THE USE OF HEURISTICS IN SERVICE EVALUATIONS

by

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ABSTRACT

Present conceptualizations of service evaluations assume that customers always use careful, thoughtful processing strategies in forming service quality and satisfaction judgments. However, research in perception suggests that people often use heuristics or decision shortcuts in making evaluations. In particular, it has been suggested that individuals may use their mood as a heuristic in several evaluative contexts. This dissertation examines the conditions under which customers are likely to their mood as a heuristic, and the effects of mood on customers' memory and judgments.

The results suggest that customers are more likely to use their mood as a heuristic when they do not expect to have future interactions with the service, and when they perceive the service to be either very simple or very complex than when they perceive it to be moderately complex. Individuals exhibited greater memory for service encounters when they were in a good mood, when they expected to have future encounters with the service, and when the service was moderately complex. Individuals also made more extreme evaluations (more positive when in a good mood and more negative when in a bad mood) when they did not expect to have future interactions and when the service was either very simple or very complex.

Table of Contents

v

List of Tables

List of Figures

THE USE OF HEURISTICS IN SERVICE EVALUATIONS

The service encounter, or the direct interaction
between the customer and the service provider(s), is
emerging as a key strategic variable in an organization's
efforts to improve customers' perceptions of service
quality and their satisfaction with the service.
Indeed, in many service contexts, the service encounter
is the service from the customer's perspective (Bitner,
Booms and Tetreault, 1990) and hence, it may be the sole
determinant of customers' quality judgments and
satisfaction.

There is considerable research interest in such
customer evaluations of service encounters because these
judgments have been shown to influence behaviors such as
service loyalty, switching, and word-of-mouth activity
(Oliver, 1980; Bitner, 1990). "The service in this
restaurant is excellent," "I am not satisfied with my new
hairstylist," "This physician seems very competent," or
"This supplier is very reliable," are examples of the
judgments that customers of services routinely make in
evaluating service encounters. But how do customers
reach these evaluations? If asked to explain how these
judgments were made, the customer would no doubt provide
a reasonable response. That is, the customer could
readily and easily generate a list of service attributes,

and an evaluation of each of these. While such a thoughtful, careful, attribute based process characterizes some service evaluations, it may not be an accurate representation of all service evaluations.

The current literature on services, however, seems to be based almost exclusively upon the assumption that customers always use careful and thoughtful processing of important service attributes (e.g., tangibles, reliability, assurance, etc.) in forming evaluations of service quality (Parasuraman, Zeithaml and Berry, 1988, 1994; Cronin and Taylor, 1994; Teas, 1994). Contrary to this view, research in perception has demonstrated that people often act as "cognitive misers" (Fiske and Taylor, 1984) intent on minimizing the amount of cognitive processing required in a careful, thoughtful evaluation based upon all the attributes. Consequently, at times, people opt for heuristics or decision shortcuts in making their judgments.

It is reasonable to expect that similar psychological processes will be at work in customers' evaluations of services as well, prompting the use of heuristics on at least some occasions. For example, in a service encounter, customers may focus on only one or a few important attributes of the service (e.g., price, location, etc.) in judging service quality. Customers

may even rely on target-irrelevant information--that is, information that is not intrinsic to the actual delivery of service--in forming impressions of service quality, and their satisfaction with the service. Heuristics used in this manner may include <u>stereotypes</u> about the service (e.g., a dental office in a shopping mall is not professional), or about the service provider (e.g., all hairdressers are chatty), or about specific features of the service provider (e.g., this financial consultant looks elderly--he'll be less aggressive in investment strategies than a younger counterpart) or the <u>mood state</u> of the customer.

Researchers have suggested that the study of customers' use of mood as a heuristic is particularly important for several reasons (Gardner, 1985). First, robust mood effects have been observed in a wide range of consumer behavior phenomena, such as responses to advertising (Goldberg and Gorn, 1987), memory for advertising (Srull, 1983), and decision making. This suggests that customers' evaluation of services may also be similarly impacted by their mood states. Second, interpersonal and affective responses seem to be more critical in the evaluation of services than in the evaluation of goods (Bateson, 1991). This is attributed to the distinguishing characteristics of services--

intangibility, heterogeneity, inseparability, and
perishability (Zeithaml et. al., 1985)--that render
services more ambiguous and difficult to evaluate
(Murray, 1991). Stronger mood effects have been found in
individuals' evaluations of ambiguous stimuli than in the
evaluations of less ambiguous ones (Isen, 1984). Hence,
it is suggested that customers may be especially prone to
using their mood as a decision heuristic in evaluating
service interactions.

Despite repeated calls for understanding the role of
mood in customer service evaluations, this issue has
received very little empirical attention. As Knowles,
Grove and Pickett (1993) point out, researchers have not
"explicitly.... or even implicitly investigated the role
of mood in the recollection of, evaluation of, and/or
behavior toward services."

To gain a better understanding of how heuristics
such as mood may influence customer evaluations, it is
important to first identify when we may expect such
influence. In other words, we need to identify whether
customers are more or less susceptible to using
heuristics such as mood (instead of thoughtful
processing) in some service encounters than in others.
Broadly speaking, a customer may use heuristics in
service evaluations when i) (s)he believes that in a

given service setting, the effort involved in thoughtful

processing is not worthwhile or, when ii) (s)he perceives

time or processing constraints (real or imagined) which

prevent thoughtful processing and encourage the use of

heuristics. The process need not necessarily involve

such a conscious tradeoff. A heuristic may also be

invoked automatically, so that the customer may not even

be aware of using it in place of deliberate processing.

In some situations however, customers may consciously

attempt to control the use of any such heuristics because

they value the accuracy of evaluations (Branscombe and

Cohen, 1991). The identification of such boundary

conditions delineating when the use of heuristics is

likely in service evaluations, may enhance our

understanding of how heuristic use affects customer

responses to service encounters.

The objectives of this dissertation therefore, are

to empirically verify a) the conditions under which

customers are likely to use mood states as heuristics,

and b) the effects of mood on customers' memory and

evaluations.

The issue of when customers use heuristics versus

thoughtful processing is significant from both the

managerial and the theoretical perspectives. To

illustrate, if customers of a service use heuristics such

as moods or stereotypes in making service quality judgments, and the managers of the service focus on improving service attributes, managerial efforts to enhance customers' service evaluations will be misdirected. Similarly, if customers actually use attribute information in thoughtful processing and managers focus on improving heuristics (such as creating good mood), managerial actions will again be in vain. In addition to helping managers adapt their marketing efforts to their customers, knowledge regarding when customers are more likely to use a specific processing strategy may allow them to promote the desired processing strategy. For instance, if the service is deemed very complex, and the customer believes (s)he cannot adequately evaluate the attribute information, (s)he may adopt a heuristic approach (Forgas and Bower, 1989). If thoughtful, attribute based processing is desired, the customer must be made to perceive the service evaluation as less complex. Most customers of financial services for example, may perceive the evaluation of the service to be a complex task. If such a service organization wishes to promote thoughtful processing by customers, it must first help customers overcome this perception. The advertising message of one such service emphasizes "We don't let you get it, until you got it." Such messages

may assure customers that they would not have to "buy" into or "get" the service before they understand its ramifications, and that the management of the service would take appropriate steps to help customers make a complex evaluation. Consequently, customers may be persuaded to examine the attribute information in the service encounter. Knowledge about the type of information processing strategy used in a given setting would also enhance our theoretical understanding of cognitive processes in general, and of service evaluations in particular.

Given the nature of the service encounter--involving the interaction between the customer and the service provider in a service setting--we can expect that the processing strategy used will be influenced by both person variables (e.g., customer characteristics) and situational variables (e.g., service characteristics). Consequently, in the next section, we present the effects on heuristic use of person and situation variables in a service encounter, using an interactional framework of service evaluations.

AN INTERACTIONAL FRAMEWORK OF SERVICE EVALUATIONS

It is widely recognized that most service encounters are social interactions in which customers are physically in the presence of service employees (Siehl, Bowen and Pearson, 1992). Several researchers have suggested therefore that customers may look to employee attitude and behavior (Surprenant and Solomon, 1987), to aspects of the physical environment in which the service is provided (Bitner, 1990), and even to the "audience" of fellow customers (Grove and Fisk, 1983; Bendapudi and Lessig, 1993) in forming service evaluations. This suggests that an interactional framework is required to capture the person-situation interaction that characterizes the social context within which service encounters take place. Such a framework is presented in Figure 1.

The framework draws upon the work of Block and Block (1981), to propose that the customer functions as the "person" operating within the service environment, that is, the service encounter situation. The service encounter may of course, involve other people such as service providers and other customers but, from an individual customer's vantage point, they become part of the service setting or the "situation". The components of "person" and "situation" can be further divided into

Figure 1
An Interactional Framework of Service Evaluations
The Customer's Perspective

Person Variables

Persistent/General
* Schemas/Scripts
* Need for Cognition
* Expectations
* Norms
* Stereotypes
* Attachment Style

Momentary/Specific
* Mood
* Involvement
* Goals
* Time Pressures
* Distractions

Situation Variables

Level 1	Level 2
Physical Biological	Canonical * Familiarity * Complexity * Divergence * Involvement

Situation: Level 3

Functional Situation

Idiosyncratic Interpretation

Attribute-Based Judgments of Service Quality

Attribute-Based Processing

Heuristic-Based Processing

Heuristic-Based Judgments of Service Quality

8

several levels. These are discussed below.

Levels of The Service Situation. Interest in the service

situation was initially confined to the effects of the

role of the physical environment in service encounters

(Bitner, 1990). However, environmental analysis suggests

that the physical environment must be studied as one of

multiple environments in a situation (Bitner, 1992).

Consequently, a conceptual distinction is drawn in the

framework among three different levels of the service

situation reflecting "successive stages of interpretation

of the situation by the experiencing individual," (Block

and Block, 1981). The first level of the service

encounter is the **physical-biological situation**. This

refers to the physical setting of the service (e.g.,

location, furniture, equipment, decor etc.) as well as to

the people present at the time of the encounter (e.g.,

age, sex, number, race etc.). The physical-biological

situation involves a descriptive rather than a conceptual

level of understanding in that it requires registering

all or part of the obvious or phenotypic attributes of

the situation that are accessible to the senses (Jessor,

1981). To a large extent (excepting perhaps the exact

configuration of customers patronizing the service at a

given moment), this level of the service situation is

controlled by the service provider.

We have suggested that in the first level of the service situation, customers register the obvious attributes of the service. However, in itself, the physical/biological level of the environment carries little meaning to the customer. In stead, customers filter the meaning about the physical/biological situation through recourse to the second level, the **canonical situation** for that service encounter. That is, customers tap into the "consensually defined, consensually constructed, or consensually accepted" (Block and Block, 1981) prototypes for the specific service encounter to ascribe meaning to the physical/biological situation. Investigations of the roles in a service encounter (Solomon et al. 1985) and common customer expectations about service performance (Surprenant and Solomon, 1987) are thus tapping into the canonical service situation. The value of the canonical situation can be illustrated by a simple example. Consider the findings of Bitner (1990) who studied the effects of the physical environment on customer responses to service encounters. Bitner reports that in the context of a travel agency service, customers attributed more blame to the travel agent (and to the agency) when a service failure was portrayed as occurring in an agency

that appeared cluttered and unorganized than when the
failure was shown to have occurred in an agency that
appeared to be clean and organized. Would such an effect
prevail across different service settings? That is,
would an immaculate, organized appearance enhance service
evaluations--and mitigate blame for failure--for all
services? It is conceivable that the effect of the
physical/biological environment will depend on the
canonical situation, or the socially constructed
expectations of the customer. The unorganized, cluttered
physical environment which may have a detrimental effect
on the evaluation of say, an accountant's office may well
enhance the evaluation of a different service such as an
advertising agency (assuming people expect creative
environments to be untidy!).

The canonical situations for various services may be
described in terms of specific dimensions. Adapting a
list formulated by Block and Block (1981), we postulate
that canonical situations may be characterized in terms
of four dimensions: complexity, divergence, familiarity,
and involvement. A more complex (as opposed to simple)
canonical situation is one where the typical customer
perceives service quality judgments as requiring a great
deal of cognitive processing. The complexity may stem
from the ambiguity of the service delivery (i.e. the

outcome may not be easily identifiable as positive or negative; Forgas and Bower, 1988) or from the amount of information to be evaluated for the various processes in the service (Shostack, 1987).

The second dimension of canonical situations is the divergence, that is, "executional latitude" (Shostack, 1987). A divergent canonical situation is one where the goal of the service encounter may be satisfied by many different paths or routes. An oil-change service, for example, would be less divergent than investment advice about a portfolio of stocks and bonds. The relationship between complexity and divergence merits clarification. While more complex services tend to be more divergent, it need not always be so. An entertainer's service may be 'simple' in the sense of involving a specific process (e.g., sing, dance, act etc.) but, the execution of the process allows infinite variations, making it a divergent service.

Services may also differ on the degree of familiarity for the typical customer. A familiar as opposed to a nonfamiliar canonical situation is one where the context of the service (physical, interpersonal, social, cultural) as well as the demands of the service (task demands, social demands etc.) are well-known and predictable to the average or typical customer. For

instance, the canonical situation for a service that is well established (e.g., dry cleaning) can be expected to be more familiar than that for an emerging service such as mobile grocery stores for older adults confined to their homes.

The fourth dimension of canonical situations is that of involvement. A more involving situation is one which is perceived as more arousing and galvanizing (Block and Block, 1981). The canonical involvement thus corresponds to the 'situational involvement' discussed in marketing literature (Rothschild, 1979). That is, it is the level of involvement generated by the service for people at large, as opposed to a given individual.

Person Variables: The above discussion posits that customers understand the physical/biological environment in terms of the canonical situation appropriate to the service encounter. It was also suggested that canonical situations are shared, consensually developed constructions of service situations. This does not imply however, that customers who share a common canonical situation will respond in an identical fashion to the service encounter or that they would evaluate it in the same manner. We turn to a discussion of person variables to explain why this is the case.

The two levels of the situation described so far--
the physical-biological and the canonical--are perceived
and interpreted by the service customer, that is, the
'person' in the interaction. The customer brings to the
service encounter both persistent and momentary states.
The persistent person variables are those that endure
beyond the specific service encounter. This definition
of persistent person variables corresponds to the
'abstract structure' of Nystedt (1981). Persistent
person variables include the individual's schemata (Fiske
and Taylor, 1984) and scripts (Solomon et al. 1985),
attitudes and opinions, expectations about future
encounters, norms, and the stereotypes the individual may
hold about the service and the service provider. It must
be pointed out that schemata, scripts and stereotypes
(which are specific to the service) are classified as
persistent because of their demonstrated perseverance
(i.e., stability across service encounters) in the face
of inconsistent information (Fiske and Taylor, 1984;
Weber and Crocker, 1983). In fact, if schemata, scripts
and stereotypes had to be adjusted with every additional
piece of information, they would lose their heuristic
power of reducing cognitive processing (Branscombe and
Cohen, 1991).

Momentary person variables are those that are
specific to a given service encounter that is, they refer
to the transitory states of the person at the time of
perception (Nystedt, 1981). Momentary variables include
the customer's mood states, the level of involvement with
the service (corresponding to the "enduring involvement"
of Rothschild, 1979), the goals and intentions of the
customer, and time or situational pressures.

The Functional Situation: The service encounter which is
perceived or construed by the customer (as a result of
the person-situation interaction) is termed the
functional situation (the beta press of Murray, 1938).
Whereas the canonical situation is consensual or shared,
the functional situation is idiosyncratic, resulting from
unique aspects in the persistent and momentary states of
the particular customer interacting with the service
situation. This suggests not only that different
customers may perceive the same service encounter
differently but also that the same customer may respond
to similar service encounters very differently, at
different points in time. For example, the polite chit-
chat of a sales clerk that is perceived favorably when
the customer has time to spare may be viewed as an
annoyance when the customer faces a time crunch.

It is the functional situation then that the customer responds to. Therefore, whether the customer adopts a careful, thoughtful processing of the service encounter or resorts to heuristics in evaluating the service will depend upon the characteristics of the functional service situation. However, aspects of the physical/biological situation, the canonical situation, person variables, and their interactions are all part of the functional situation, and hence, they too affect the use of heuristics.

Discussing all of these influences in detail is beyond the scope of this paper. In stead, in the next section, we draw upon the interactional framework to develop those propositions on heuristic use that will be empirically tested in this dissertation. In response to the paucity of studies of mood effects in service encounters, and the calls for closer examination of this phenomenon, this dissertation specifically examines the use of mood state as a heuristic in service evaluations. The propositions are developed to reflect this focus.

DEVELOPMENT OF HYPOTHESES

The objectives of this dissertation are a) to empirically test the conditions under which customers are more likely to use their prior moods in evaluating services and further b) to explore the nature of the effects when moods are used as heuristics.

As with heuristics in general, moods may have an important influence on two aspects of the service encounter: a) the attention to and memory of information available in the encounter, and b) the evaluation that customers make about the service (Gardner, 1985; Knowles et. al., 1993). The following discussion and development of hypotheses are organized around these two issues.

ATTENTION TO/MEMORY FOR INFORMATION AVAILABLE IN THE
SERVICE ENCOUNTER

Clearly, one may expect to see differences in the attention paid to the information available in the service encounter, and in the degree and accuracy of memory for such information, between customers who use a thoughtful processing strategy and those who use a more simplifying, heuristic approach. The former are expected to pay more attention to information and to exhibit better memory for it (Klein and Yadav, 1989).

The issue of attention paid to the information, and

subsequent memory of the information, are particularly important in the case of service encounters. This is because recollection of the details of service encounters may be complicated by the distinguishing characteristics of services (intangibility, inseparability, heterogeneity and perishability) alluded to earlier. To illustrate, the intangibility of services may make it more difficult to remember the service encounter; in general, the recall of the abstract (intangible) appears to be worse than the recall of the concrete (tangible) (Bowen and Springston, 1970). However, enhancing customers' attention to and memory of the information in the service encounter may be a priority for a high quality service organization that has carefully formulated its mix of services. Rather than naively assuming that customers will pay attention to all the details of the service encounters, it may be in the strategic interest of the service organization to know when customers are likely to do so. Below, we explore some effects that might lower the attention paid to, as well as the memory of, service encounter information by inducing a less thoughtful, heuristic procesing of service attributes. That is, we investigate potential influences that might make the expenditure of greater cognitive effort for greater accuracy seem sub-optimal.

