

ASSESSING CONSUMER SATISFACTION
WITH THE SERVICES MARKETING
MIX: AN INVESTIGATION
OF THE PROCESS OF
SERVICE ASSEMBLY
AND PRICE

By

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CHAPTER I

INTRODUCTION

Background

Researchers spent much of the 1980's differentiating services marketing literature from the traditional physical goods marketing literature. The services marketing field has now moved into distinct research areas (e.g. service quality, customer service, complaint behavior, services marketing mix, service strategies). Specifically, investigations into the determinants of service quality and the "gaps" between each of these dimensions have dominated the literature (Brown and Swartz, 1989; Parasuraman, Zeithaml and Berry, 1985, 1988; Swartz and Brown, 1989; Zeithaml, Parasuraman and Berry, 1985; Zeithaml, Berry and Parasuraman, 1988).

Recent calls for research have been made to move beyond this stream of service quality and "gap" investigations (Bitner, 1990; Brown and Swartz, 1989). Specifically, Bitner (1990) and Brown and Swartz (1989) have urged researchers to address the importance of process quality within a service encounter. Scholars such as Shostack (1987) and Lovelock (1983) have suggested one factor that

may affect levels of consumer satisfaction are various levels of service customization.

Most marketing researchers have simply adapted manufacturing process terms into services marketing (Lovelock, 1984; Shostack, 1987). Service customization usually refers to "some level of adaptation or tailoring" of the process of service assembly to the individual customer (Shostack, 1987, p. 35). The customization concept takes on a "made to order" connotation for both the service provider and the customer. Service standardization usually refers to "a nonvarying sequential process" with regard to the process of service assembly (Shostack, 1987, p. 35). In manufacturing standardization implies the mass production of similar goods.

The characteristics of services (e.g., less standardized and uniform and simultaneous production and consumption) indicate that service customers would derive more satisfaction from greater customization with regard to the process of service assembly since the service is being specifically performed for them (Berry, 1980; Lovelock, 1984; Shostack, 1977). According to Berry (1980) the simultaneous production and consumption nature of services provides the service firm with a greater opportunity to "customize" the service to meet the customers needs. Since the fundamental objective of marketing is to satisfy the customer the customization of an intangible-dominant service would provide greater customer satisfaction (Berry, 1980;

Lovelock, 1984; Shostack, 1977). However, according to Shostack (1987) marketing research offers little or no assistance in how to develop the process of service assembly to alter service customization in order to achieve customer satisfaction. Shostack (1987) posits that the process of service assembly is important because "process design can be used to 'engineer' services on a more scientific basis" (p. 34). Noting that the process of service assembly is often one of the key elements of a service Shostack (1987) believes marketers need to develop a better grasp on service "process design, process modification, and process control" (p. 34).

Efficiency is one of the key dimensions of the process of service assembly. Surprenant and Solomon (1987) state that efficiency is the goal of a standardized process of service assembly, however, it contradicts the purpose of a customized process of service assembly. Thus, the inconsistency between efficiency and customization presents the service provider with a dilemma. Firms must make the trade-off between offering either efficient or customized services in order to provide customer satisfaction.

Shostack (1987) also points out that pricing policies also affect the process of service assembly. The author cites the example of a firm that substitutes a limousine for a taxicab. The firm is providing the same transportation service, but is simply charging a higher price to tap a different market segment. Like the process of service

assembly, there is no empirical investigation of the relationship between various levels of service process customization and price.

The issue to resolve is the conflict between the idea presented by Shostack (1987) that customization is important within a service encounter and that price is critical and the concept presented by Surprenant and Solomon (1987) that efficiency contradicts customization and customer satisfaction. This research is exploratory in nature.

In order to conduct the research and deal with this issue two tasks must be performed. First, the process of service assembly construct has only been conceptually developed. There has been little empirically work and no scale development on the construct. Therefore, a scale must be developed to accurately assess the construct process of service assembly. The second task involves investigating the relationship between price and the degree of customization with regard to the process of service assembly that a customer receives. Research has found that a persons reaction may be influenced by the fact that price is or is not consistent with customization (Shostack, 1987).

The process of service assembly is the method and manner in which a service provider delivers a service. There is a reason to believe that the process-satisfaction relationship is not as simple as Shostack (1987) and Lovelock (1983) suggest. These scholars have also argued that consumers will expect a more customized process to be

more expensive. This raises the question what happens when consumer expectations are violated? In particular, what type of satisfaction evaluation does the consumer have about a service process that provides a great deal of personal attention and is time consuming at a low price?

Prior research has found that one consequence of violated expectations is that the customer will begin to view the situation in terms of a schema (Wiener, LaForge and Goolsby, 1990; Wright, 1986). Applied to the case of highly customized and low-priced service processes, potential schema are: "This deal is too good to be true", "This firm is trying to pull one over on me", "The firm really does not know what it is doing". These schema would be a consumers' way of explaining lots of unexpected attention and time involvement by the service provider in a service encounter. If the schema is invoked, then the consumer will focus more attention on the service process which will result in different levels of perceived satisfaction.

This research examines consumers' perceived satisfaction levels with the process of service assembly and price within a service encounter. A contingency framework using a match/mismatch classification is used to help explain price and the process of service assembly interaction. Gaining a better understanding of consumer expectations of the process of service assembly, and pricing within marketing encounters is a move towards greater

comprehension of the ultimate goal of all marketers-- providing satisfaction.

Purpose and Scope

The purpose of this exploratory research is to investigate whether consumers' level of perceived satisfaction is influenced by the process of service assembly and price within a services marketing encounter. An empirical investigation of the process of service assembly and price constructs will lead to insights about Shostack's (1987) ideas regarding complexity and divergence. This research will help managers design service delivery systems and provide insight into pricing strategies for specific types of services (customized or standardized). An added benefit of this research is it will increase the information researchers have about satisfaction with regard to the services marketing mix.

