leaving us with the question '?'

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