In developing these hypotheses, we distinguish between the attention paid to information, as evidenced by the time spent on acquiring such information and on the efficiency of such tactics, as evidenced in subsequent memory for information available in the service encounter.

The Impact of Mood.

The findings on the impact of mood upon attention to information are somewhat equivocal. Some studies suggest that good mood leads to greater attention and more efficient use of information (Bearden, Duncan, and Masters, 1981) while other studies suggest that positive mood may induce individuals to resort to more simplifying, heuristic processing of information, in place of more taxing, careful, thoughtful processing (Isen and Means, 1983). Similarly, some researchers suggest that negative affect enhances the attention to external information (Lewisohn et. al., 1980). However, others have argued that this effect may be an artifact of the method used, and that it may be restricted to situations that involve information about oneself (Schwartz, 1981). Thus, though researchers postulate that attention paid to information differs between individuals in good and bad mood states, the direction of

the difference is not clear.

In contrast, the findings on the effect of mood on memory are less ambiguous. It is generally recognized that individuals in a good mood tend to recall more information overall than their counterparts in a bad mood (Ellis et. al., 1985). This is consistent with the notion that positive mood enhances the efficiency of search for information and of the decision-making strategy (Isen, 1984). Thus, even in studies that showed that individuals in a good mood used heuristic approaches, the performance of these individuals did not seem to be impaired (Isen and Means, 1983).

A related issue concerns the recall of positive or negative information. It goes without saying that service organizations would prefer to have customers recall the positive versus the negative aspects of a service encounter. Current evidence suggests that individuals in a good mood recall more positive information than negative information (Bower, 1981). Moreover, in these and other studies, the opposite effect appears to prevail for individuals in a negative mood (see Isen, 1984 for more complete discussion). The information provided by the service organization, in the course of service encounter is likely to be slanted toward more positive aspects. If this is the case, given

its content, the memory of this information should be
higher among individuals in a good mood than among those
in a bad mood. Based on the above discussion, we propose
the following:

> **H1**: Customers in good versus bad moods will differ
> in the attention that they pay to information
> available in the course of a service encounter, as
> measured by time spent on acquiring such
> information.

> **H2**: Customers in a good mood will exhibit greater
> and more accurate memory for the information
> presented in a service encounter than those in a bad
> mood. This effect will be more pronounced when the
> information content is positive in tone.

The Impact of Expectations of Future Encounters.

An important persistent person variable is the
expectation that the customer holds about the service
encounter and about his/her relationship to the service
(whether the customer expects it to be a onetime service
encounter or expects it to be a repeated interaction).
The expectations of the customer about his or her
continued relationship with the service may impact the
choice of information processing strategy. That is,
there may be a difference in the processing strategy used
by a customer who perceives the encounter as leading to
no future commitment (e.g., a customer who chooses an
airline on the basis of a temporary price discount) and
one who perceives the current service encounter as one in

a series of encounters that (s)he is committed to (e.g.,
a customer who participates in an airline's frequent
flier program). Person perception literature
demonstrates that expectations of future interactions
(Branscombe and Cohen, 1991) encourage a more thoughtful,
attribute based processing strategy, presumably due to
the individual perceiving a greater outcome dependency
with respect to the target (Neuberg and Fiske, 1987).
Current marketing practices seems to lend credence to
this view. For example, the strategy of relationship
marketing is predicated upon the assumption that long
term relationships between customers and service
providers lead to perceptions of greater dependence on
the service/service provider (Shani and Chalasani, 1992).
A customer who expects the encounter to involve no future
commitment would thus experience less of an outcome
dependency and consequently, less motivation to engage in
a thoughtful attribute based processing.

This is because the effort-accuracy tradeoff may
work in favor of saving effort when an individual
believes that the impact of an inaccurate evaluation will
be restricted to a single, isolated service encounter.
On the contrary, the need for accurate evaluation may be
far greater when the customer perceives that (s)he will
be committed to several service encounters, especially in

the initial stages of the service relationship. It is possible of course that over time, after a comfort level has been established with the service, that the customer may again revert to heuristics. In this case, heuristics may be used because thoughtful, cognitive effort is not deemed worthwhile given the predictability of the outcome. A marked departure from expectations may be required to jolt consumers back into a thoughtful processing mode. The overall effect of the expectation of future encounters may thus be to lead customers to pay more attention to the information presented in the service encounter, and to better remember this information later. Based on the above discussion, it is proposed:

> **H3**: Customers with expectations of future encounters will pay greater attention to information available in the course of a service encounter, as measured by the spent on acquiring such information, than customers who do not have such expectations.

> **H4**: Customers with expectations of future encounters will exhibit greater and more accurate memory for the information presented in a service encounter than those without such expectations.

The Impact of the Complexity of the Service.

When referring to a service evaluation that is "generally" accepted to be more (or less) complex, we are referring to the complexity dimension of the canonical

situation. That is, we are referring to whether a service evaluation is perceived to be complex on average, even though specific individual customers' assessments may vary from this general perception.

As reviewed earlier, canonical complexity may be affected by the ambiguity of the service delivery and by the amount of information to be evaluated. The ambiguity in a service may result from the difficulty of diagnosing and validating the service outcome (e.g., the outcome of lawn maintenance service is less ambiguous than the outcome of a therapy session) or from the amount of information that must be processed, or from the time delay before the results of the service can be evaluated (e.g., the investment advice about long term financial strategy). The greater the ambiguity of the service delivery, the harder it is for the customer to evaluate whether the service encounter is positive or negative. Such complexity generally appears to favor a heuristic approach to information processing. For example, Isen and Shalker (1982) report that individuals were most likely to use their moods as heuristic devices when the evaluation task was ambiguous, and hence, more complex, than when the evaluation task was of a target that was unambiguous and straight forward.

We have thus suggested that when services are very high in complexity, customers may resort to heuristic processing of information (exhibiting less attention and recall) because they believe their cognitive abilities are inadequate to judge service quality. What of extremely simple services? At very low complexity, the service evaluation task may be seen as so easy as to make the mustering of cognitive resources for thoughtful processing unnecessary. Studies have established that the effort an individual is willing to expend is proportional to the level of motivational arousal, which in turn is a function of task difficulty (Brehm and Self 1989). At very low or very high levels of task difficulty, motivational arousal is low. Motivation is strongest when the task is moderately difficult.

Support for such a quadratic relationship (the most use of heuristics at very low and very high levels of service complexity) comes from the research on pricing as well (Marmorstein, Sharma and Grewal, 1994). These studies showed that customers attended to additional, non-pricing information, and recalled it more when the price discount was moderate, rather than when it was very high or very low. Similarly, Bettman and Park (1980) found that in a decision task, individuals who were novices or experts spent less time acquiring and

evaluating information than individuals who had moderate knowledge. This suggests that the motivation to process additional information will be low when the service evaluation is perceived to be very low or very high in complexity. Based on the above, we propose:

> **H5**: Customers will pay greater attention to information available in the service encounter as measured by time spent on acquiring information, when the service situation is moderately complex than when it is very low or very high in complexity.

> **H6**: Customers will exhibit greater and more accurate memory for the information presented in a service encounter when in a moderately complex service situation than when in service situations that are very low or very high in complexity.

EVALUATION OF SERVICE ENCOUNTERS

The evaluations made by customers who use thoughtful versus heuristic processing of the information may differ because of the different process underlying the evaluation. Specifically, when customers use their mood state as a heuristic, they may make judgments that are congruent with their mood state. The evaluations of customers who use thoughtful processing on the other hand, may be driven more by the attributes of the service, and the information acquired in the service encounter.

The differences in processing styles may affect the time taken to make service evaluations as well. The evaluations made when using heuristics should be faster, or have lower response latencies, than evaluations based on thoughtful processing of service attributes. To the extent that heuristics allow customers to bypass some (only heuristic-consistent information is used) or all attributes (heuristic is used as an affective tag), heuristic based judgments of service quality should be faster than thoughtful judgments based on attributes (Fiske and Pavelchak, 1986). This is because customers have less information to process in order to make heuristic based evaluations. Hence, mood based judgments should be faster than judgments that are less prone to mood effects. These effects are examined below.

The Impact of Mood State

A robust finding in mood research is that individuals in good moods tend to form more positive evaluation of targets than individuals in bad moods (Goldberg and Gorn, 1987; Carson and Adams, 1980). This effect has been attributed to two phenomena: a) the mood-consistent attributes of a situation may be invoked and, due to their greater accessibility, only these mood-consistent attributes may be used in making evaluations

or, b) the individual may use the affective tone of the heuristic (e.g., "good" or "bad") as a decision shortcut and thus entirely avoid examining the target information, (Branscombe and Cohen, 1991). In light of the above, we propose:

> **H7**: Customers in a good mood should form more positive evaluations of a service encounter than customers who are in a bad mood.

The more interesting question would be to examine whether the effects of mood would be the same across all service encounters. That is, does mood affect evaluations in the same fashion, and to the same extent, in all service encounters? To examine this issue, we investigate the following interaction effects.

Mood x Expectation of Future Encounters.

In the earlier discussion of expectations of future encounter, it was suggested that individuals who do not expect to have repeated interactions will be more likely to use heuristic processing than individuals who do expect to have such repeated interactions. Hence, individuals who do not expect to have future encounters should be more prone to using their mood states as heuristics in evaluating a service, rating it as extremely positive when in a good mood and extremely

negative when in a bad mood.

Individuals who expect to have future encounters, on the other hand, may make more of an effort to attend to target-relevant information, and at least to an extent, discount their mood states. Such was indeed found to be the case. When subjects expected to meet and date the target person, they showed greater attention to target-relevant information and their evaluations were less likely to be affected by moods than when subjects did not hold such expectations (Branscombe and Cohen, 1991). Thus, for a given mood state, evaluations may be more extreme (more positive when in a good mood and more negative when in a bad mood) for individuals who do not expect future encounters than for those who do. In other words, we may expect that when in a good mood, individuals who do not expect to have future encounters will evaluate the service more positively than those who do not. On the other hand, when in a bad mood, individuals who do expect to have future interactions with the service should evaluate the service more positively (less negatively) than those who do not expect to have such interactions.

Given their greater use of mood in forming service evaluations, we may also expect that individuals who do not expect to have future encounters with the service

will take less time in making evaluations than those who do. The rationale for this argument was presented earlier and will not be repeated. Based on the above we propose:

H8: For a given mood state, individuals who do not expect future encounters with the service should make more extreme evaluations than customers who expect such future interactions. Consequently, the evaluations of those who do not expect to have future encounters should be higher (lower) than those who do expect such encounters when in a good (bad) mood.

H9: Individuals who do not expect to have future interactions with the service should have shorter response latencies than individuals who do.

Mood x Service Complexity.

It was hypothesized earlier (H5 and H6), that customers would be most prone to using heuristics when the service is perceived to be either very low or very high on service complexity. Hence, when in a good mood, individuals in a service evaluation condition which is either low or high should evaluate the service as more positive than those in a moderate service complexity condition. When in a bad mood, they should also evaluate the service more negatively than those in a moderately complex service situation. This is because when the service is moderately complex, the effects of mood states should be more muted, leading to smaller differences

between good and bad mood states. Providing evidence for this view, Forgas (1992) reports that when individuals had to make evaluations of very complex targets (atypical couples), the difference between those in good and bad moods was more pronounced than when individuals evaluated less complex targets.

To the extent that the use of heuristics results in individuals taking less time in making judgments, we may also expect that individuals in the low or high service complexity conditions will make faster evaluations than individuals in the moderate complexity conditions. Consequently, we propose:

> **H10**: For a given mood state, individuals in a service setting of low or high complexity should make more extreme evaluations than customers in a service setting that is moderately complex. Consequently, the evaluations of individuals in service situations of very low or very high complexity should be higher (lower) than those in moderate complexity encounters when in a good (bad) mood.

> **H11**: Individuals in a low or high complexity service setting should have shorter response latencies than individuals in a moderately complex service setting.

RESEARCH DESIGN AND METHOD

Design.

To test the research hypotheses, a 2 (expectation of future encounter: 'yes' versus 'no') x 2 (moods: 'positive mood induction,' versus 'negative mood induction') x 3 (levels of complexity: high, medium and, low) factorial design was used.

Subjects.

Three hundred and twenty eight subjects were recruited from the business and journalism undergraduate student pools at the University of Kansas. The mean age of the subjects was 22 years. Men and women accounted for 55% and 45% of the subjects respectively. All subjects received extra credit in a course for their participation. Subjects were randomly assigned to the treatment conditions and sessions were run in groups of 15-25. An additional forty one subjects from the same student pool participated in a pre-test of the material used in the study.

Procedure

The study was conducted in a room equipped with approximately thirty computer terminals. The computer

terminals were arranged at about arm's length from each other so that subjects could not readily observe a neighbor's computer screen. Upon entering the room, subjects were asked to seat themselves at any available computer terminal and were told that they would be participating in two unrelated studies. The first study was described as a test of a computerized lottery game being developed for college students. Subjects were told that the second study had to do with reading about the service encounters of a typical college student. They were told that they would be asked to imagine that they were actually visiting a service establishment and experiencing the events described. It was emphasized that for the duration of the studies, it was extremely important for subjects to carefully follow the instructions provided on the computer screen.

The lottery game. The computerized lottery game, presented as an unrelated study was actually used to induce appropriate moods in subjects. Next to each computer terminal, a card was placed face down, with a unique log-on ID number and password. To begin the session, subjects were asked to type in the ID number and password provided. The ID numbers were used to assign subjects to positive and negative mood induction

conditions; these conditions were alternated so that a subject in a good mood condition would be flanked by subjects in bad mood conditions and vice versa.

To begin the session, subjects were asked to type in the ID number and password provided. From that point on, subjects read and followed the directions on the computer screen at their own pace. The first screen informed subjects that they were about to participate in a test of a computerized lottery game being developed for use in service settings frequented by college students like themselves. They were also told that the developers of the game were seeking input from college students. Before beginning the game, they were asked to read two sample passages at their own pace. The passages were chosen for their neutral content; specifically, they dealt with the ancient Greek civilization. The purpose of the passages was described as allowing the subjects to become familiar with the computer key board, for instance, pushing the right arrow key to get to the next computer screen. While the passages did serve this purpose, they also provided a base measure of subjects' reading speed. The computer was set up to note the time that subjects spent on each screen as well as their responses to questions presented on the computer.

After subjects read the passages at their own speed, they were provided instructions on how to play the lottery game. The game consisted of five trials. On each trial, subjects were asked to select any number between zero and nine. They were told that the computer would randomly select a winning number on each trial. If their selection matched the computer's choice, they would win. Subjects were informed that they would not actually receive prizes for winning. However, consistent with the cover story, subjects were told that the developers of the lottery game wanted them to imagine how they would feel if they were playing the game for real, and actually won or lost attractive prizes.

Following each trial, after the subjects entered their choice, they were provided with feedback that they had either won or lost a desirable prize. The prizes on the five trials included dinner for two, a fifty dollar shopping spree, sun glasses, and a T-shirt. Subjects in the good mood condition "won" on four trials out of five, their only "loss" occurring on the second trial (win, lose, win, win, win); the same pattern was used for subjects in the bad mood condition, except that their only "win" occurred on the second trial (lose, win, lose, lose, lose).

After the five trials were done, subjects were provided with false feedback, designed to strengthen the mood manipulation. Thus, subjects in the good/bad mood condition were informed that a comparable win/loss record was achieved by only the top/bottom five percent of all participants in the computerized lottery game.

As a further precaution to ensure that the appropriate mood was aroused, subjects were told that they would read the statements made by other students with a win or loss record comparable to theirs. Subjects then read fifteen statements reflective of either good or bad mood. Sample statements for the good mood condition include "If your attitude is good then things go well, and my attitude is good, "I feel so happy I could laugh," and "I have good friends who really care about me." For the bad mood condition, they included sentiments such as "Life is often cruel and unkind to me," and "Nobody really cares about me." The statements were drawn from a set developed by MacLeod and Campbell (1992). This procedure was used because the statements were shown to induce the appropriate mood in a similar setting, that is, with subjects reading them on a computer screen. After reading the statements, subjects were told that they would provide their feedback on the game later in the session, and were asked to proceed to Study Two.

The Service Encounter. At the conclusion of the lottery game, subjects followed computerized instructions to log out of the first study and to access the second study. This procedure was used to reinforce the notion that the two studies were unrelated.

In this portion, subjects were informed that they would be reading about a visit to a hair styling salon. They were asked to imagine that they were actually making this hypothetical visit to the hair salon. It was emphasized that it was important for the subjects to adopt this perspective of a client visiting the salon. Subjects then read background information on the visit that involved manipulations of subjects' expectations of future encounters and the complexity of the service. Thus, subjects in a good or a bad mood read one of six versions of the visit, reflecting two levels of expectations of future encounters (yes versus no) and three levels of service complexity (low, medium, and high).

To develop the different scenarios, in-depth interviews were conducted with a purposive sample of five hair stylists and five undergraduate business students. All of the hair stylists were women. Of the students, two were men and three were women. This input from the service providers and the service customers was used to

generate believable manipulations of the variables of interest.

Expectations of future encounters were manipulated by suggesting that the visit was prompted by the presence of a free coupon. In the no-expectation-of-future-encounters condition, subjects read that they were visiting the salon to use one free visit offered by the salon. In the expectation-of-future-encounter condition, the scenario claimed that the salon was offering coupons for five free visits and that this was the first visit.

The purpose of the visit was varied to reflect different levels of service complexity. In the low complexity condition, subjects read that they were at the salon to get a hair trim to maintain their current hair style, that is, there would be no change in their present hairstyle. In the moderate complexity condition, subjects read that the visit was to get a hair tint, to change their hair color slightly. The tint was described as temporary, lasting two to three weeks. In the high complexity condition, the service involved getting permanent hair coloring and a specialty wrap that would involve a completely new look in hair styling. This procedure was described as relatively long-lasting, because the hair would have to grow out to change the color. Subjects were also provided with price

information on all three services, with the object of their visit highlighted. Prices were used to reflect the demands of the service; hair trim was portrayed as costing twelve dollars, with hair tint and permanent hair coloring/wrap valued at forty five dollars and one hundred and twenty dollars respectively.