The concept of process has been widely studied in fields other than marketing (e.g. manufacturing, engineering, chemistry). The process research in these areas is theoretically strong, mathematically precise, and empirically tested. However, within the marketing discipline, the concept of process has only been conceptually developed within the field of services marketing with little empirical investigation (Booms and Bitner, 1981; Parasuraman, Zeithaml, and Berry, 1985; Shaw, 1990; Shostack 1987; Surprenant and Solomon, 1987; Zeithaml,

Berry, and Parasuraman, 1988). Specifically, according to Booms and Bitner (1981), the process of service assembly can be defined as "the actual procedures, mechanisms, and flow of activities through which the service is delivered." (p. 223).

There are several reasons for studying the process of service assembly within a service encounter. Two main reasons are: (1) consumers have perceptions and expectations about the process of service assembly that help them make satisfaction evaluations, and (2) the research on the process of service assembly has all been from a conceptual perspective and it has not been empirically studied.

Support for the first reason to study the process of service assembly can be found in Brown and Swartz's (1989) call for an investigation of process quality as it relates to consumers. This is important because consumer satisfaction is a direct result of meeting or exceeding consumers' expectations. The majority of research has focused on how expectations are linked to satisfaction (Cadotte, Woodruff, and Jenkins, 1987; Churchill and Surprenant, 1982; Liechty and Churchill, 1979; Swan and Trawick, 1981), quality (Brown and Swartz, 1989; Zeithaml, Parasuraman, and Berry, 1985), and performance (Anderson, 1973; Cardoza, 1965; Churchill and Surprenant, 1982; Olshavsky and Miller, 1972; and Olson and Dover, 1976).

Specific support for studying the process of service assembly can be found in the recent group of studies that analyzed the "gaps" in perceived service quality (Brown and Swartz, 1989; Swartz and Brown, 1989; Zeithaml, Berry, and Parasuraman, 1988). These studies investigated the gap between client expectations versus client experiences.

The second reason for studying the process of service assembly is the issues, models, and concepts regarding process are all conceptual in nature and have not been subjected to any empirical testing (Shostack, 1987). An empirical examination of the process of service assembly would be a contribution to the area of services marketing. One of the reasons the process of service assembly has not been empirically studied is that it is a difficult concept to operationalize.

The second independent variable under investigation in this study is price. From a managerial perspective it is important to examine price in a service encounter because increasing or decreasing the number and type of steps in the process of service assembly affects the costs of the service encounter (Shostack, 1987). Cost oriented pricing is the most common method of pricing services (Zeithaml, Parasuraman, and Berry, 1985). Because customization increases production costs and cost oriented pricing methods are used for services, pricing becomes a critical element for evaluating a service encounter.

Like other areas in marketing, price research has become specialized (Cox and Cox, 1990; Inman, et al., 1990; Walters, 1991). However, the central issue in pricing research continues to be price/quality relationships (Curry and Riesz, 1988; Zeithaml, 1988). Since the price/quality relationship debate has not been clearly settled it is important to investigate the interaction between the quality of the process of service assembly with price. Also, since process quality is essential in determining satisfaction levels in a service encounter it is also important to gauge the impact of price within the service encounter.

Finally, it is important to remember that price is an extrinsic cue and thus is not part of the actual physical service encounter and the process of service assembly. This becomes more apparent with a service because it is intangible, thereby reducing the number of cues for a consumer to evaluate. These considerations are the basis for studying price within a service encounter.

Further evidence of the need for research into the concepts of process of service assembly and price can be found in the services marketing literature (Bitner, 1990; Shostack, 1987; Solomon, et al., 1985; Surprenant and Solomon, 1987). A recent area of interest in services marketing is centered on the "three new P's" or the services marketing mix (Bitner, 1990; Booms and Bitner, 1981).

Along with the traditional four P's of marketing, the services marketing mix includes the following: physical

evidence ("atmospherics" or all the surrounding physical cues), participants (all individuals involved in the service encounter), process of service assembly (the actions, steps and procedures of the service activity) (Booms and Bitner, 1981). However, Bitner (1990) notes:

. . . the relationships between services marketing mix elements and expectations/perceived performance have not been tested empirically . . . there is also a need for in-depth research on each of the new marketing mix elements (p. 22).

Thus, further investigation is needed into not only the service marketing mix variables, specifically the process of service assembly, but consumers' expectations and perceptions of these constructs as they relate to a consumers' level of perceived satisfaction.

One of the problems associated with studying the process of service assembly is methodology. Since the process of service assembly has not been empirically studied within a marketing context there is no recommended methodology for assessing this construct. One way to solve this measurement issue is to run a pretest and factor analyze subject's responses to identify which elements of the construct domain are essential to the assessment of the process of service assembly.

A role-playing approach may provide an excellent way to manipulate the various levels of consumers' satisfaction with the process of service assembly. This approach encourages the subjects to place themselves in the actual service situation thereby eliciting more realistic

responses. Role-playing also increases internal validity (Cook and Campbell, 1979).

A second problem with studying the process of service assembly is how to conceptualize and operationalize the construct. It is almost impossible to perform a professional service process without a service provider participating in the process. Therefore, following Surprenant and Solomon (1987), this study will collapse Booms and Bitners (1981) participants construct into the process of service assembly construct. Surprenant and Solomon (1987) combined the process of service assembly and participants to form three types of personalization. The authors were studying predictability and personalization in a service encounter.

The majority of theoretical work on the process of service assembly has come from a managerial point of view. The marketing manager has always designed and implemented service processes for the consumer with little consideration of what the consumer expects. Thus, a new perspective on the concept of the process of service assembly might be elicited from the consumer. The consumers' viewpoint of the process of service assembly would aid marketing managers in their design of service processes. Shostack's (1987) work defines two different types of process: complexity and divergence. It would therefore be important to determine if consumers also view the process of service assembly in a service encounter in the same manner.