Following this background information, all subjects read that as they entered the salon, they were greeted by a receptionist. Because there were a few minutes left before the appointment, the receptionist was described as showing the subject to a waiting area, and handing out a brochure about the salon. All subjects read that there were also magazines available and that they could spend as much or as little time on the material as they wished. At this point, subjects were exposed to the brochure, presented in three computer screens. The brochure listed the fictitious name of the salon, and typical information such as hours open, locations, the fictitious name of the hair care products used, other services offered, and the like. The claims in the brochure were developed by culling information from advertisements for hair salons in three midwestern cities, other than the study site.

At this juncture, following the procedure in similar studies with service scenarios (Hui and Bateson, 1991), subjects were asked for information on dependent

variables, and manipulation checks.

Dependent Variables.

The dependent variables of interest were evaluations
of the service, the time taken to make the evaluations,
the time spent on the brochure, and the memory for the
brochure. To gauge evaluations of different components
of the service, subjects were asked to indicate their
judgments of the quality of the service, and their
satisfaction with the salon and with its employees.
These items were chosen to represent evaluations from
higher to lower levels of abstraction. The evaluation
items were 7-point semantic differentials with extremely
low and extremely high as the anchors for service
quality, and delighted/terrible as the anchors for the
satisfaction items (Oliver and DeSarbo, 1988; Bitner,
1990). As an additional measure for evaluations,
subjects were also asked to indicate on a seven point
scale how likely they were to recommend the salon to a
friend. These items were presented on the computer
screen one at a time, and the time spent on each screen
was tracked by the software, without the subjects'
knowledge.

The time spent on reading the brochure was likewise
measured unobtrusively. Information on the remaining

dependent measures and manipulation checks were also
secured. Memory of the brochure was tested by using both
recall and recognition measures. In the recall measure,
subjects were first asked to write down any thoughts they
had about the brochure. Next, they were prompted to
recall the names of the salon and the hair styling
products used, as well as any claims made in the
brochure. In the recognition measure, subjects performed
three two-alternative forced-choice tests regarding the
names of the salon and the hair styling product used, and
one claim presented in the brochure. In this procedure,
subjects saw two items at a time. One of the items was
the stimulus item and the other was a distractor. The
subjects' task was to identify the original stimulus,
that is, the correct name of the salon, the correct brand
of hair styling products used, and the correct claim
presented in the brochure.

Results

<u>Manipulation Checks</u>.

Manipulation checks for the three independent variables--mood, expectation of future encounters, and service complexity--are discussed below.

<u>Manipulation checks for mood</u> were conducted in two stages. A pre-test was done with forty one subjects who participated in the computerized lottery game as described earlier. Subjects were randomly assigned to good (twenty one subjects) and bad mood (twenty subjects) conditions. Following the game, subjects completed a sixteen item adjective battery, reflecting both positive and negative mood states. Two items each were used to capture the emotions of happiness, agreeableness, sadness, disgust, anger, surprise, fear and curiosity; the two items were summed for further analysis. Consistent with the procedure described in Murry, Lastovicka, and Singh (1992), univariate t-tests and multivariate analysis of variance tests were conducted on the eight dimensions of the adjective battery identified before. The good and bad mood conditions were significantly different on seven of the eight dimensions in the univariate tests ($p < .05$). No significant difference was observed between the good and bad mood conditions on the dimension of curiosity ($p > .10$);

however, the results were in the predicted direction with individuals in the good mood condition reporting greater curiosity than those in a bad mood.

The same scale was used to assess the success of the mood manipulation in the study too. Similar results were obtained here as well, with significant differences between the good and bad mood conditions on seven of eight dimensions (p<.05). No significant difference emerged on fear (p>.10) even though the results were in the expected direction, with individuals in a bad mood reporting greater fear than those in a good mood. The groups differed significantly on the multivariate analysis of variance as well (Wilks Lambda = 0.50; $F_{16, 301}$ = 38.59; p < .001). The results for the checks for mood manipulation in the study are presented in Table 1.

The manipulation check for expectation of future encounters involved a free recall item asking subjects how many more free visits to the salon remained after the current visit. A t-test of the responses showed that subjects in the no expectation of future encounters condition responded that there were 0.34 visits remaining while those who expected future encounters said that there were 4.04 visits remaining (t=-41.12, p<.001). Thus, the manipulation of the expectation of future encounters seems to have been successful.

Table 1

Manipulation Checks for Good and Bad Mood Conditions[a]

DIMENSION	GOOD MOOD	BAD MOOD	t-VALUE
HAPPINESS	7.1742 (2.12)	3.5088 (1.84)	16.73
SADNESS	2.2323 (0.78)	3.8304 (1.99)	-9.69
AGREEABLE	6.6258 (2.06)	3.5680 (1.74)	14.37
DISGUST	2.370 (1.26)	4.1588 (2.22)	-9.03
ANGER	2.4323 (1.09)	3.8647 (2.00)	-8.09
SURPRISE	6.4774 (2.00)	5.4327 (2.02)	4.67
FEAR	3.8129 (1.63)	4.0000 (1.57)	-1.05
CURIOSITY	5.4516 (1.50)	4.5471 (1.66)	5.17

[a]Standard deviations in parentheses.

To assess the manipulation of the <u>complexity of the</u> <u>service</u>, three seven-point semantic differential items were used (simple/complex, routine/rare, easy/difficult). One way analysis of variance models demonstrated that on all three items, the three hair styling procedures (hair trim, hair tint, and permanent hair coloring/specialty wrap) were perceived as varying on complexity (p < .001). Follow up analyses showed that the three groups were significantly different from one another on all three items (p <.05), providing support for the effectiveness of the complexity manipulation. The results of the manipulation checks for expectation of future encounters and complexity are shown in Table 2.

Analysis.

The hypotheses were tested using analysis of variance models. The results for the attention and memory hypotheses and the evaluation hypotheses are presented separately.

Attention (H1, H3, H5).

It was hypothesized that subjects in good and bad mood states would differ in their attention to the attribute information in the service encounter (H1); and further that they would pay less attention to the

Table 2

Manipulation Checks For Expectation of Future Encounters and Level of Service Complexity

A. Expectation of Future Encounters

	Expectation of Future Encounters		
	No	Yes	t-Value
Mean Number of Visits Remaining	0.3125	4.0491	-41.12

B. Level of Service Complexity

	Level of Complexity			
	Low	Moderate	High	F-Value
Mean Value for Routineness of Task	1.70	3.07	4.42	129.47
Mean Value for Ease of Task	1.87	4.50	5.08	190.28
Mean Value for Simplicity of Task	1.90	4.78	5.44	216.47

information when they do not expect future encounters
with the service (H3), or when the service is either very
high or very low in complexity (H5). To test these
hypotheses, the time the subjects spent on reading the
brochure was analyzed using the analysis of variance
procedure.

The results (presented in Table 3a and 3b) showed a
significant effect of expectation of future encounters,
with subjects who expected future encounters spending
significantly greater time reading the brochure than
those who did not (F = 16.04; df = 1, 315; p < .001).
The expected difference between good and bad mood
conditions was not significant. The direction of the
results suggests that subjects in a good mood spent
longer on reading the brochure than those in a bad mood.
The hypothesis regarding service complexity was not
supported. However, here too, individuals in the
moderate service complexity condition spent more time
reading the brochure than those in the low or high
service complexity conditions. An unexpected interaction
was found between service complexity and expectation of
future encounters (F=5.836; df = 2,313; p<.01). A
follow-up analysis revealed that the differences among
the levels of service complexity were significant when
individuals expected to have future encounters with the

TABLE 3
MEAN SCORES OF TIME SPENT ON BROCHURE[a]

Mood	Expectation of Future Encounters	Complexity of Service		
		Simple	Moderate	Complex
Good	Yes	32.963 (10.6)	43.958 (11.8)	35.731 (12.8)
	No	35.080 (17.3)	28.704 (9.41)	30.077 (10.4)
Bad	Yes	29.714 (10.41)	37.533 (14.0)	37.893 (13.0)
	No	29.444 (14.7)	30.233 (13.3)	29.929 (11.9)

[a]Standard deviations in parentheses.

TABLE 3B

ANALYSIS OF VARIANCE RESULTS FOR THE MOOD, EXPECTATION OF FUTURE ENCOUNTERS, AND COMPLEXITY EFFECTS ON TIME SPENT ON BROCHURE

Souce	Sums of Squares	df	Mean Square	F	p	ETA Square
Mood	242.76	1	242.76	01.51	.220	..
Expectation	2573.3	1	2573.3	16.04	.000	.048
Complexity	542.69	2	271.35	01.69	.186	..
Mood x Expectation	15.922	1	15.922	00.10	.753	..
Mood x Complexity	393.12	2	195.56	01.23	.295	..
Expectation x Complexity.	1872.9	2	936.44	05.84	.003	.036
Mood x Expectation x Complexity	410.50	2	205.25	01.28	.28	..
Residual	50545.8	315	160.47			

service (F=7.13; df=2,161; p<.01) but not when they did not hold such expectations. The analysis was repeated, using reading speed as a covariate. Even after controlling for reading speed, there were no differences in the significance levels of effects reported above[1] (effects that were significant/not significant at the specified p-values continued to have the same significance levels).

A potential problem with these results is that the measure of time may not have the required precision. Due to an oversight, the computer software was set up to keep track of time to the nearest second, in stead of the nearest milli-second. Hence, the measure may not have provided a powerful test of the hypotheses.

Memory (H2, H4, H6)

Paralleling the hypotheses on attention paid to the brochure, it was hypothesized that greater memory for the brochure would be demonstrated for subjects in a good mood (H2), those who expected future encounters (H4), and those faced with moderate service complexity (H6).

Two measures of memory that were collected were

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[1] If a one-directional t-test is used, individuals in a good mood would be shown to have spent more time reading the brochure than those in a bad mood at p<.1.

recall and recognition scores. Recall of the name of the salon and of the hair styling products was scored as 0 or 1 for incorrect or correct recall respectively. Because there were 18 claims in the brochure, claim recall scores could range from 0 to 18. However, no subject in the study recalled more than 9 claims. Two judges--one familiar with the study and one unfamiliar--coded a randomly selected sample of ten percent of the claim data. Inter-rater agreement was estimated at 94% Given the high degree of agreement, the remainder of the claim data were coded by the judge who was familiar with the study. As an additional check, after all the coding was done, a third judge, unfamiliar with the study, coded a random sample of 15% of the claim data. Inter-rater agreement was 98% (49 out of 50 responses); the remaining one disagreement was readily resolved. Brand name and claim recall scores were combined to form an index of recall memory. The scores could potentially range from 0 (absolutely no recall) to 20 (recall of both brand names and all claims). In reality, these scores ranged from 0 to 10.

Scores on recognition for brand name and claim recall were assigned 0 or 1 for incorrect or correct recognition respectively. These were combined to form a recognition memory index. The scores on the recognition

memory could hence range from 0 (absolutely no recognition) to 3 (both brand names and one claim recognized). The average score on the recognition index was 2.82. Across the cells, the lowest mean recognition score was 2.70 and the highest was 2.96. With a maximum possible recognition of 3, these results indicate that mean recognition scores ranged from 90% to 98% Given these ceiling effects, the data on the recognition index were not analyzed any further.

The results of the analysis on recall memory are presented in Table 4a and 4b. As expected, these results revealed that individuals in a good mood recalled more of the information presented in the encounter than those in a bad mood (t=1.40; p<.1). Hypothesis 4 proposed that individuals who expected to have future interactions with the service would recall more than those who did not. This effect was highly significant (p<.001). Further, as hypothesized (H6), there was a significant effect of service complexity on recall of information (p<.001). A follow-up one way analysis of variance revealed that as hypothesized, individuals in the moderate complexity condition recalled more than those in the low or high complexity conditions (F= 7.55; df=2,324; p<.01). These relationships are shown in Figure 2. No other effects were significant.

TABLE 4
MEAN SCORES OF RECALL[a]

Mood	Expectation of Future Encounters	Complexity of Service		
		Simple	Moderate	Complex
Good	Yes	3.074 (1.98)	4.560 (2.14)	3.692 (2.21)
	No	3.080 (2.36)	3.556 (1.93)	2.640 (2.16)
Bad	Yes	2.964 (2.487)	4.800 (2.67)	3.500 (2.43)
	No	1.926 (1.57)	2.806 (2.10)	2.571 (1.99)

[a]Standard deviations in parentheses.

TABLE 4b

ANALYSIS OF VARIANCE RESULTS FOR THE MOOD, EXPECTATION OF FUTURE ENCOUNTERS, AND COMPLEXITY EFFECTS ON RECALL MEMORY

Souce	Sums of Squares	df	Mean Square	F	p	ETA Square
Mood	09.35	1	09.35	01.95	.164	..
Expectation	81.70	1	81.70	17.02	.000	.051
Complexity	79.65	2	39.82	08.30	.000	.050
Mood x Expectation	08.24	1	08.24	01.72	.191	..
Mood x Complexity	03.65	2	01.83	00.38	.684	..
Expectation x Complexity	13.23	2	06.61	01.38	.254	..
Mood x Expectation x Complexity	05.84	2	02.92	00.61	.545	..
Residual	1512.13	315	04.80			

Two potential correlates of service complexity may be consumer knowledge of the service and involvement with the service. Specifically, those with greater knowledge or greater involvement may perceive the service evaluation as less complex. To rule out these alternative effects, knowledge and involvement were used as covariates in a separate analysis. Even after controlling for these variables, the significance levels of the effects discussed above did not change. Knowledge and involvement were measured using scales based upon those proposed by Mishra, Umesh and Stem (1993), and McQuarrie and Munson, (1991) respectively. The reliabilities of the measures were 0.98 and 0.95.

Evaluation (H7, H8, H10)

The four measures of evaluations of the service encounter were perceived quality of the service, satisfaction with the service, satisfaction with the employees, and intention to recommend the service. These items were selected to represent a range of evaluations from the most abstract to the most concrete. The services literature suggests that these constructs are conceptually different (Parasuraman, Zeithaml and Berry, 1988); hence, the effects on all of these variables may not be the same. Consequently, we present separate

FIGURE 2

Effect of Complexity on Recall Memory
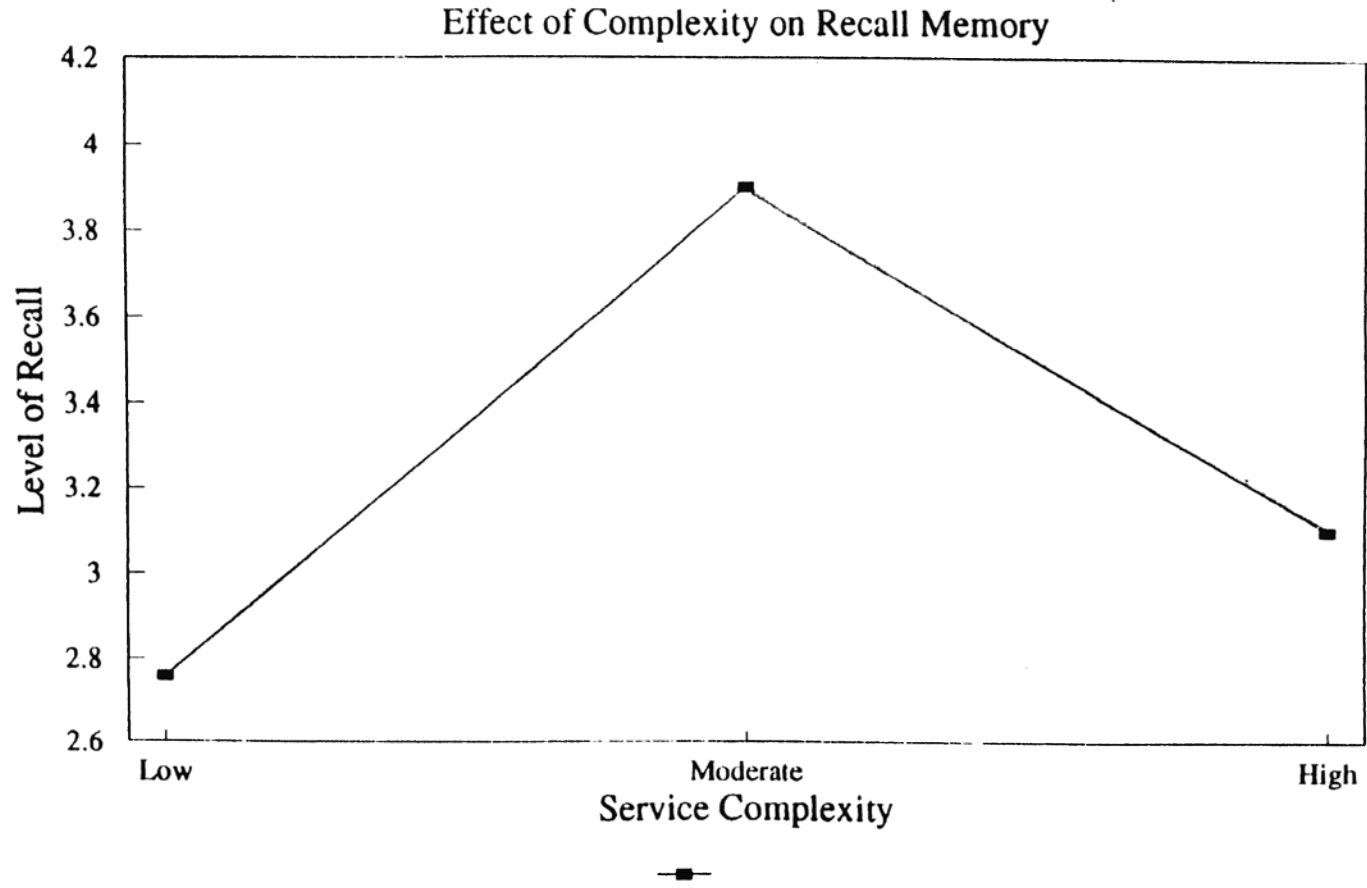
analyses of the four evaluations in Tables 5-8.

Hypothesis 7 proposed that individuals in a good mood would make more positive evaluations those in a bad mood. This effect was verified for all four evaluations: service quality, satisfaction with the service, satisfaction with the employee and intent to recommend the service (p<.001). There was also a significant positive effect of expectations of future encounters, with those who expected future encounters perceiving higher service quality, and professing greater satisfaction with the service, with the employees, and a greater intention of recommending the service (all effects were significant at p<.001).

Hypothesis 8 concerned an interaction between mood and expectation of future encounters. This effect was highly significant for all four evaluation items (p<.001). Consequently, the main effects noted above must be interpreted cautiously.

To understand the nature of the interaction, a residual means analysis was conducted (Ross and Cryer, 1993; Rosnow and Rosenthal, 1991). These authors suggest that an interaction effect should not be interpreted by using raw means, as is customary. This is because the raw cell means are the results of main effects and interaction effects. Consequently, examining the raw

TABLE 5
MEAN SCORES OF QUALITY EVALUATIONS[a]

Mood	Expectation of Future Encounters	Complexity of Service		
		Simple	Moderate	Complex
Good	Yes	5.741 (.984)	5.625 (.824)	5.923 (.796)
	No	5.840 (.987)	5.222 (.641)	5.846 (.784)
Bad	Yes	5.179 (.863)	5.533 (.819)	5.200 (.190)
	No	4.259 (1.10)	4.833 (1.05)	4.000 (1.58)

[a]Standard deviations in parentheses.

TABLE 5b

ANALYSIS OF VARIANCE RESULTS FOR THE MOOD, EXPECTATION OF FUTURE ENCOUNTERS, AND COMPLEXITY EFFECTS ON SERVICE QUALITY

Souce	Sums of Squares	df	Mean Square	F	p	ETA Square
Mood	59.64	1	59.64	60.63	.000	.160
Expectation	22.65	1	22.65	23.02	.000	.069
Complexity	00.22	2	00.11	00.11	.892	..
Mood x Expectation	13.16	1	13.16	13.37	.000	.042
Mood x Complexity	16.35	2	08.18	08.31	.000	.052
Expectation x Complexity.	00.70	2	00.35	00.35	.702	..
Mood x Expectation x Complexity	02.72	2	01.36	01.38	.22	..
Residual	302.99	308	00.98			

TABLE 6
MEAN SCORES OF SERVICE SATISFACTION EVALUATIONS[a]

Mood	Expectation of Future Encounters	Complexity of Service		
		Simple	Moderate	Complex
Good	Yes	5.556 (1.05)	5.208 (.721)	5.692 (.884)
	No	5.640 (1.04)	5.111 (.751)	5.538 (.948)
Bad	Yes	5.000 (.770)	5.267 (.907)	5.080 (.954)
	No	3.741 (1.02)	4.333 (.844)	3.640 (1.32)

[a]Standard deviations in parentheses.

TABLE 6b

ANALYSIS OF VARIANCE RESULTS FOR THE MOOD, EXPECTATION OF FUTURE ENCOUNTERS, AND COMPLEXITY EFFECTS ON SATISFACTION WITH THE SERVICE

Souce	Sums of Squares	df	Mean Square	F	p	ETA Square
Mood	71.49	1	71.49	80.25	.000	.207
Expectation	31.93	1	31.93	35.84	.000	.104
Complexity	00.01	2	00.00	00.00	.990	..
Mood x Expectation	26.57	1	26.57	29.83	.000	.088
Mood x Complexity	14.01	2	07.00	07.86	.003	.049
Expectation x Complexity	01.12	2	00.56	00.63	.534	..
Mood x Expectation x Complexity	01.05	2	00.52	00.59	.556	..
Residual	274.37	308	00.89			

TABLE 7
MEAN SCORES OF SATISFACTION WITH EMPLOYEES[a]

Mood	Expectation of Future Encounters	Simple	Complexity of Service Moderate	Complex
Good	Yes	5.259 (1.25)	5.250 (.944)	5.308 (.884)
	No	5.360 (1.35)	4.741 (.944)	5.231 (1.03)
Bad	Yes	4.607 (.956)	5.167 (.950)	5.120 (.971)
	No	3.815 (1.18)	4.300 (1.12)	4.080 (1.08)

[a]Standard deviations in parentheses.

TABLE 7b

ANALYSIS OF VARIANCE RESULTS FOR THE MOOD, EXPECTATION OF FUTURE ENCOUNTERS, AND COMPLEXITY EFFECTS ON SATISFACTION WITH THE EMPLOYEES

Souce	Sums of Squares	df	Mean Square	F	p	ETA Square
Mood	36.46	1	36.46	32.22	.000	.095
Expectation	22.43	1	22.43	19.83	.000	.060
Complexity	01.61	2	00.81	00.71	.492	..
Mood x Expectation	10.84	1	10.84	09.58	.002	.030
Mood x Complexity	09.49	2	04.74	04.19	.016	.026
Expectation x Complexity	01.61	2	00.81	00.71	.491	..
Mood x Expectation x Complexity	01.48	2	00.74	00.65	.521	..
Residual	345.48	308	01.13			

TABLE 8
MEAN SCORES OF INTENTION TO RECOMMEND THE SERVICE[a]

Mood	Expectation of Future Encounters	Complexity of Service		
		Simple	Moderate	Complex
Good	Yes	5.333 (1.07)	5.042 (1.16)	5.038 (1.25)
	No	4.760 (1.39)	4.037 (1.32)	4.500 (1.18)
Bad	Yes	4.143 (1.38)	5.000 (1.44)	4.800 (1.23)
	No	2.852 (1.06)	3.233 (1.41)	3.240 (1.36)

[a]Standard deviations in parentheses.

TABLE 8b

ANALYSIS OF VARIANCE RESULTS FOR THE MOOD, EXPECTATION OF FUTURE ENCOUNTERS, AND COMPLEXITY EFFECTS ON INTENTIONS TO RECOMMEND THE SERVICE

Souce	Sums of Squares	df	Mean Square	F	p	ETA Square
Mood	65.52	1	65.52	39.98	.000	.115
Expectation	100.31	1	100.31	61.21	.000	.165
Complexity	00.79	2	00.39	00.24	.787	..
Mood x Expectation	13.84	1	13.84	08.45	.004	.027
Mood x Complexity	18.11	2	09.05	05.52	.004	.035
Expectation x Complexity	03.01	2	01.50	00.92	.400	..
Mood x Expectation x Complexity	00.35	2	00.17	00.11	.899	..
Residual	504.71	308	01.64			

cell means can be misleading when the research hypothesis concerns the nature of the interaction effect. Hence, interpretations of interactions should in stead be based upon residual cell means, that is, cell means from which the main effects have been partialled out. The raw cell mean for a cell 'ij' is thus given by:

Residual Mean$_{i,j}$= Raw Cell Mean$_{i,j}$ -Marginal Mean$_i$
-Marginal Mean$_i$ +Grand Mean

To illustrate the possible differences in interpretations stemming from the use of raw versus residual means, the interaction effects of mood and expectation of future encounter on the four evaluation items are graphed using both techniques (Figures 3 to 6b). An analysis of raw cell means would lead one to conclude that there is partial support for Hypothesis 8. Specifically, it would suggest that when in a bad mood, individuals who expect future encounters do evaluate the service components more positively than those who do not. The raw cell means however, would lead one to conclude that contrary to the hypotheses, even in the good mood condition, those who expect future encounters rate the service the same or higher than those who do not expect such encounters. However, an analysis of the residual means (Figures 3b, 4b, 5b, and 6b) it would also indicate that the hypothesis is verified for both good and bad
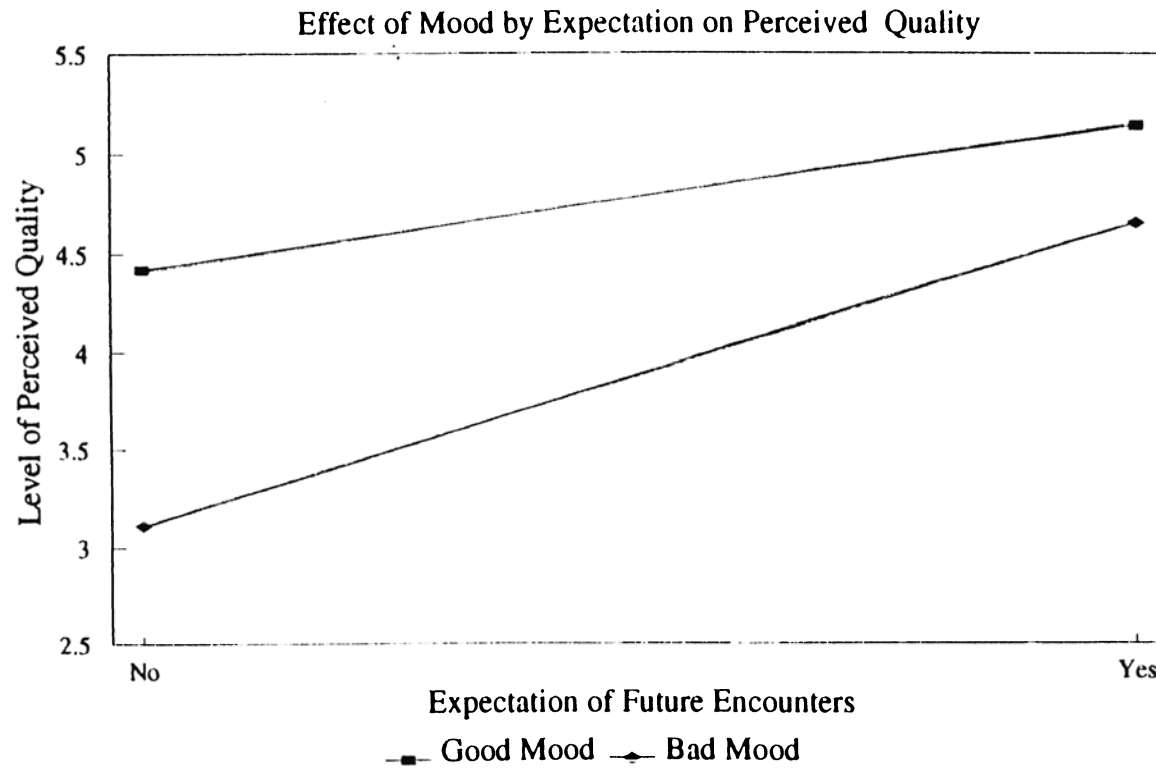
FIGURE 3A

ANALYSIS WITH RAW CELL MEANS

Effect of Mood by Expectation on Perceived Quality

FIGURE 3B

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Expectation on Perceived Quality
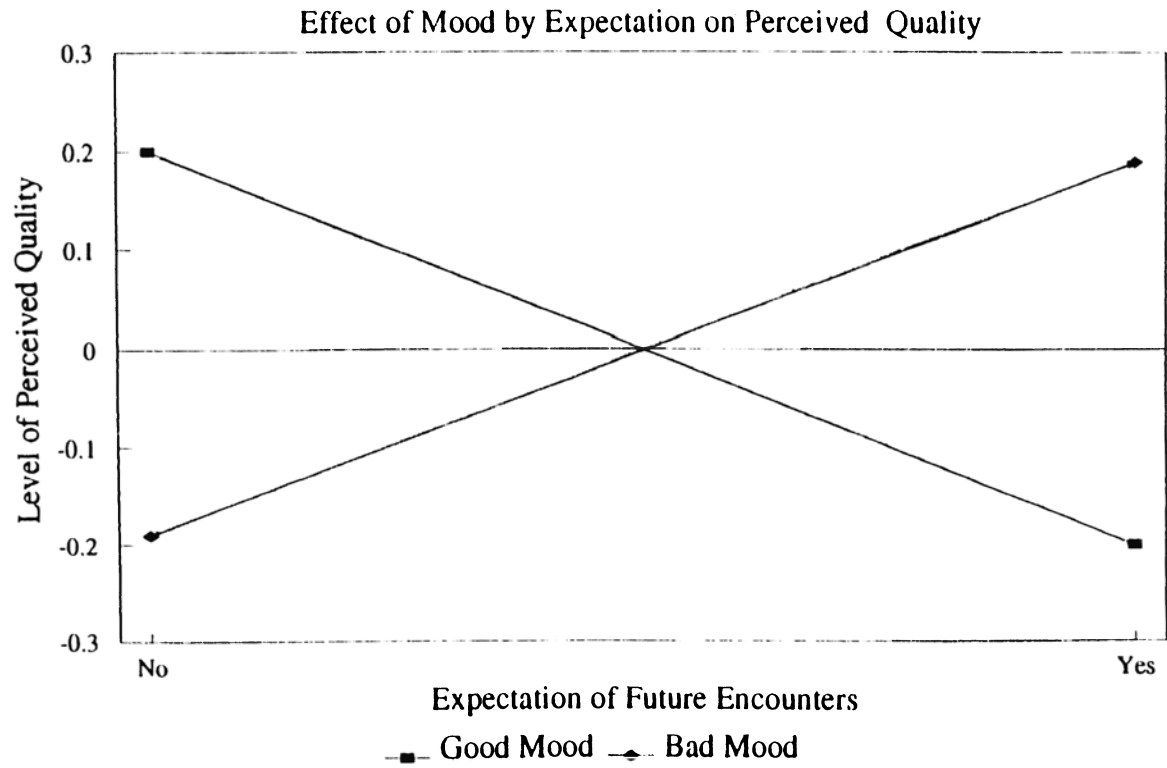
FIGURE 4A

ANALYSIS WITH RAW CELL MEANS

Effect of Mood by Expectation on Satisfaction with the Service

69
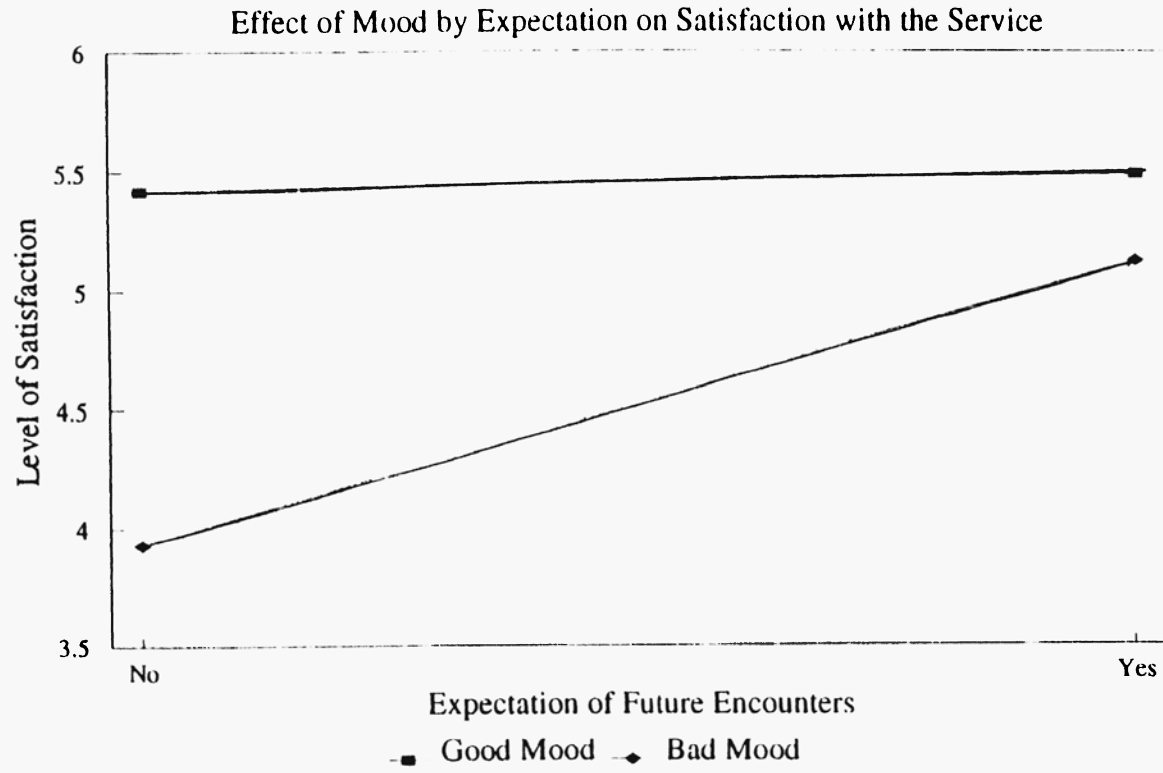
FIGURE 4B

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Expectation on Satisfaction with the Service