This research occurs in a services marketing encounter. There are two reasons for this decision. First, the most recent work involving expectation and satisfaction investigation and process conceptualization has taken place in the services marketing literature (Bitner, 1990; Shostack, 1987; Surprenant and Solomon, 1987). Second, existing research indicates that satisfaction with a physical good is based on product performance (Churchill and Surprenant, 1982), whereas satisfaction regarding a service may be more closely linked to the process of service assembly.

Statement of Research Question

A review of the services marketing literature (Chapter Two) provides the foundation and support for this research idea. The following research question will be used to guide the study:

How do various levels of the process of service assembly and price affect the consumers' perceived level of satisfaction?

This research is an empirical study that attempts to examine the relationship between the process of service assembly and price. These two elements have not been investigated together in a service encounter. Satisfaction research has addressed product performance, but not the process of service assembly.

Marketing Contributions

Professional service marketers are facing increasing levels of competition and more sophisticated consumers. Therefore, research into the areas of the process of service assembly and price will ultimately lead to increased consumer satisfaction. At a broad level, this topic is pertinent because satisfaction is a function of expectations (Oliver, 1980). More specifically, the consumers' assessment of the process of service assembly in a service encounter is his expectation.

The existing work on the process of service assembly is conceptual and theoretical in nature. Thus, empirical work on process of service assembly will help advance the knowledge structure about the concepts. This work is an attempt to examine some of the conceptual ideas regarding the process of service assembly that have been put forth by other researchers (Bitner, 1990; Booms and Bitner, 1981; Shostack 1987). This research will determine if consumers envision specific services having the same complexity and divergence as managers.

This work also answers Bitner's (1990) call for research on the service's marketing mix. Therefore, this study adds to the available information about the services marketing mix. Understanding the relevance of the process of service assembly is critical to the success of most service operations.

Bitner's (1990) work investigated participants and physical evidence. This piece of research contributes to the services marketing literature by empirically studying the process of service assembly, a construct that has only been conceptually developed up to this point in time.

This research will also assist managers in their pricing policies regarding services offered. Because of the increasing customization and standardization of services it will be important for managers to learn consumers' price expectations about these types of services.

Finally, this work will aid practitioners in their design of service delivery systems. By obtaining consumers' perceptions of perceived satisfaction levels about specific processes of service assembly and price service firms will be able to design more efficient services.

Limitations of the Research

There are limitations to this research. First, since the process of service assembly has not been empirically investigated this portion of the research will be exploratory in nature. As is the case with exploratory research, there is a high degree of uncertainty. That uncertainty will revolve around the best way to investigate and operationalize the construct.

The second limitation of this study is due to the choice of research methodology. Following in the footsteps of Bitner (1990) and Surprenant and Solomon (1987), who also

investigated service encounters, this study will use a role-playing technique. This approach trades off external validity for internal and statistical conclusion validity by reducing "noise" and increasing control over the independent variable manipulations (Cook and Campbell, 1979).

The final limitation of this study is the scope. While Bitner (1990) called for an investigation of all the service marketing mix variables this particular study addresses one of the three elements of the services marketing mix. Physical evidence was not included in the study for both conceptual and methodological reasons. Conceptually, physical evidence has mainly been studied in the area of retailing under the titles of atmospherics and image. Methodologically, the construct would be extremely difficult to manipulate in a field study. Laboratory and role-playing techniques also pose similar problems.

Organization of the Study

This dissertation is divided into six chapters. Chapter One provided a brief explanation of the study. Specifically, it provides the theoretical support for the research and introduces the research question that will guide the work.

Chapter Two reviews the status of the process of service assembly, price, satisfaction, and the services marketing literature. Also included in the literature review is a discussion of the various models of process from

both a managerial and theoretical perspective and contingency frameworks. This discussion will help identify pragmatic uses of this research.

Chapter Three presents the methodology and research design. Role-playing will be used for this piece of research. Chapter Four discusses the procedure and criteria used for service selection. It also discusses the scale and scenario development. Chapter Five will report the findings of the study as they relate to the concepts of the process of service assembly and price. Finally, Chapter Six presents the conclusion, implications, and future research streams based on the findings.

CHAPTER II

LITERATURE REVIEW

Introduction

In order to investigate the relationship between the process of service assembly and price within a contingency framework a thorough analysis of the literature must be conducted. The services marketing literature focused considerable effort on differentiating services from physical goods during the past decade. It is now generally accepted that services have a number of distinct characteristics: intangibility, perishability, simultaneous production and consumption, no inventories, and heterogeneity (Berry, 1980; Lovelock, 1981; Shostack, 1977; Zeithaml, Parasuraman and Berry, 1985).

Recent services marketing literature has moved to more specific research topics: service encounters (Bitner, 1990; Surprenant and Solomon, 1987); blueprinting (Shostack, 1987; 1984a, 1984b); services strategies (Lovelock, 1983; Zeithaml, Parasuraman, and Berry, 1985); price bundling of services (Guiltinan, 1987); needs (Gillett, 1986); satisfaction (Crosby and Cowles, 1986; Fisk, 1981; Oliver, 1980, 1981; Westbrook, 1981); customer service (Christopher, 1983; Cunningham and Roberts, 1974; Garfein, 1987; Lovelock,

1985; Kyj, 1987; Tucker, 1983); and service quality (Brown and Swartz, 1989; Carman, 1990; Parasuraman, Zeithaml and Berry, 1985, 1988; Swartz and Brown, 1989; Zeithaml, Parasuraman, and Berry, 1985, 1988).

The most recent area of interest within the services literature is the services marketing mix (Bitner, 1990; Booms and Bitner, 1981). The only cues available for consumers to evaluate a service are the firm's physical facilities, its employees and their actions, and the price of the service (Shostack, 1977). Booms and Bitner (1981) developed a new classification for these items called the services marketing mix. The services marketing mix is the traditional four P's of marketing plus the three "new P's," which are: Participants, Physical Evidence, and Process of Service Assembly. The importance of the last three items is essential to the growth of the services marketing literature and to the management of service operations (Bitner, 1990).