ANALYSIS WITH RAW CELL MEANS
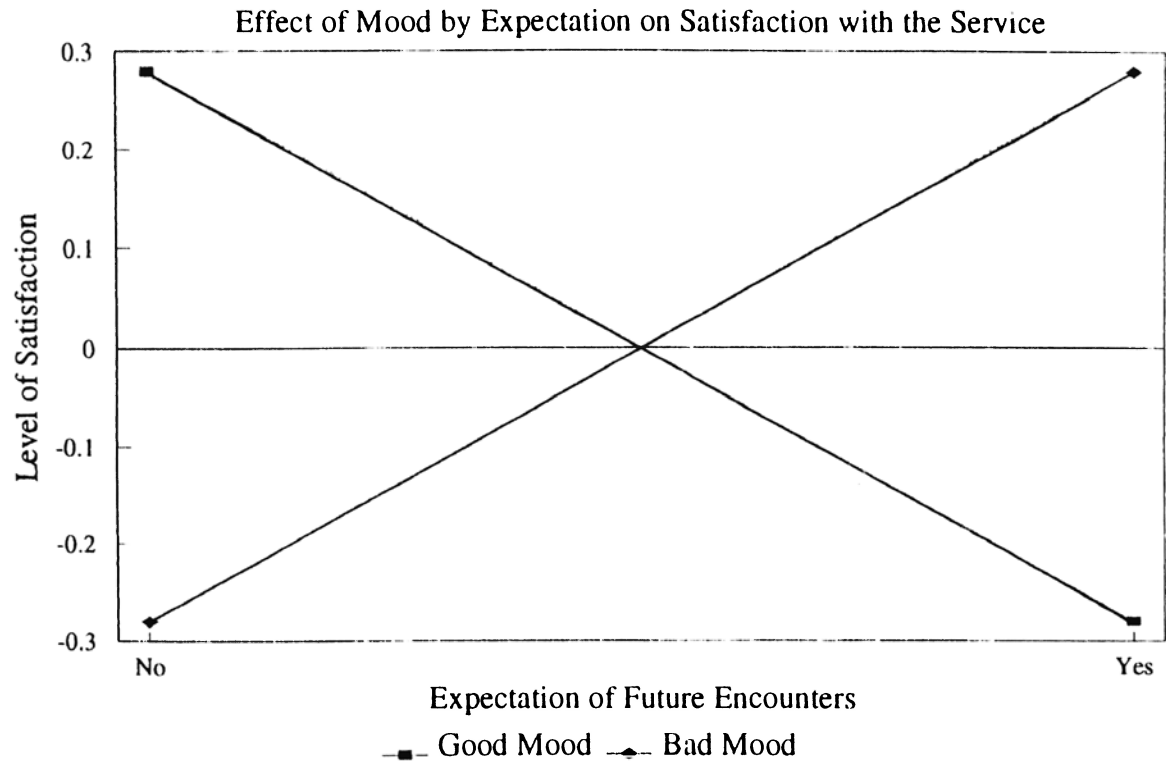
Effect of Mood by Expectation on Satisfaction With Employees
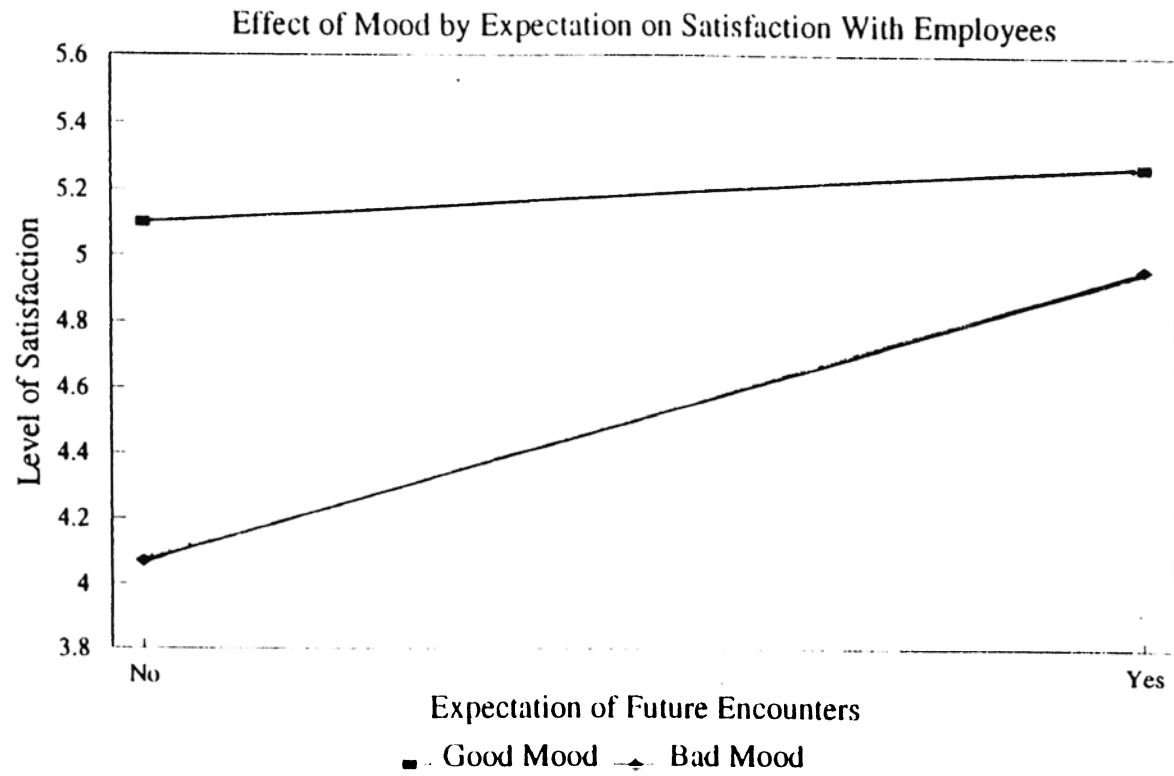
FIGURE 5B

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Expectation on Satisfaction with Employees
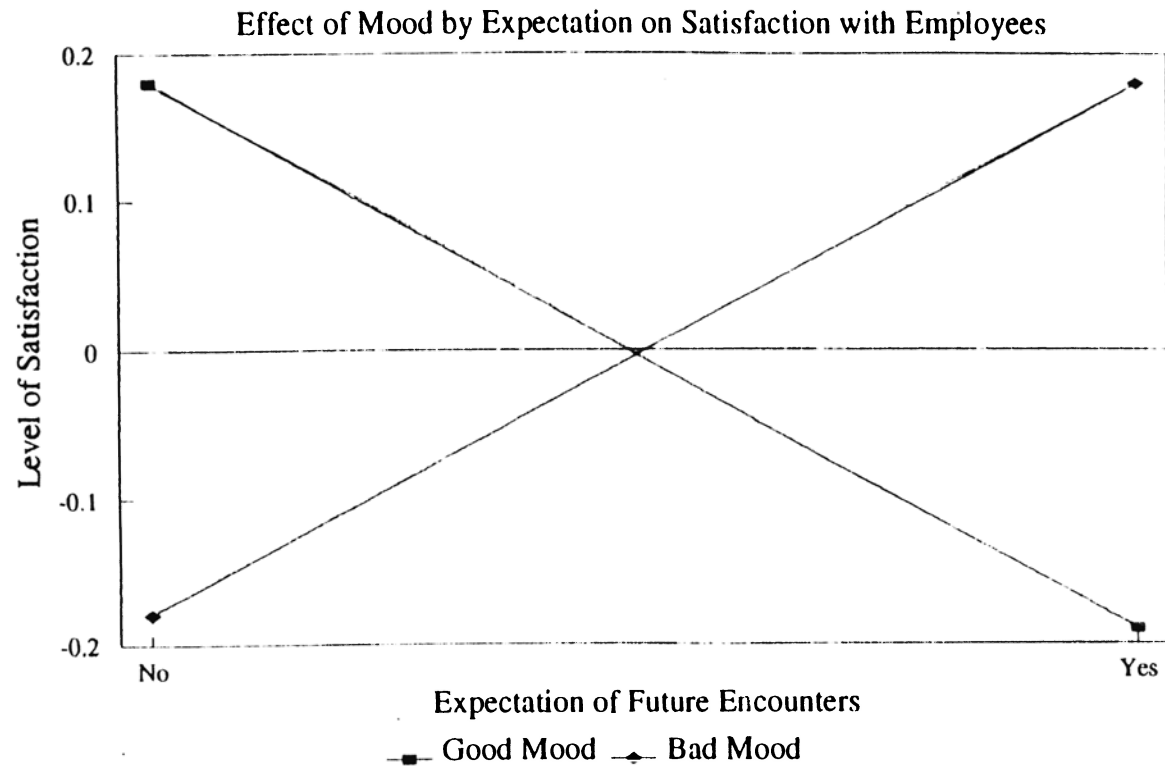
FIGURE 6A

ANALYSIS WITH RAW CELL MEANS

Effect of Mood by Expectation on Intention to Recommend the Service
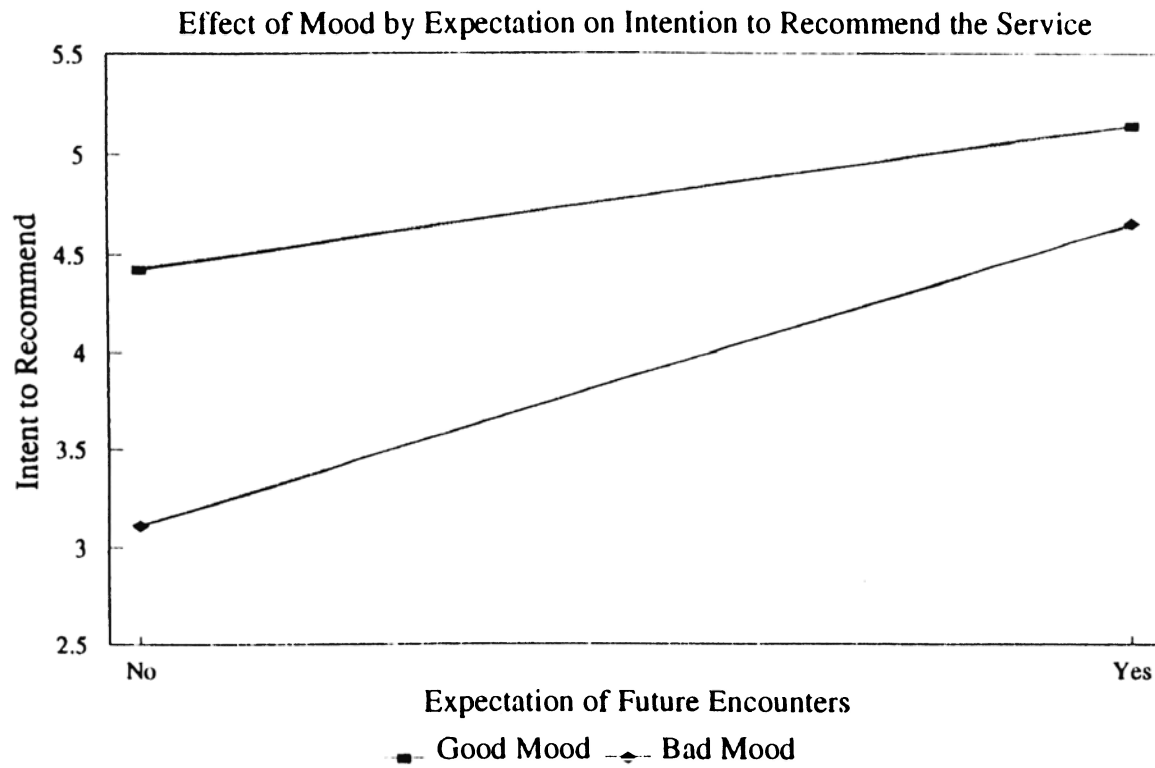
FIGURE 6B

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Expectation on Intention to Recommend the Service

Expectation of Future Encounters

■ Good Mood   ▲ Bad Mood
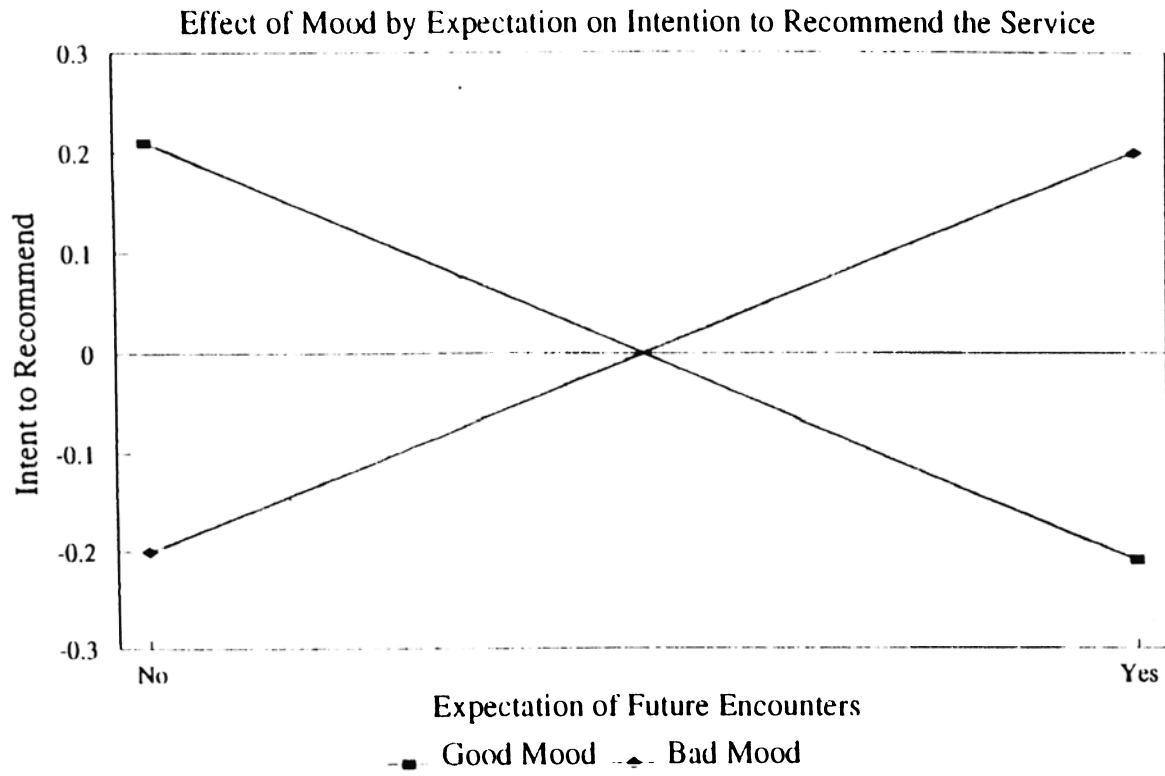
mood conditions. Specifically, when in a good mood, individuals who do not expect future encounters do evaluate the service higher than those who expect such encounters. Hypothesis 8 is thus supported by these data.

Hypothesis 10 concerned the effect of the mood by complexity interaction on service evaluations. Hypothesis 9 predicts a 'U' shaped relationship between complexity and good mood, with individuals in the low and high complexity service situations forming more positive evaluations than those in moderate service complexity conditions. The hypothesis also suggests that an inverted U shape will exist between bad mood and complexity, with individuals in the low and high complexity conditions forming more negative evaluations than those in the moderate conditions. These interactions are graphed using both raw and residual means in Figures 7-10.

To test these predictions, two separate oneway analyses of variance models were used to test the effect of complexity on evaluations under good and bad moods. The results showed that for the good mood condition, a quadratic trend fit the data for service quality evaluation ($F=8.66$, $df=1,152$; $p<.01$), service satisfaction ($F=8.48$; $df=1, 152$; $p<.01$), satisfaction

with employees ($F=2.77$; $df=1$, 152; $p<.1$) and intention to recommend the service ($F=3.43$; $df=1$, 152; $p<.1$). For the bad mood condition, the quadratic trend fit the evaluations of service quality ($F=7.14$; $df=1,162$; $p<.01$), service satisfaction ($F=5.37$; $df=1$, 162; $p<.05$) and satisfaction with employees ($F=3.14$; $df=1$, 162; $p<.1$). The quadratic trend did not fit the data on intention to recommend the service. To correct for possible bias due to unequal intervals in complexity levels, a regression analysis was done using the manipulation checks scores for complexity (treating it as a continuous variable) and a dummy-coded mood variable. An additional advantage of this procedure was that it allowed the test of different slopes for good and bad mood conditions (as opposed to the two separate analyses for good and bad mood conditions as described earlier. The results showed that the interaction of mood and complexity was significant for all four evaluation items. Further, the quadratic term fit the data for service quality ($p<.01$), service satisfaction ($p<.01$), and satisfaction with the employees ($p<.1$). The quadratic term was not significant for intention to recommend the service.

Follow-up analyses reveal that the moderate complexity condition resulted in higher (lower) evaluations relative to low and high complexity in bad
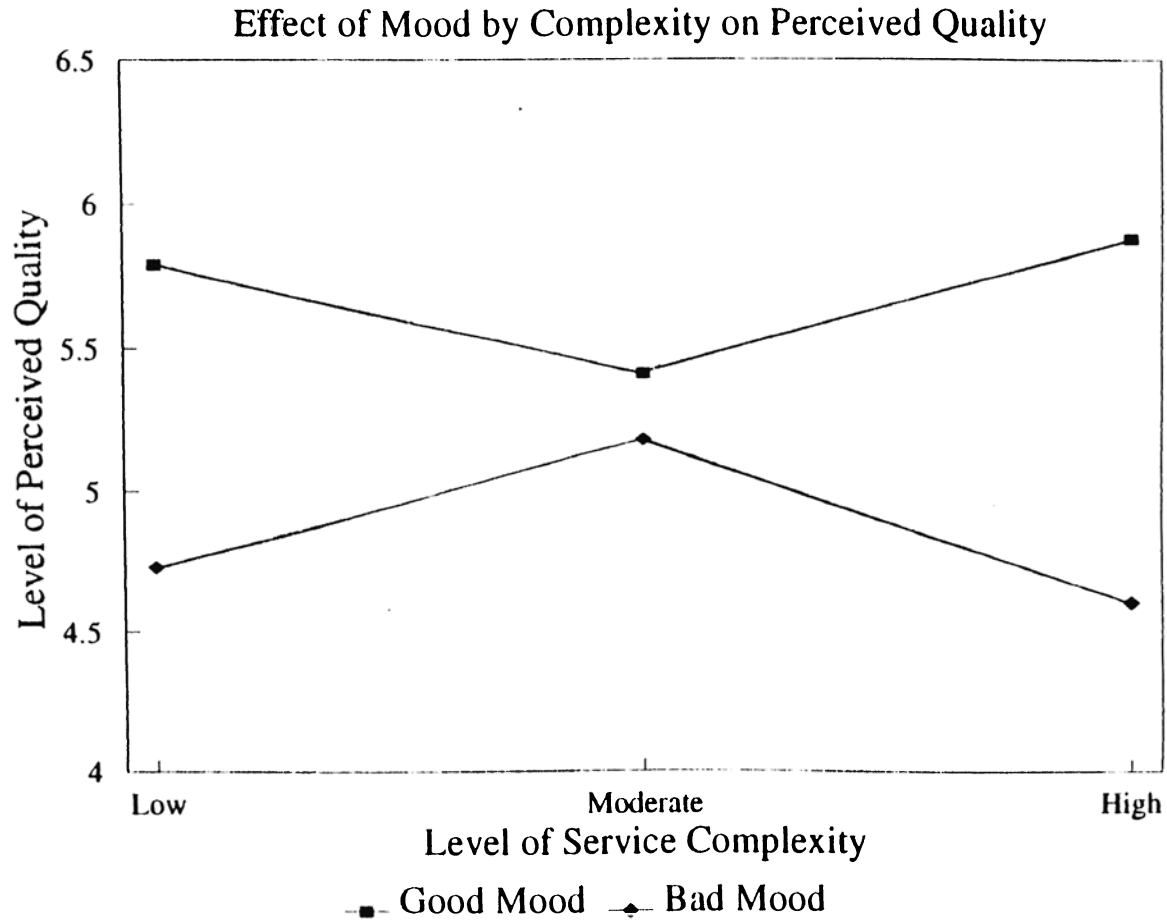
FIGURE 7A

ANALYSIS WITH RAW CELL MEANS

Effect of Mood by Complexity on Perceived Quality

FIGURE 7B

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Complexity on Perceived Quality
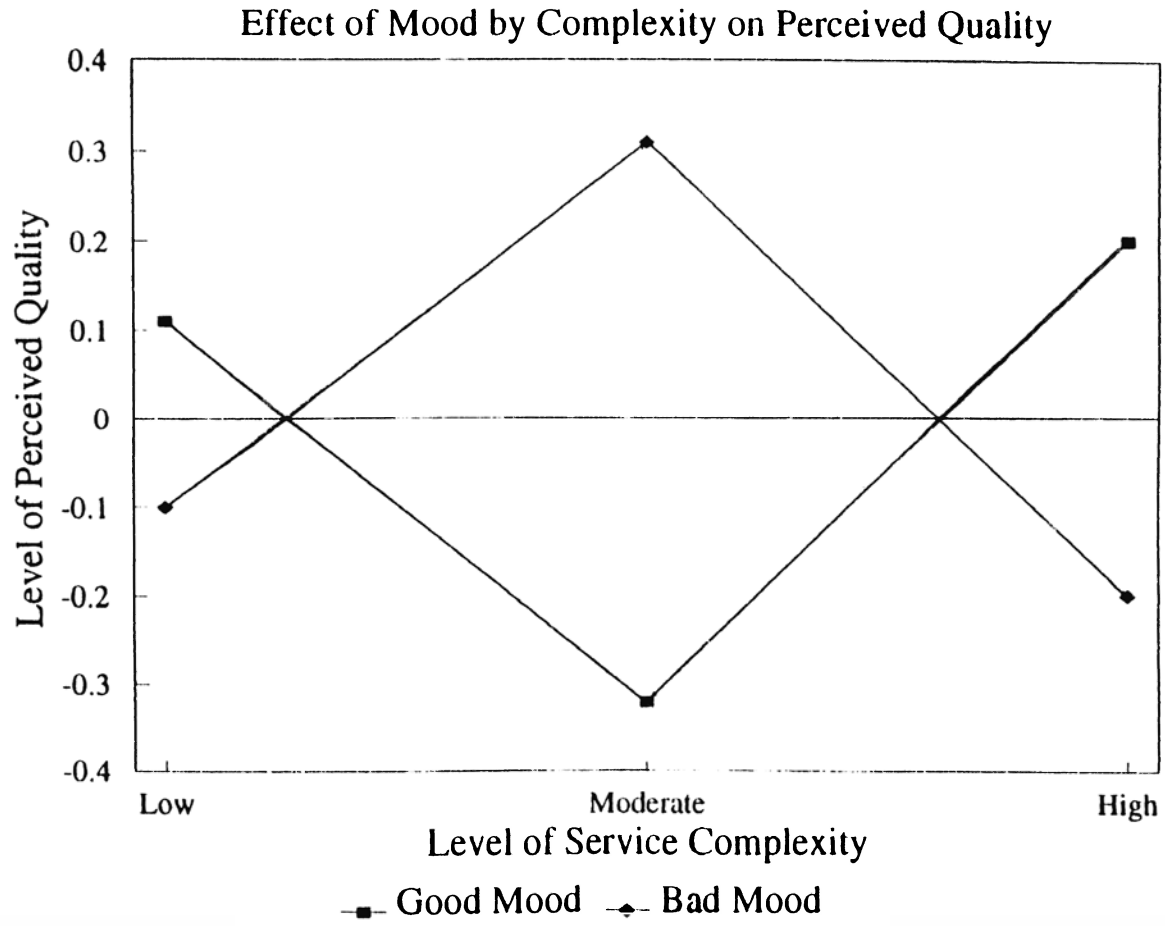
FIGURE 8A

ANALYSIS WITH RAW CELL MEANS
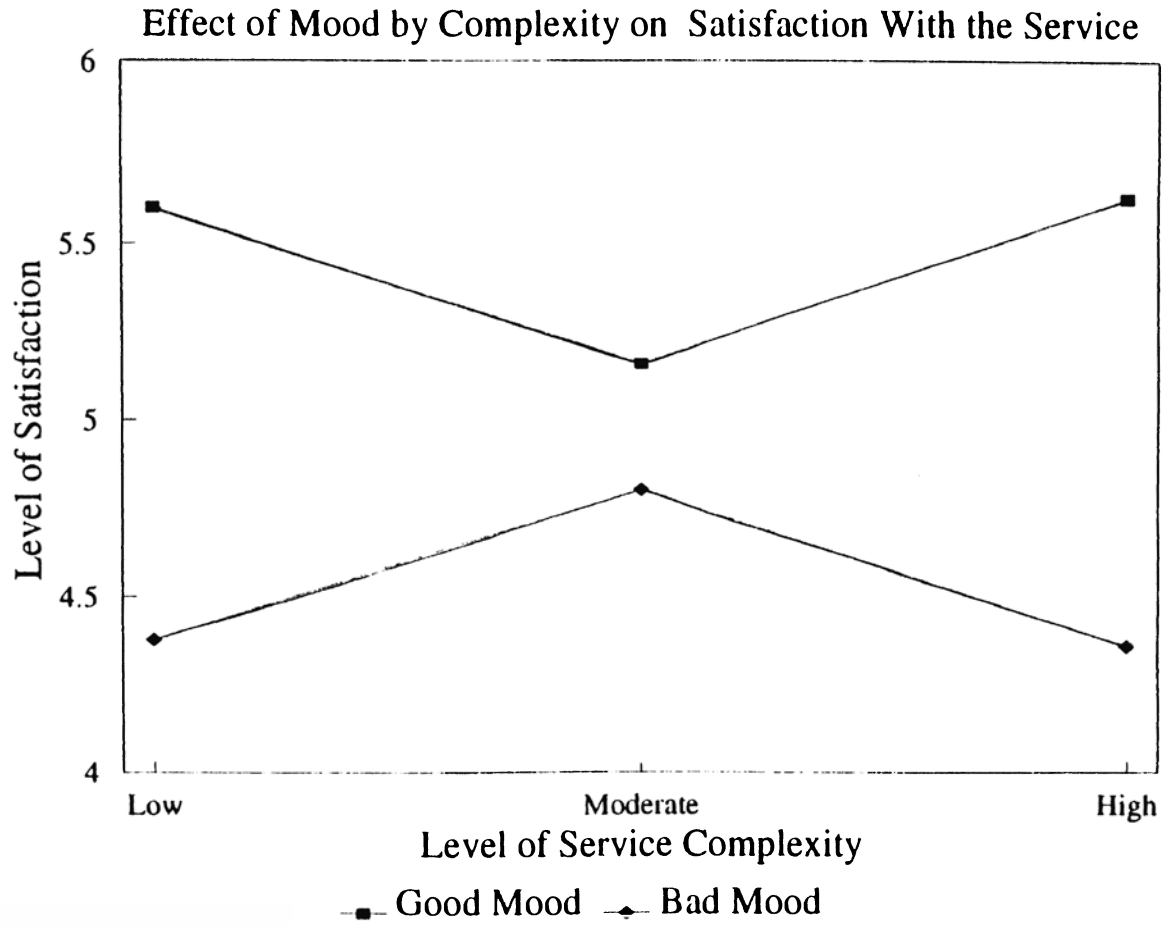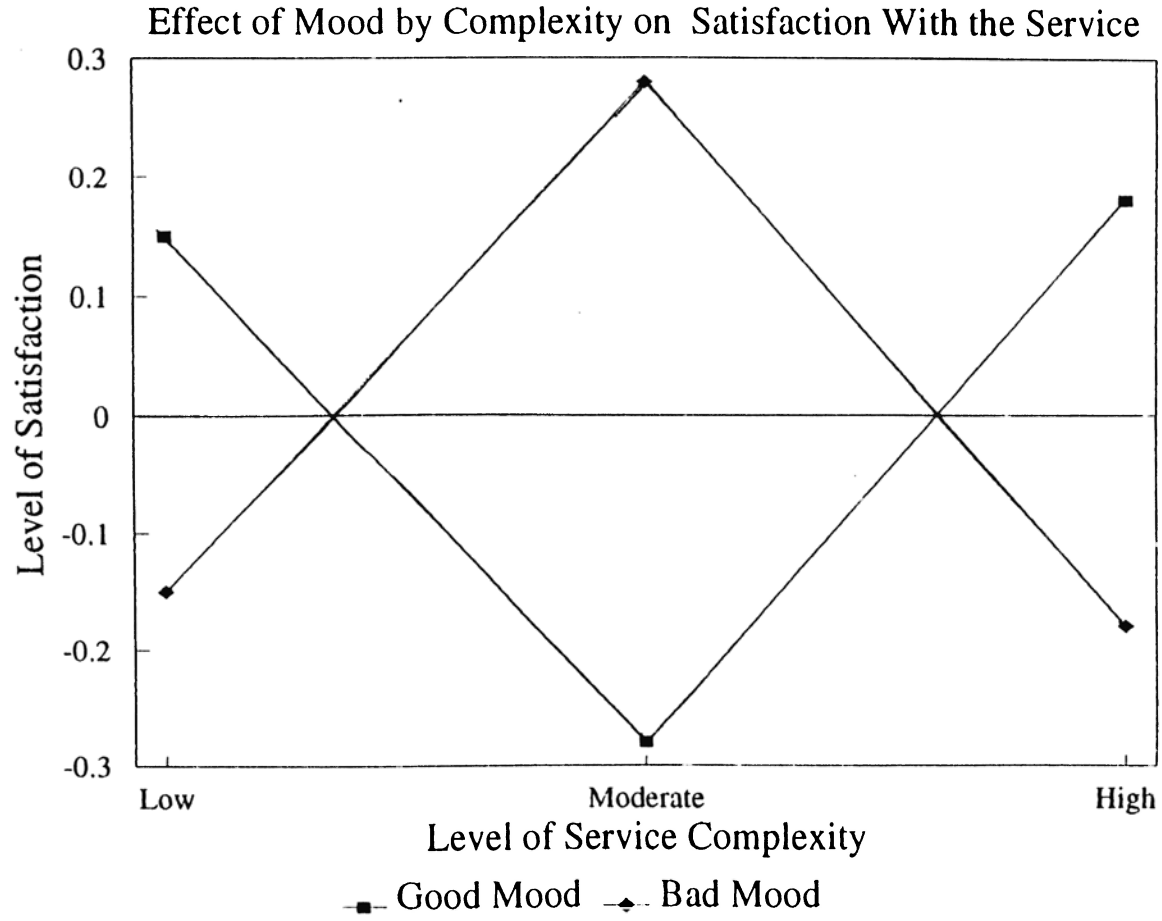
Effect of Mood by Complexity on Satisfaction With the Service

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Complexity on Satisfaction With the Service

Effect of Mood by Complexity on Satisfaction with Employees

ANALYSIS WITH RESIDUAL CELL MEANS

Effect of Mood by Complexity on Satisfaction With the Employees

ANALYSIS WITH RAW CELL MEANS

Effect of Mood by Complexity on Intent to Recommend

Effect of Mood by Complexity on Intent to Recommend
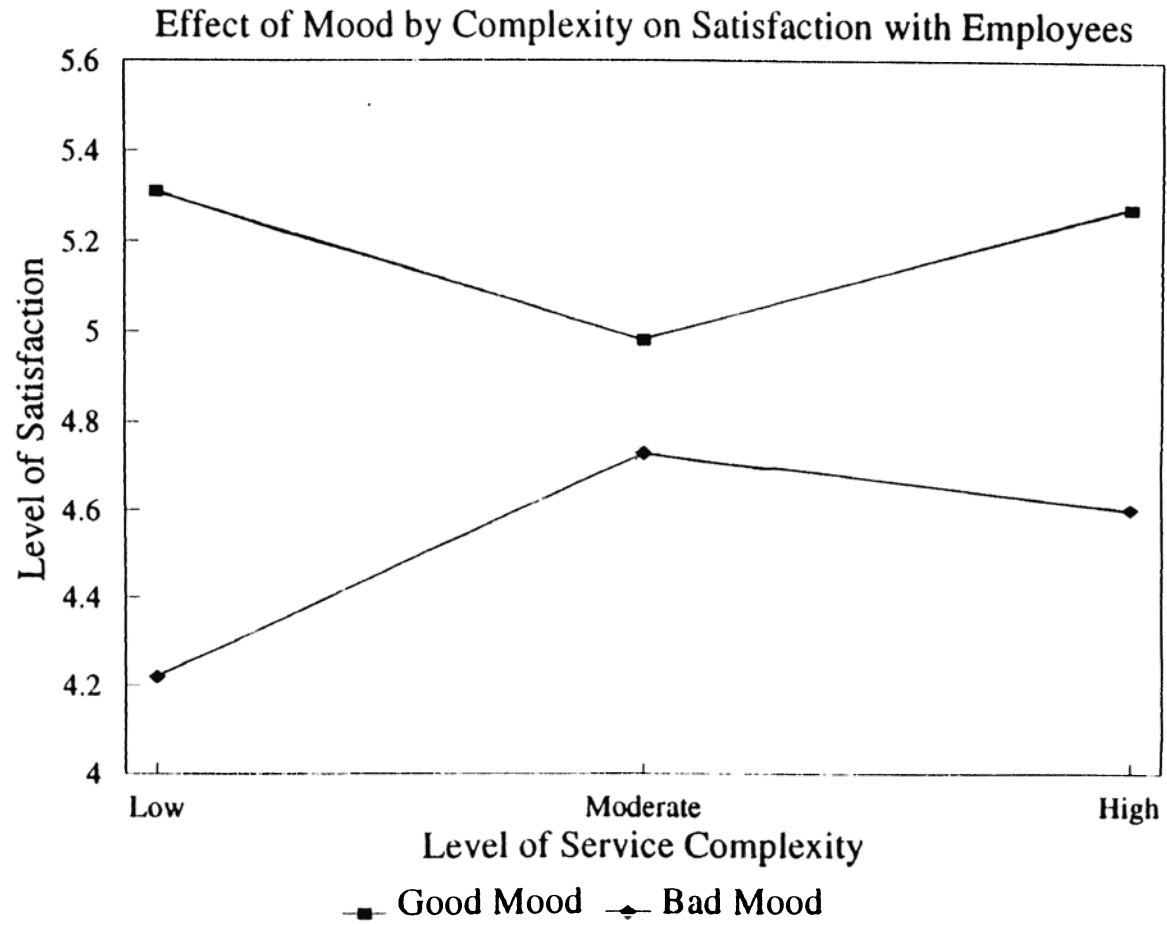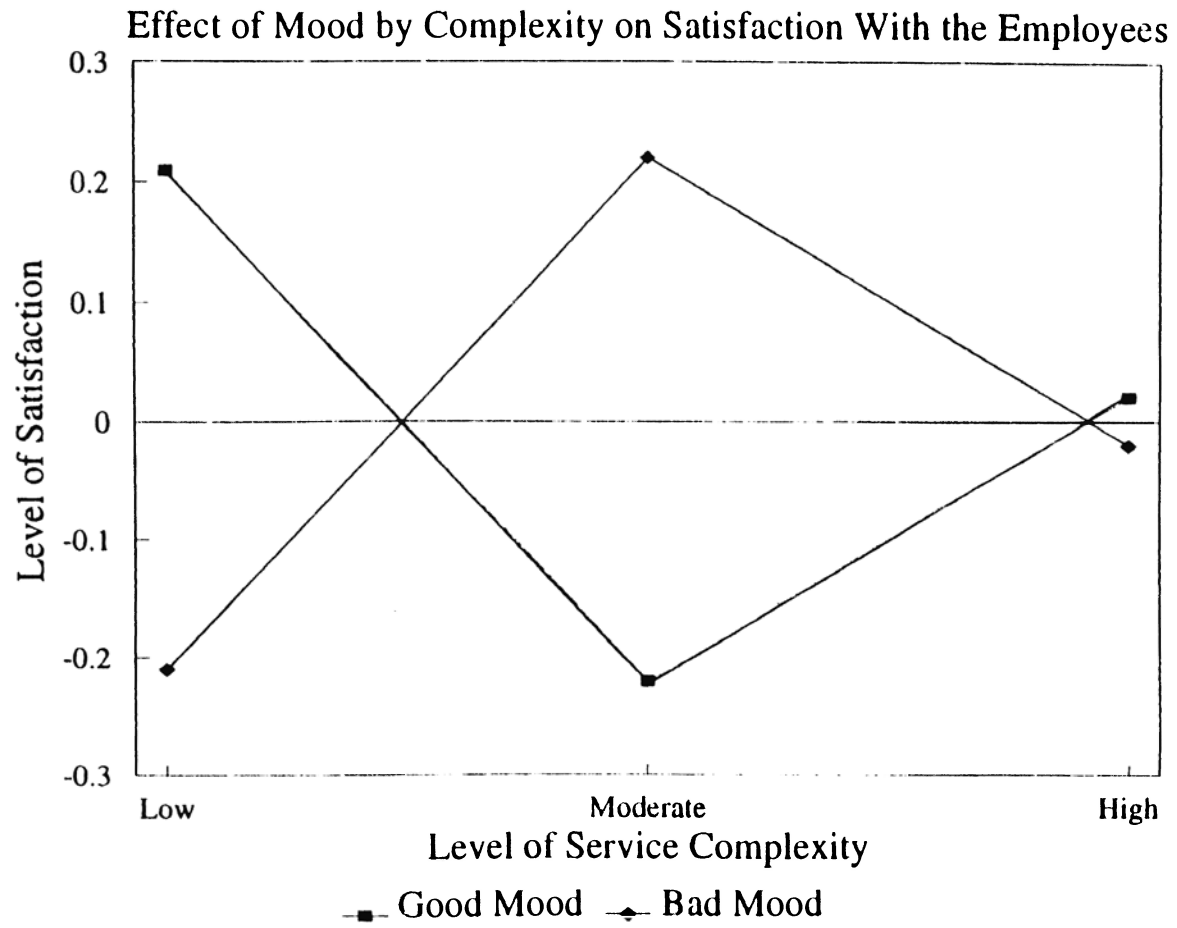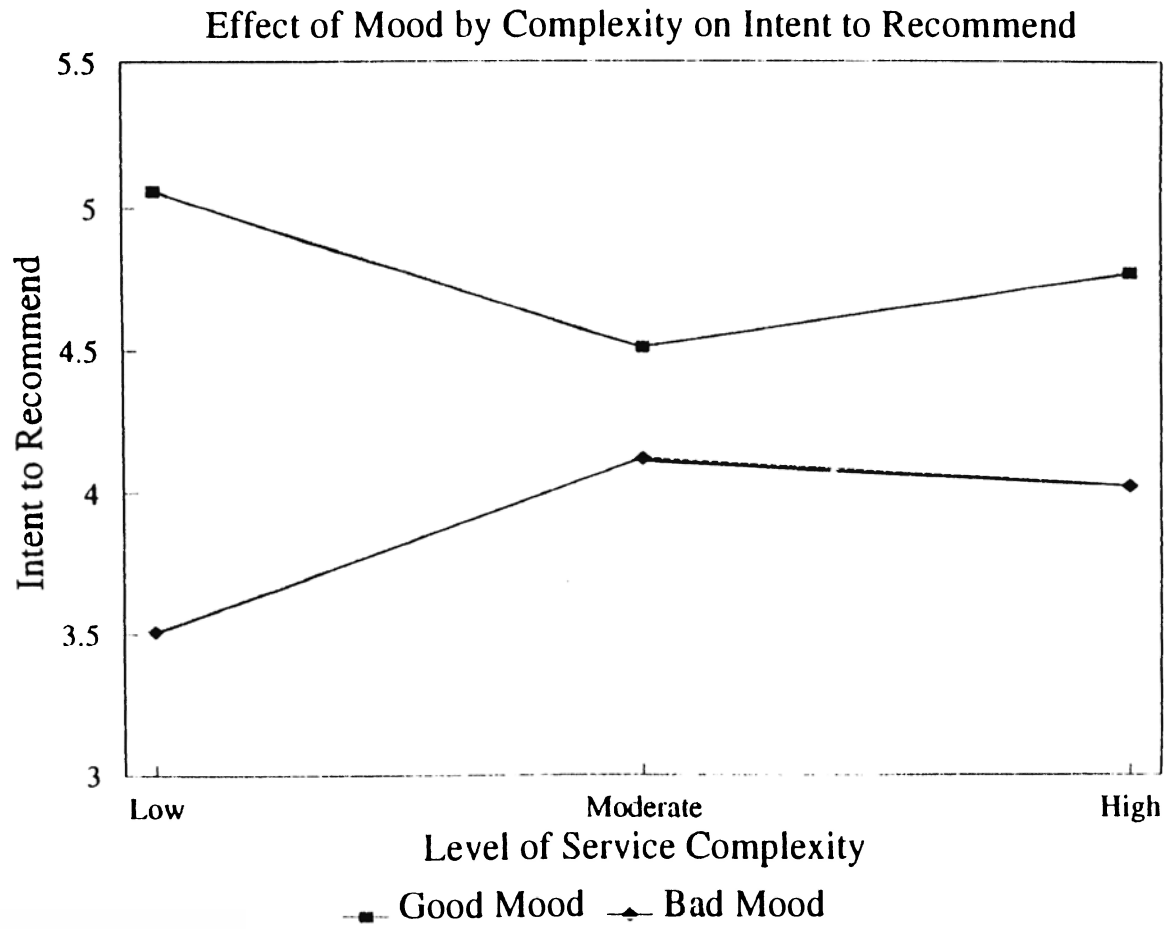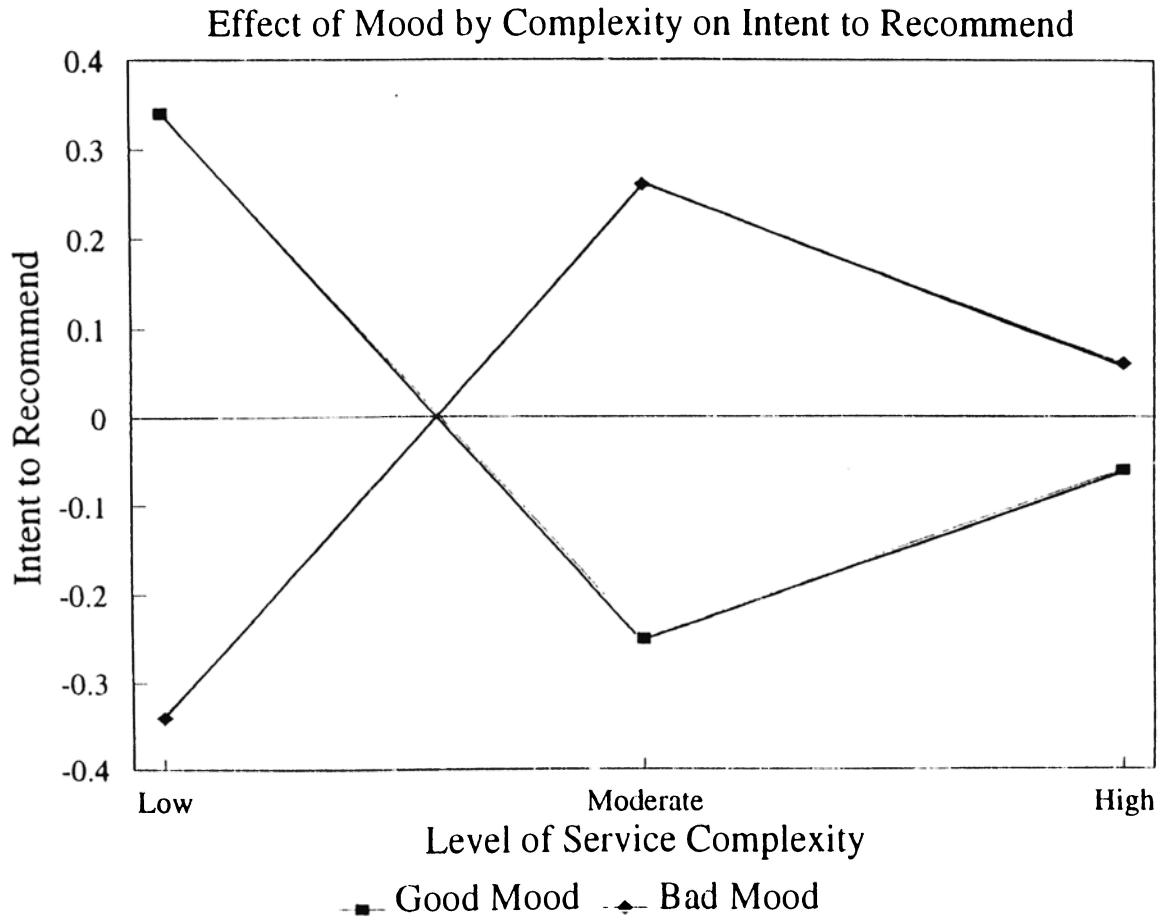
(good) mood conditions for service quality and service satisfaction (both at p<.05). The moderate and high complexity conditions did not differ significantly on satisfaction with employees and on intention to recommend the service.