For this particular piece of research the literature review will focus on the process of service assembly, price, satisfaction, and contingency frameworks. This research examines customers' levels of satisfaction when presented an unexpected occurrence within a service encounter which necessitates a review of contingency frameworks.

This study is treating the process of service assembly and price as the independent variables. Satisfaction is the dependent variable in the study. These areas will be examined for definitions, conceptual and theoretical work,

and empirical results. The first section of this literature review examines the process construct.

The Process Construct

In a review of process characteristics, Shostack (1987) notes that regardless of the discipline there are three underlying factors that relate to process:

- (1) Each discipline has a way of dismantling any process into specific steps and actions;
- (2) Each discipline has methods for dealing with variation in processes for which there may exist multiple outcomes due to 'effects of judgement, chance, choice on a sequence' (Shostack 1987, p. 35);
- (3) Each discipline has a system of quality checks to help detect deviations from the "norms" within the system.

All of these same features appear in the process of service assembly.

Besides the three factors that characterize process, there are three types of processes that can occur in both a manufacturing and service environment: 1) line operations, 2) job-shop operations, and 3) intermittent operations (Sasser, Olson, and Wyckoff, 1978). According to Levitt (1972), seldom is a service (process) strictly a pure job-shop or line operation.

A line operation follows a set of prescribed steps or activities to produce a good or service. In a true line process, none of the steps or activities may be eliminated, thus making the operation fairly inflexible. When developing a line process, marketers must pay a great deal

of attention to the physical layout of the service to avoid causing uncertainty with customers. Interruption of the line process affects the effectiveness and efficiency of the operation. A classic example of a line type service operation is the cafeteria-style restaurant.

The second type of process is the job shop. Generally, a pure job shop operation delivers a customized good or service. Each customer gets exactly what he desires. This type of process eliminates the chance to establish a standardized set of activities, like the line operation. A typical example of a job shop service would be a medical specialist (e.g., Cardiologist, Neurosurgeon).

The final type of process is the intermittent operation. An intermittent operation is a "project process" (Sasser, Olsen, and Wyckoff, 1978). Operations management techniques such as PERT (Program Evaluation and Review Technique) and CPM (Critical Path Method) are commonly used with intermittent process projects. Examples of intermittent service processes are the construction of new service facilities, the introduction of a new service, or the installation of a management information system (Sasser, Olsen, and Wyckoff, 1978).

Service Quality and Process

The concept of process has been conceptually developed in the field of services marketing, but little empirical work has been completed on the topic. Within the services

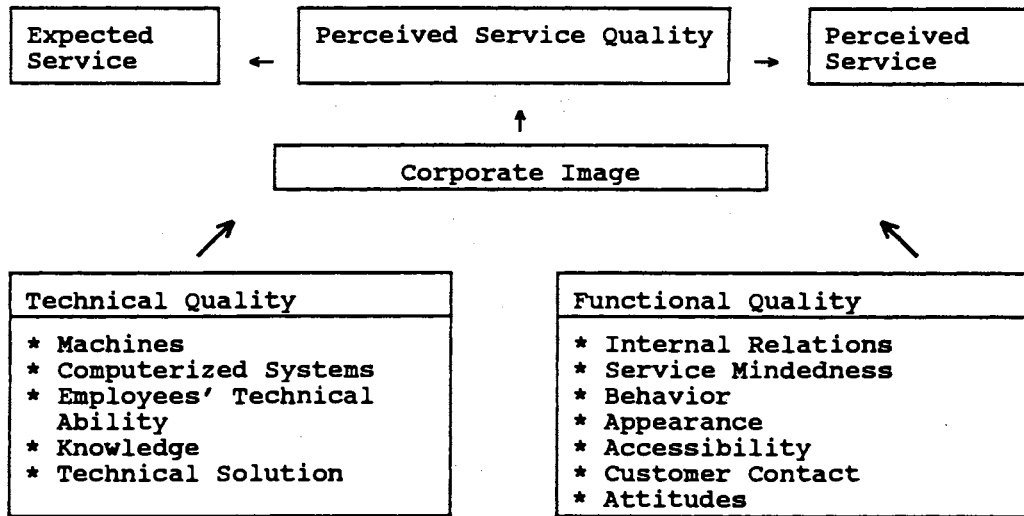
literature, the services quality research has usually included process. The inclusion of process within the quality literature is predicated on the fact that "consumers are usually deeply involved with the production process and can be considered part of the organization" (Lehtinen, 1985, p. 5). Table 1 summarizes the dimensions of service quality and process within the literature. Lehtinen and Lehtinen (1982) take a three dimensional view of service quality: corporate quality, physical quality, and interactive quality. One of those dimensions, interactive quality, is defined as the two way flows that occur between the service provider and the consumer. Gronroos (1983) states that there are two levels of service quality. Functional quality relates to what is delivered. Berry (1985) defines process quality as how the service is performed.

Gronroos (1983) was the first researcher to tie the concepts of expectations and perceptions to service quality (see Figure 1). He points out that consumers do not "perceive the results of the service production process only," but they also "perceive how the end result is transformed during the buyer-seller interactions" (Gronroos 1983, p. 42).

TABLE 1
DIMENSIONS OF SERVICE QUALITY

Description	Lehtinen Lehtinen	Gronroos (1983)	Berry, et al. (1985)
What (evaluated after performance)	Physical quality	Technical quality	Outcome quality
How (evaluated during performance)	Interactive quality	Functional quality	Process quality

Source: Swartz, T. A. and Stephen, W. B. (1989).
 "Consumer and Provider Expectations and
 Experiences in Evaluating Professional Service
 Quality." Journal of the Academy of Marketing
 Science, 17 (Spring), p. 190.



Source: Gronroos, C. (1983). Strategic Management and Marketing in the Service Sector. Cambridge, MA: Marketing Science Institute.

Figure 1. Perceived Services Quality Model

Kelley, Donnelly, and Skinner (1990) expanded upon Gronroos' concepts about technical and functional quality. By noting that consumers are often part of the production and delivery process, the authors developed a model that considers the consumers' participatory nature. Thus, Kelley, Donnelly, and Skinner (1990) added customer technical quality and customer functional quality to the model.

Customer technical quality is what portion of the service the consumer supplies to the service encounter. Examples of customer technical quality can range from what labor the consumer provides during the encounter to what information he may supply to the service provider. Customer functional quality is concerned with how the consumer behaves during the service process. Examples of customer functional quality would include interpersonal aspects, such as "friendliness and respect," that the customer provides during the encounter (Kelly, Donnelly, and Skinner, 1990, p. 317).

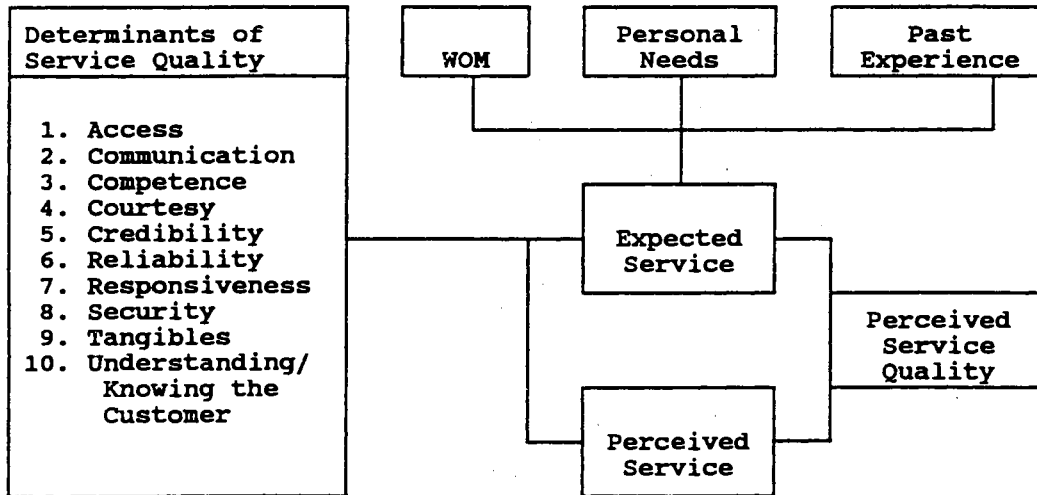
One of the major pieces of research on service quality focused on this question: "Do discrepancies exist between the perceptions of consumers and service marketers?" (Parasuraman, Zeithaml, and Berry, 1985). In order to answer this question, the authors had to build a model of service quality and ascertain the determinants of perceived service quality. After the construction of the model

(Figure 2), the authors noted the importance of investigating service quality expectations.

Parasuraman, Zeithaml, and Berry (1985) focused on the broader issue of service quality as opposed to process. However, when they were constructing their model two of the issues they focused on were: (1) "Service quality perceptions result from a comparison of consumer expectations and actual service performance," and (2) "Quality evaluations are not made solely on the outcome of a service, they also involve evaluations of the process of service assembly" (emphasis added, Parasuraman, Zeithaml, and Berry, 1985, p. 42). Figure 3 shows their version of the service quality model.