Response Latencies (H9, H11)

It was hypothesized that evaluations would be faster for individuals who do not expect to have future encounters and for individuals in low or high complexity conditions than for those who do not meet these conditions. None of the effects were significant. However, this may largely be due to the gross measurement of time taken to make evaluations. As described earlier, the software tracked time spent on a screen to the nearest second instead of the nearest millisecond. Hence, these results should not be understood as refuting the relationships proposed in the hypotheses.

A discussion of the findings is presented in the next section.

DISCUSSION

The findings of this dissertation suggest that mood has an important effect on customers' evaluation of services. Further, the use of mood as a heuristic in evaluating services seem to be more pronounced in certain service encounters than in others.

Researchers have often suggested that customers' mood states are likely to have an impact on their service evaluations (Gardner, 1985). However, as Knowles et. al, (1993) note, "despite these intuitive postulations, the impact of one's a priori mood state upon one's response to a service encounter has not been studied." (p. 43). To the best of our knowledge , this is the first marketing study that has demonstrated this effect in the context of service encounters. Though intuitive, the finding is by no means trivial. It has important implications for current conceptualizations of how customers form service quality judgments. These conceptualizations pre-suppose that customers evaluate all service encounters on a set of important attributes, and aggregate these responses to form global service quality and satisfaction assessments (Bitner, 1990; Parasuraman, Zeithaml, and Berry, 1994; Cronin and Taylor, 1994; Teas, 1954). The findings of this

dissertation suggest that this model must be expanded to incorporate both the thoughtful processing paradigm that dominates current marketing thought in service evaluations, and the heuristic decision making approach that has been demonstrated in research in social psychology (Fiske and Taylor, 1984) as well as in other realms of marketing and consumer behavior (Ozanne et al, 1992; Klein and Yadav, 1989).

This dissertation also sheds some light on when customers may be more likely to utilize mood as a heuristic in evaluating services. In both very simple and very complex service evaluation settings, customers showed an increased likelihood of using their mood as a basis for making evaluations about the quality of the service, and about their satisfaction with the service. Interestingly, this effect is most pronounced for more "global" judgments such as satisfaction with the service or the quality of the service. When subjects evaluated more specific dimensions of the service such as the satisfaction with the employees or were asked about specific behaviors such as recommending the service to a friend, subjects in the high complexity condition also seemed to discount their mood state, as evidenced in their more tempered judgments on these dimensions.

What might be the cause of these differing responses? One explanation may be that mood states simply dissipated after each successive evaluations. However, this seems untenable because a) there is no reason to expect that mood states would dissipate at different rates for the different complexity conditions, and b) the mood manipulation administered after all the evaluations were done continued to reflect differences between the good and bad mood conditions. An alternative explanation is that individuals in the high service evaluation complexity condition were more able to discount their mood heuristic when the evaluation was presented along a less complex, narrowly defined dimensions. That is, evaluations along these specific dimensions may have seemed less complex than global evaluations. Support for this notion comes from Schwartz and Clore (1988) who found that stronger mood effects were found when individuals were asked to make judgments on more complex issues (Are you satisfied with your life, on the whole?) as opposed to more narrowly defined aspects (Are you satisfied with your job?). Similarly, Bodenhausen and Lichtenstein (1987) report that the use of another heuristic--stereotypes--was when subjects were asked to make judgments about a target person's guilt (a more complex evaluation) than when asked to evaluate the

target person's aggressiveness (a less complex, more narrowly defined evaluation). It is also interesting that individuals in the low complexity service evaluation condition did not exhibit such reductions in heuristic use when faced with narrowly defined evaluations. This may be because their use of heuristics was predicated less upon concerns about processing constraints (ability to evaluate the service) than the heuristic use by individuals in the high complexity service condition. Hence, reductions in the complexity of the evaluation may have been less relevant to individuals in the low complexity service condition.

The dissertation findings also find strong support for the mitigating effect of expectations of future encounters on the use of mood as a heuristic. Subjects who expected future encounters with the service paid greater attention to the information presented in the service encounter, recalled more information, and exhibited lower mood effects on service evaluations. The effect of expectations of future encounter on even the time taken to read the brochure--a measure that was not very sensitive as discussed in the results section-attests to the strength of this effect.

The results on the recall of information presented in the service encounter also provide insights into how

customers make service evaluations. The information
available to the customer in evaluating services in more
tangible and less concrete than the information available
in evaluating products. As Friedman and Smith (1993),
note, "there is no kicking the tires or peeking under the
hood," that customers can rely on in evaluating services.
Due to this intangible nature of service encounters,
customers may face considerable difficulty in trying to
recall the service encounter experience. The study
findings suggest that this is especially the case when
the service lies in the extremes of evaluation complexity
and when the customer has no intention or expectation of
future encounters. Consequently, the current
conceptualizations of service quality evaluations that
assume customers can accurately remember all the
attributes of various service encounters and then combine
them to form global evaluations may need to be modified
to reflect service encounters where these assumptions do
not hold.

In this study, mood had a marginal effect on recall,
with individuals in a good mood recalling more than
individuals in a bad mood (t = 1.4; p < .10), one
directional test). This result is in the expected
direction and provides additional support for the finding
that good mood enhances recall (Isen, 1984). This study

used only positive information, to simulate the one-sided communication that organizations typically provide. Hence, in this study, we do not know whether individuals in a bad mood would have exhibited greater recall of negative aspects of the service encounter. The managerial and theoretical implications of this, and other effects are addressed in the next section.

A final issue in the interpretation of results concern the effect of mood on customers who are in service situations that seem to be conducive to thoughtful information processing, for example individuals expecting to have future encounters with the service or those who are in a moderately complex service evaluation condition. These individuals are not totally immune to mood effects. Here too, individuals in good mood evaluate targets more positively than those in a bad mood. The mood effects are less pronounced, however. This suggests that it may be more useful to conceptualize the thoughtful processing-heuristic processing distinction on a continuum, rather than as distinct strategies.

IMPLICATIONS

Managerial Implications

The findings of the study show that customers are more likely to use heuristics, such as their moods, in forming evaluations in some service settings than in others. Knowing whether customers will use a specific processing strategy can aid managers in a) deploying organizational resources most effectively to capitalize on the customers' processing strategy, and/or b) developing interventions to influence the processing strategy used.

Consider a service such as financial planning or investment counseling that wishes to enhance customers' satisfaction and their perception of the quality delivered by organization. But, how should the organization go about this task? Assume that the service caters to two customers--one an experienced customer who perceives that (s)he can competently evaluate the service and the other, a first time user of such financial services, who finds the service very complex to evaluate. Our findings suggest that the first-time user will be more prone to use heuristics such as "Does the consultant appear competent?" etc. The experienced customer on the other hand may be more likely to use attributes such as the track record of the investment advice in evaluating

the service. Recognizing and responding to these differences can help the organization position itself successfully.

Knowledge of the processing styles used by customers can be used not only to adapt to customers' processing styles but to influence them as well. Consider a service that is popularly perceived to be very complex and divergent such as a physician's care. These perceptions may lead to a customer's opting for a heuristic evaluation of the service, with or without being aware of doing so. Customers for instance, may invoke the stereotype of the friendly, competent, caregiver who "fixes" all medical problems. If, as many doctors believe, customer dissatisfaction with their service is primarily due to an inadequate understanding of what the physician can and can't do (the attributes of the service), then, encouraging patients to adopt a thoughtful processing strategy may enhance the judgments of service quality. This may take the form of first letting the customers know that the service recognizes the difficulties inherent in evaluating medical services. Next, the service may communicate the importance of patients understanding the attributes of the service to receive the best possible care. Finally, the service may empower patients to evaluate the service attributes by

providing information, encouraging questions, etc.

The findings regarding expectations of future encounters highlight the need for managers to create interdependencies between the customer and the service organization. When customers perceive a given encounter as one of several to follow, they appear to be less likely to penalize the service for their bad mood (in terms of lowered perceptions of quality and satisfaction) than when they perceive the encounter as involving no future commitments. Hence, efforts to build expectations of future encounters through strategies such as relationship marketing may be successful in getting customers to focus on the attributes of the service. On the flip side, this implies that service providers must be particularly careful in catering to their regular clientele. These individuals, through their use of thoughtful processing, may be more sensitive to failures in service delivery, and may be less mollified by efforts to induce positive mood.

The above discussion should not be taken to mean that service providers can ignore service attributes and focus on inducing positive mood when serving customers who are likely to be using heuristics in judging service attributes, or that services can bypass efforts to create a positive mood environment and emphasize only the

service attributes when customers use thoughtful
processing. In other words, these strategies should not
be viewed as mutually exclusive. Efforts to induce
positive mood will not be a panacea for severe problems
in service delivery. Similarly, the marginal return on
excellent service attributes can be greatly enhanced when
presented in settings that promote positive mood. Hence
service organizations must be attentive to the influence
upon mood of such variables as the physical surroundings,
ambient conditions, and customers' interaction with
people and machinery in the course of the service
encounter (Gardner, 1985). Successful organizations will
incorporate both aspects in planning service delivery.
However, the relative emphasis on one or the other aspect
should be tailored to the customer segment.

There may be several payoffs to creating such
positive moods. First, positive moods result in improved
perceptions of service quality and satisfaction. Second,
positive moods may enhance customers' recall of the
information presented during the service encounter. The
benefits of this improved recall are obvious when the
service encounter goes smoothly. However, the beneficial
aspects of positive mood may be considerable even when
there are problems associated with the service encounter.
Despite the best efforts of management, there may be

circumstances under which some service failures occur. Consider a customer who is irritated by a botched reservation. Efforts to induce a good mood in the customer in such a situation, may seem daunting, but they may be very worthwhile. If a good mood is induced successfully, through service recovery or making good on the problem, in later recall, the positive mood associated with the encounter may make the responsiveness of the organization more salient than the failure that prompted it.

Theoretical Implications

There are several theoretical implications of the dissertation's findings regarding service evaluations. Specifically, the results of the study suggest that the predominant emphasis on thoughtful processing of information must be complemented by recognizing the role of heuristic use in service evaluations.

To demonstrate the need for including heuristic processes, this dissertation presented heuristic and thoughtful processing as discrete alternatives. In reality, they may form points on a continuum, with a processing strategy being say, more or less heuristic rather than either heuristic or thoughtful processing. The clarification of this relationship should greatly

advance theoretical understanding of service evaluation processes.

The findings of this study also set the stage for several theoretical extensions. This study focused on mood as a heuristic, providing the first empirical test of the impact of mood in responses to service encounters. As a preliminary investigation, this dissertation examined the impact of selected person and situation variables and their interactions. The next step would be to test the effects of relatively more complex interactions. For example, we need further insights into which processing strategy would be used if a service is both high in complexity (favoring the use of heuristics), and high in involvement (inhibiting the use of heuristics). That is, which aspect would dominate the choice of processing strategy? To test such a hypothesis, it would be necessary to identify a range of services that vary on both involvement and complexity.

Research is also needed regarding the interactive role of persistent and momentary person variables (Branscombe and Cohen, 1991). Consider a service customer who experiences two conflicting heuristics upon meeting an older service employee (say, an a priori positive mood and a persistent negative stereotype regarding the abilities of an older person) in the

context of a service encounter. We need to understand
which specific heuristic will be invoked. That is, would
the customer be influenced more by the positive mood or
by the negative stereotype?