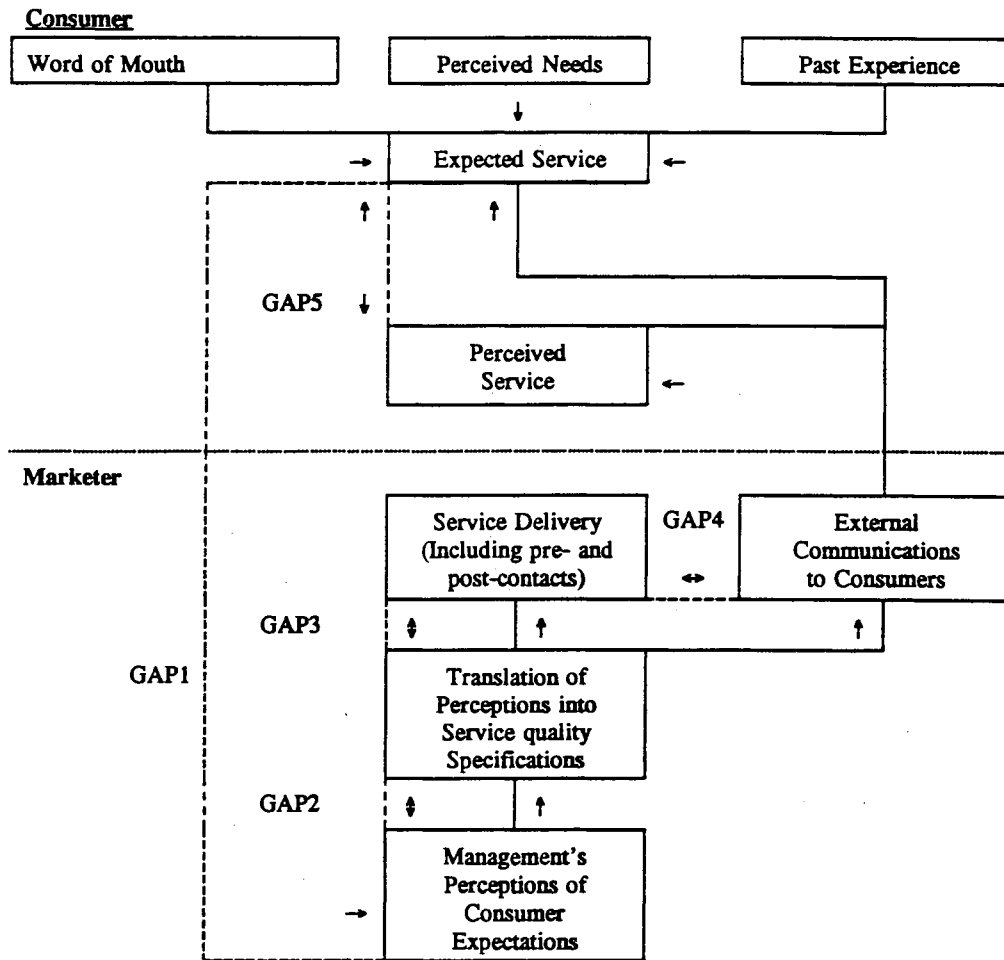
The Service Quality "GAP" Studies

This model of service quality resulted in several studies that revolved around the "GAPS" that are presented. One of the first pieces of research was an examination of the four gaps that occur on the marketers side of the model. (Zeithaml, Berry, and Parasuraman, 1988). The exploratory study found the cause of these gaps is due to "(1) communication and control processes implemented in service organizations to manage employees and (2) consequences of these processes, such as role clarity and role conflict of contact personnel" (p. 35). They then developed a second conceptual model to support their exploratory findings (Figure 4).



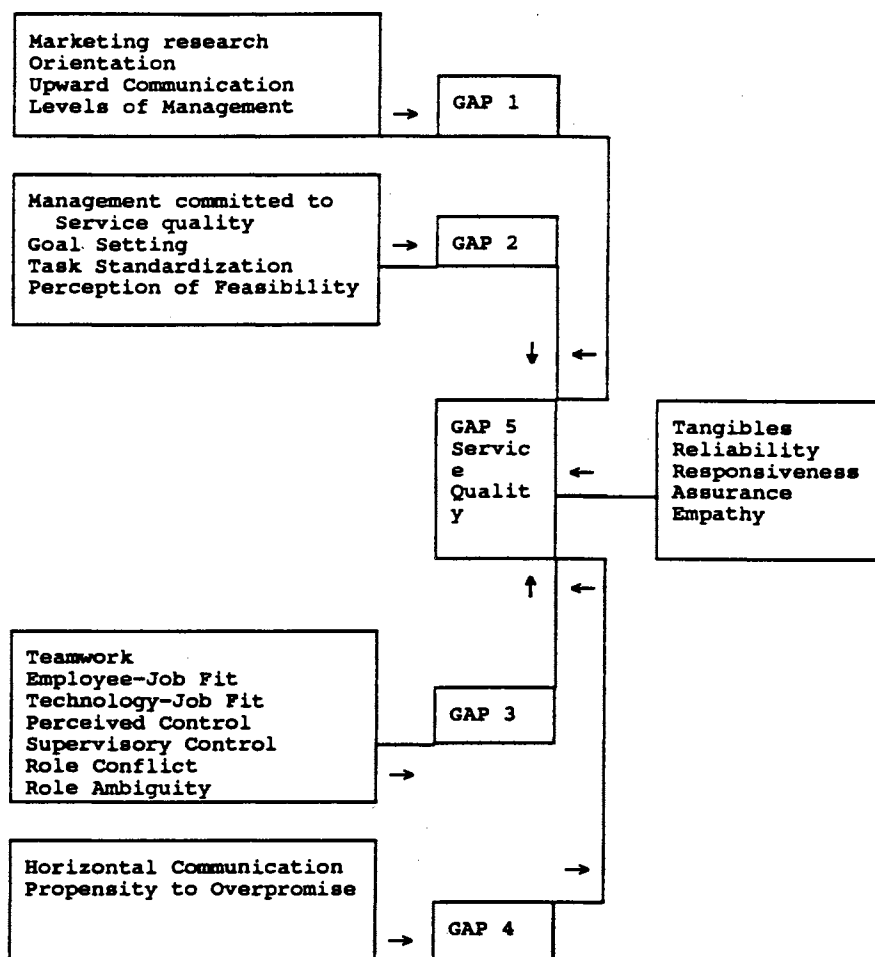
Source: Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1985). "A Conceptual Model of Service Quality and Implications for Future Research." Journal of Marketing, (Fall), p. 48.

Figure 2. Determinants of Perceived Service Quality



Source: Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1985). "A Conceptual Model of Service Quality and Implications for Future Research." Journal of Marketing, (Fall), p. 44.

Figure 3. Service Quality Model



Source: Parasuraman, A., Zeithaml, V. A., and Berry, L. L. (1988). "Communication and Control Processes in the Delivery of Service Quality." Journal of Marketing, 52 (April), p. 46.

Figure 4. Extended Model of Service Quality

A second series of "GAP" studies was conducted by Brown and Swartz (1989) and Swartz and Brown (1989), which focused on service quality and expectations. The first study by Brown and Swartz (1989) found there is a "significant relationship between perceptual gaps (between professional and client) and the evaluation of professional services" (p. 96). If such a gap exists between client and professional regarding the evaluation of the service, then it could be proposed that a gap exists between client and professional regarding the process of service assembly.

In fact, one of the questions Brown and Swartz recommend for future research investigation is: "Does process quality have a greater role than outcome quality in the overall professional service evaluation?" (p. 97). However, before this question can be answered, one must determine if consumers view process in a different manner than the professional service provider.