There are important contributions of the proposed
theoretical framework of service evaluations as well.
First, the theoretical framework provides a broadbased
approach that can integrate and extend current insights
into customers' evaluation processes. Second, by
introducing the levels of situational analysis, the
framework avoids the phenomenological bias remarked upon
in interactional analyses. Kenrick and Dantchick (1983)
note for instance, that

> ...the interactionist approaches have tended to
> favor a cognitively based view of personality...
> this bias manifests itself in a tendency to view
> traits and situations as constructions of observers,
> each in his or her own solipsistic universe..(p.
> 296).

Our framework avoids this problem of solipsistic
interpretation by introducing the canonical situation
which is the consensually constructed representation of
the service encounter.

An additional benefit of the proposed framework is
that it can also be used to further the understanding of
the service employee, an important other "person" in the
service situation. To demonstrate this extension, a

brief overview of the applicability of the framework to the service provider is presented in the Appendix.

The interactional framework does not fully address the impact of the time dimension in the person-situation interaction, however. Lerner and Lerner (1986) propose for instance, the "circular function" in the person-situation interactions. In applying the circular function to child development, they note that there are four phases to the circular function, a) the person acts on the environment, b) the environment reacts to the person's actions, c) the environment acts on the person and d) the person reacts to the environment's feedback, thus reverting to the first phase. In the context of the service encounter, the study of service evaluations must therefore incorporate the dynamic interaction between the service situation and the customer's persistent and momentary states over time. This would require a paradigmatic shift from the current cross-sectional studies to a longitudinal investigation of service evaluations.

CONCLUSION

This study suggests that current conceptualizations of service evaluations, which assume that customers always use thoughtful processing of service encounter information, may be incomplete. This dissertation has shown that heuristics such as mood can influence service evaluations and recall of information about encounters. Consequently, the role of heuristics must be explicitly incorporated into the present models of service evaluations. The dissertation also shows that the strength of the mood effects varies in different service scenarios. This suggests that it may be possible to identify the various conditions under which a thoughtful or a heuristic evaluation process is likely to dominate. The successful identification of other potential factors affecting customers' use of thoughtful or heuristic based evaluations of services should contribute to both theory and practice in services marketing.

The findings of this dissertation must be interpreted in light of two limitations. The study was conducted in a computer center, a setting that may have facilitated, and even implicitly demanded, thoughtful processing of information. Further, the subjects were all college students, a group that may be higher on cognitive ability than the general population. However,

these conditions may also be construed as setting up a more conservative test of the research hypotheses. Even individuals with high cognitive ability, in a setting conducive to analytical processing, were susceptible to the use of heuristics. This suggests that if anything, in a naturalistic service setting, with customers of varying cognitive abilities, the use of heuristics may be much greater.

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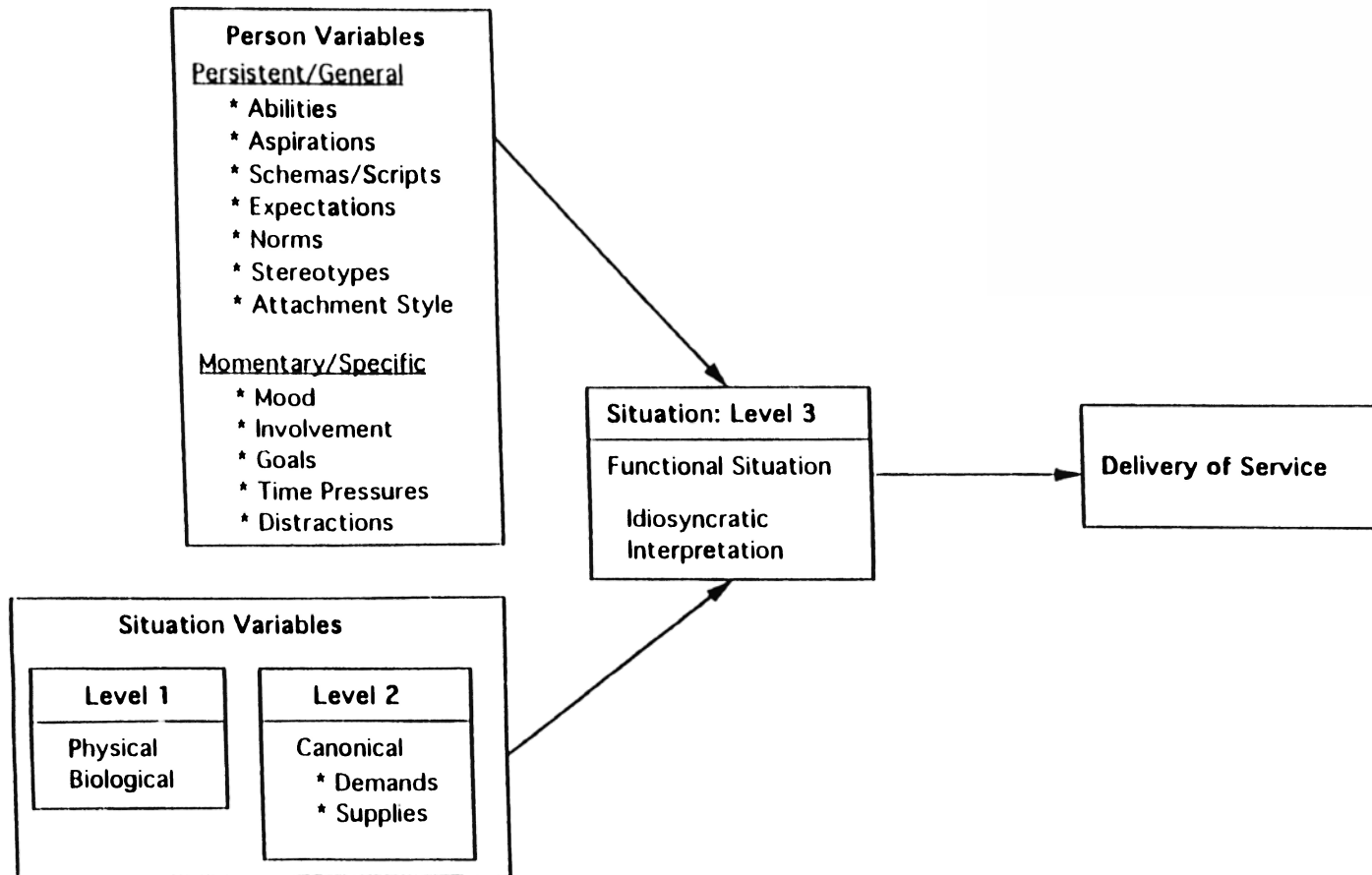Singh, Surendra N. and Gilbert A. Churchill (1987), "Arousal and Advertising Effectiveness," Journal of

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An Interactional Framework of Service Evaluations
Factors That Affect The Quality of Service Delivered

The responsibility for ensuring the customer's perception of a high quality service often lies with the service provider. For this reason, there is great interest in the services literature in identifying the factors that affect the delivery of the service quality. Unfortunately, current efforts to explore the delivery of service have been restricted to narrow aspects such as job satisfaction (Hoffman, 1992), or the physical environment (Bitner, 1992). What is lacking is a comprehensive framework that can identify both the person and the situation variables within a service encounter that impact on the quality of the service delivery. In an attempt to rectify this gap, we propose an interactional framework of service encounters from the perspective of the service provider. In doing so, we combine the P-E fit approach to understanding behavior (Caplan, 1987; Edwards and Cooper, 1990) with the levels of situational analysis (Block and Block, 1981) and the levels of person analysis (Nystedt, 1981).

An Interactional Framework of Service Evaluations: The interactional framework depicted in Figure A-1 focuses on the service provider as the "person" operating in the service "situation".

Figure A 01
An Interactional Framework of Service Delivery
Frontline Personnel's Perspective

Person Variables

<u>Persistent/General</u>
* Abilities
* Aspirations
* Schemas/Scripts
* Expectations
* Norms
* Stereotypes
* Attachment Style

<u>Momentary/Specific</u>
* Mood
* Involvement
* Goals
* Time Pressures
* Distractions

Situation: Level 3

Functional Situation

Idiosyncratic
Interpretation

Delivery of Service

Situation Variables

Level 1	**Level 2**
Physical Biological	Canonical * Demands * Supplies

110

As in the discussion pertaining to service customers, we once again distinguish between persistent and momentary person variables as well as between three levels of the service situation: the physical-biological, the canonical and the functional. It is to the latter issue of service situation dimensions that we now turn our attention to.

The Levels of the Service Situation : The definitions of the levels of the service situation have been addressed earlier and hence, we now proceed to specific aspects of the levels of service. The physical-biological situation from the perspective of the service provider parallels that for the service customer, involving as it does the mere registering of sensory stimuli. The canonical situation however, can be categorized along two dimensions: demands and supplies. These dimensions of the service situation are classified as canonical (i.e., consensual or shared) because organizations generally make a special effort during selection, orientation, training, performance evaluation and reward allocation procedures to communicate to their employees the expectations for the employees (demands) and the resources and incentives available to them (supplies). Additionally, the socialization process should ensure that the expectations of demands and supplies among

employees share a common base. The perceptions about demands and supplies may be further refined across specific task dimensions: for instance, number of customers served, turnaround time on customer requests etc.

The _functional situation_, the idiosyncratic interpretation by the service provider is the result of the interaction between the two levels of service situation discussed (the physical-biological and the canonical) and the person variables.

Person Variables: The service provider's person variables can be categorized as persistent (enduring beyond the specific service encounter) and momentary (specific to a service encounter). Persistent person variables include the abilities of the service provider, the aspirations/needs of the provider, and the provider's expectations, schemata and scripts, norms and stereotypes.

The abilities of the service provider include task-specific abilities (such as technical training to be a nurse), as well as generic abilities such as empathic abilities (Clary and Orenstein, 1991), service/customer orientation (Hoffman, 1992), and uncertainty orientation (Sorrentino et. al. 1986). Within the service encounter, empathic ability refers to the ability of the provider to

identify with or empathize with the service customer. The service or customer orientation has been defined in the literature as the ability of the service provider to engage in behaviors that promote the customer's long-term satisfaction. Uncertainty orientation is the predisposition of an individual to seek situations that provide the means for resolving uncertainty about oneself or the environment and to function effectively in such environments. A certainty orientation on the other hand predisposes individuals to avoid situations that are uncertain and to be less effective if placed in such environments. This of course, is by no means an exhaustive list of the abilities in a given service encounter--rather, it is meant to serve as an indicative list of the types of abilities that may be included.

The aspirations of the service provider encompass career aspirations as well as aspirations regarding other life roles (to be a good parent, spouse, friend etc.). The third persistent person variable is the expectations of the service provider. These expectations include notions about future environments (e.g., expectations about a future raise or promotion), and about continued interaction with the customer.

In addition to expectations about the future, experiences from the past are also part of the persistent

person variables of the service provider. These are embodied in the schemata and scripts, the norms and stereotypes of the service provider.

The momentary person variables are those that are specific to the service encounter: the mood state, the involvement level, the time pressures and the distractions. These person variables, in conjunction with the situation variables, create the functional situation that is, the idiosyncratic interpretation of the service encounter by the service provider. The functional situation in turn, determines the actual level of service quality delivery. Below, we develop some propositions regarding the level of service quality delivered.

The Delivery of Service Quality: Some Propositions:

Person Variables: The empathic ability of the service provider should result in the provider's more readily adopting the customer's viewpoint during the service encounter. similarly, a strong service/customer orientation should result in the service provider more easily engaging in customer-satisfying behaviors. Greater ability on both of these dimensions then, should lead to better quality of service delivered. The impact of these abilities is not assessed then in terms of the

difference between the demands-abilities as is

conventional in the P-E fit literature. Consequently, we

propose:

Proposition 1: The level of service quality delivery will
be greater, the greater the empathic ability of the
service provider and the greater the service
orientation of the service provider.

With respect to the uncertainty orientation, the

performance of the service provider is contingent upon

the fit between the orientation and the demands of the

service encounter. Thus, we propose:

Proposition 2: The level of service quality delivery will
be greater, the greater the fit between the orientation
of the service provider (certainty/uncertainty) and the
characteristics of the service encounter
(certainty/uncertainty).

With task related abilities as well, the performance of

the service provider depends on the demands placed upon

him/her. A negative discrepancy[2] (abilities < demands)

is hypothesized to lead to performance decrements

(Edwards and Cooper, 1990) while a positive discrepancy

may lead to higher performance than required. Therefore,

we propose:

Proposition 3: The level of service quality delivery will
be greater, the greater the fit between the abilities

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[2]The issue of various measures of P-E fit and the relationship
between P, E and quality delivered is discussed later, under
directions for future research.

of the service provider and the demands of the service encounter. A negative discrepancy (abilities < demands) leads to a lower level of service quality delivered; a positive discrepancy increases the level of service quality delivered.

While the fit between demands and abilities is hypothesized to affect performance, the fit between aspirations and supplies is hypothesized to result in the service provider's job satisfaction (Locke, 1976; Edwards and Cooper, 1990). Job satisfaction in turn, has been shown to be positively correlated with such interpersonally sensitive behaviors as demonstrating tact, concern for others, emotional control and acceptance of criticism (Motowidlo, 1984). Such behaviors may be expected to enhance the quality of service delivery. Hence, it is proposed:

Proposition 4: The greater the fit between the aspirations of the service provider and the supplies of the service environment, the greater the job satisfaction of the provider and the greater the level of service quality delivered.

When the service provider expects to continue to interact with the customer beyond the specific service encounter (e.g., the customer is a regular patron of the hairstylist), the provider experiences a greater outcome dependency (Neuberg and Fiske, 1987). Consequently, the service provider may make a greater effort to provide a higher quality of service than when no such dependency is perceived. thus, we propose:

Proposition 5: Service providers who perceive the
encounter to be a part of a series of encounters will
provide a greater level of service quality delivery
than service providers who perceive the encounter to be
a one-time interaction.

Expectations may extend to future P-E fits as well.

Given an inadequate fit between aspirations and supplies

for example (i.e., an employee may perceive current

rewards as being inadequate to satisfy personal needs and

aspirations), the expectation that the fit will improve

in future (say, by an imminent raise) should ameliorate

the fall in job satisfaction, and consequently, service

quality, associated with the bad current fit. It follows

then:

Proposition 6: Expectations of better P-E fit should
moderate the effects of current P-E fit. In the face
of poor P-E fit, expectations of better/worse future
fit should decrease/increase the drop in service
quality delivery. In the face of good P-E fit,
expectations of better/worse future fit should
increase/decrease the rise in service quality delivery.

Among the momentary person variables of the service

provider is his or her mood state. The provider's mood

(whether induced prior to or during the service

encounter) may be expected to affect his/her subsequent

behaviors during the service encounter (Gardner, 1987;

Knowles et. al., 1992). Specifically, good mood should

enhance the service provider's positive social behaviors

towards customers whereas bad mood may either enhance or

inhibit such positive behaviors due to the operation of
mood maintenance/mood repair phenomena (Isen, 1984;
O'Malley and Andrews, 1983). This leads us to propose:

Proposition 7: Service providers in a good mood will
deliver a higher level of service quality than their
neutral mood counterparts. Service providers in a bad
mood may provide a higher or lower level of service
quality relative to the neutral mood counterparts.

The propositions so far focused on person variables
either in isolation or in conjunction with situation
variables. We now turn our attention to canonical
situation variables. In keeping with the P-E fit
literature, we propose:

Proposition 8: The greater the fit between the demands
and supplies of the service situation, the greater will
be the overall service quality of the firm.

Several issues remain to be addressed regarding the
delivery of service quality. Firstly, we need to assess
the importance of different kinds of fit (that is, the
fit between demands and abilities, supplies and
aspirations etc.) in affecting the delivery of service
quality. Organizational behavioral literature (Edwards
and Cooper, 1990) suggests for example that the fit
between supplies and aspirations impacts only on job
satisfaction while the fit between demands and abilities
determines the performance of the employee. Research in
marketing (Hoffman, 1992) seems to establish a link

between the job satisfaction (the fit between supplies and aspirations) and the performance (the fit between demands and abilities) of the employee. More research is needed to clarify the effects of different kinds of fit and the strategic importance of each type of fit on various indices of employee performance and well-being.

Secondly, in measuring the effects of different types and degrees of fit, there is a need for greater precision in specifying the relationship between person and environmental variables. For instance, is the relationship between demands, abilities and quality of service a linear function of P and E (say, a discrepancy score), an interactive function, or yet another form? Obviously, the specification of the form of fit will impact subsequent interpretations regarding the effect of fit. The work of Edwards and Cooper (1990) may be useful in determining which functional form best represents the P-E fit in a given situation.

The discussion so far has focused on current fit between the P-E variables. Research is also required to examine the effects of the employee's perceptions of past and future fits. Thus, the misfit between supplies and aspirations may be more palatable to the employee if (s)he perceives some redress in the near future. This would have important implications for a service firm that

wishes to use a temporary raise freeze to be competitive for example. The firm may be able to counter the negative effects of such a move (a misfit between aspirations and supplies) by communicating to the employees when and how they would be compensated for current concessions.

An important aspect of future fit in the employee's environment has to do with the emphasis the organization places on relationship marketing efforts. An organization that focuses on relationship marketing may convey to employees the expectation that there will be future encounters (because the firm is understood to value and develop such relationships). This in turn should lead to better service delivery than when the employee does not have such an expectation of future encounters. However, the mere expectation of future encounters may not be sufficient to ensure higher service quality, and the success of relationship marketing efforts. The organization must come up with appropriate incentive schemes that reinforce the importance of performing up to par in every single interaction.

A related issue in relationship marketing would be the relative importance of interactions with different service providers in a service context (that is, the different employees that the customer interacts with in

the course of a service transaction). Every interaction between the customer and the service provider(s) must be analyzed in terms of its effects on relationship marketing efforts. Research must identify measures of congruity of each interaction with relationship marketing, as well as the congruity among the several interactions that the customer has with multiple service providers. Assessing the nature and degree of the impact of relationship marketing on employees' performance in individual encounters would further theoretical development in both the services and relationship marketing literatures.

The service employee operates in multiple environments with varying aspirations and abilities in each. Employees may therefore bring their positive and negative experiences from other spheres to the work environment. It is in the interest of the service firm to accommodate the special needs of their employees so as to improve their work environment. Companies today are examining programs such as child care, employee fitness, flex time etc. as possible means for enhancing the employee's job satisfaction by easing the pressures in the employee's other, non-work environments. Research is needed to examine which type of benefit programs will result in the greatest employee satisfaction.