The second study by Swartz and Brown (1989) examined consumer and service provider expectations and experiences with regard to service quality. Analytically, the tested model was:

$$\begin{aligned} O_p &= f(X, E_c) \\ E_c &= f(P_s, O_s) \\ X &= f(E_p, C) \end{aligned}$$

where:

$$\begin{aligned} O_p &= \text{perception of service quality} \\ X &= \text{expectations} \\ E_c &= \text{experiences} \end{aligned}$$

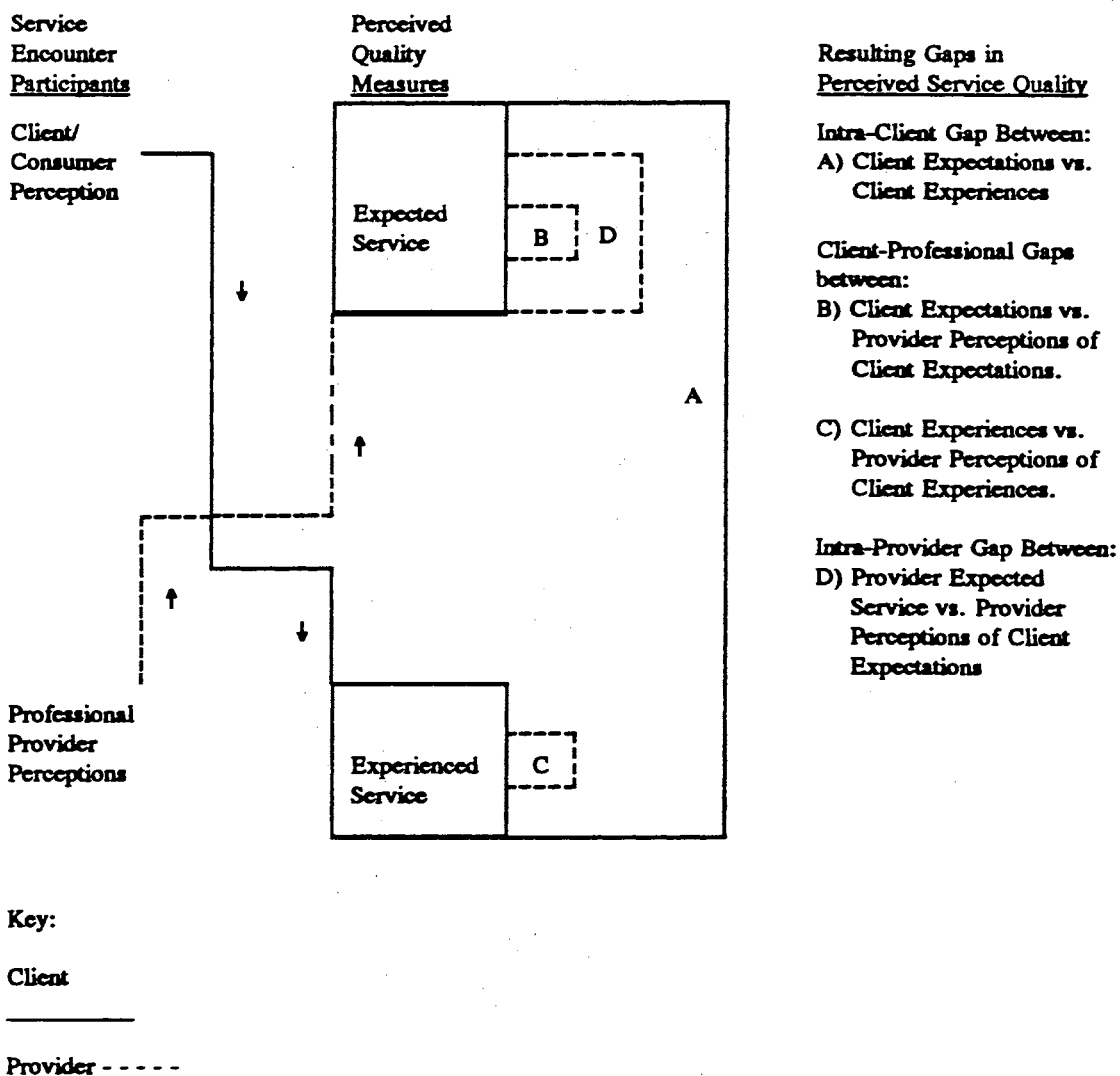
Ep = past experiences
and:
Ps = service process
Os = service outcome
C = communications

This was the first "GAP" study that specifically looked at service process. However, the three variables (professional competence, professional credibility, and communication) that Swartz and Brown (1989) examined with regard to professional service provider and consumers perceptions were related more towards service quality than process. Their findings helped them construct a model of professional service quality (Figure 5).

These studies serve as a useful foundation for this research. By focusing on the concept of service quality, they helped bring to light the importance of process within a service encounter. What little research has been conducted on process within the services arena has used Zeithaml, Parasuraman, and Berry's (1985) work on service quality and the resulting gaps found between client and provider. The next portion of the literature review discusses the process of service assembly.

The Process of Service Assembly

The preceding sections have discussed the general ideas, concepts, and features surrounding the construct process. The concepts of the service delivery system and service quality have also been reviewed. This section will



Source: Swartz, T. A. and Brown, S. W. (1989). "Consumer and Provider Expectations and Experiences in Evaluating Professional Service Quality." Journal of the Academy of Marketing Science, 17(2), p. 193).

Figure 5. Conceptual Model Evaluating Professional Service Quality

review the element of the services marketing mix on which this study is focusing: the process of service assembly.

Booms and Bitner (1981) were the first to use this concept and definition. They coined the term process of service assembly and defined it as: "the actual procedures, mechanisms, and flow of activities through which the service is delivered" (p. 47). The authors argued that process of service assembly, along with participants and physical evidence, influence consumer behavior: therefore, they are part of the marketing mix for services.

In an analysis of the customer-firm communication component of the services marketing mix, Booms and Nyquist (1981) made the argument that "unlike the production of goods, the assembly of services cannot be separated from purchase, use, and evaluation steps" (p. 173). Booms and Nyquist (1981) also stated: "Services are acts or performances, not things alone. Thus the service assembly process is simultaneously the service. The process is also the product" (p. 173). These statements help support the need to study the process of service assembly. A summary of Booms and Nyquist's (1981) concepts regarding the process of service assembly appear in Table 2.

Except for Surprenant and Solomon's (1987) study of personalization using various participant processes, there has been no empirical research on the process of service assembly. Bitner (1990) conducted research on the services

TABLE 2
SERVICES VS. GOODS

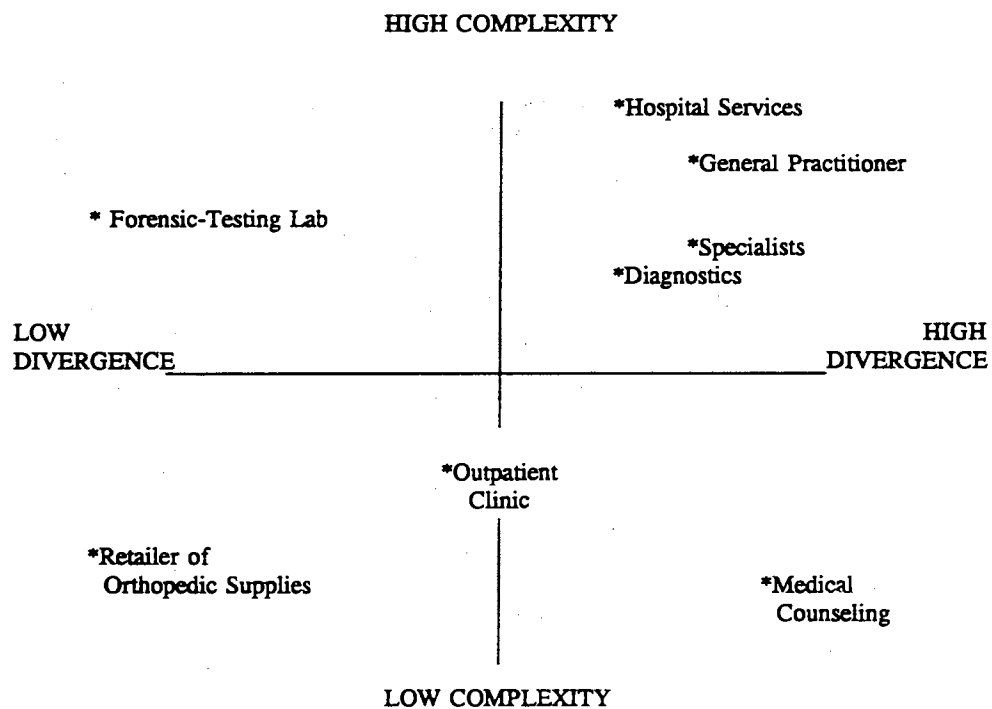
Concept	Services	Goods
Production /Process of service Assembly	Customer is directly involved in and contributes to the assembly process.	No customer involvement in the production process
	All or part of the assembly process is visible to the customer.	Production is invisible to the customer.
	Assembly cannot be easily standardized or controlled.	Production can be standardized and controlled.
	Assembly, purchase and use occur simultaneously and often in the same geographic location.	Production is separated in time and place from purchase and use.
Purchase	Purchase involves the exchange of dollars and/or value in the form of time, energy, information, and expertise for an intangible product.	Purchase involves the exchange of dollars for physical goods.
	Purchase, assembly and use occur simultaneously.	Purchase is separated in time from production and use.
Use	The firm is integrated into the use process and may control this process totally.	The customer controls the use of the product, and the firm is totally outside this process.
	The service is a unique experience and may not be used or resold to others.	The product may be used by several people and/or resold.
	Use, assembly, and purchase occur simultaneously.	Use is separated in time from production and purchase
Evaluation	Evaluation involves the matching of expectations with the actual experience and is partially within the control of the firm.	Evaluation involves the matching of expectations with product performance and is out of the control of the firm.
	Partial evaluation takes place simultaneously with assembly, purchase and use.	Evaluation is separated in time from production, purchase, and use.

Source: Booms, B. H. and Nyquist, J. (1981). "Analyzing the Customer/Firm Communication Component of the Services Marketing Mix." in The Marketing of Services, James H. Donnelly and William R. George (Eds). Chicago, IL: American Marketing Association.

marketing mix, but only investigated two of the variables: participants and physical evidence. As previously mentioned, one of the problems associated with studying the process of service assembly is how does a researcher define this construct.

Shostack (1987) was the first marketer to handle process as a separate issue from service quality. This work offers a way to analyze the process of service assembly. Following up on Sasser, Olsen, and Wyckoff's (1978) work on designing service delivery systems with flowcharts, Shostack (1987) came up with a design system to which consumers can react. Specifically, Shostack (1987) stated there are two ways in which a marketer can classify service processes: complexity and divergence. Complexity is defined as the steps and order of performance that make up a service process. A service's performance process (complexity) is analyzed by the number and intricacy of its steps (Shostack 1987). Divergence is defined as the "executorial latitude or variability" of the service process (p. 35). A service's performance process (divergence) is analyzed by its "degree of freedom" (Shostack, 1987, p. 35). Figure 6 shows Shostack's view of specific services and their relative positions based on structural analysis.

A technique called "blueprinting" is one method of analyzing a service process and its inherent complexity and divergence (Shostack 1984). A blueprint for process design



Source: Shostack, G. L. (1987). "Service Positioning Through Structural Change." Journal of Marketing, 51 (January), p. 40.

Figure 6. High Complexity

purposes should document all process steps and points of divergence in a specific service (Shostack, 1987).

Process considerations are critical to the design of a service delivery system. The conflicting goals of efficiency and personalization were studied by Surprenant and Solomon (1987) with regard to designing service delivery systems. Customers want the service process to be as efficient as possible, yet they also desire personal service.

The first empirical study of service process was undertaken by Surprenant and Solomon (1987). They developed three forms of personalization (process) strategies: option personalization, programmed personalization, and customized personalization. The latter two concepts deal with the process of a service encounter. The first concept pertains to the outcome of a service encounter. The results showed that programmed personalization (e.g., small talk) exerted strong positive effects on the evaluation of the service, employee, and satisfaction. It was also found that customized personalization had positive effects on the evaluations of the same three variables. Thus, this piece of research had a greater focus on participants within the process of service assembly than the actual steps and procedures.

In order to develop a scale to measure the process of service assembly it will be necessary to determine the underlying elements of this construct. A myriad of items

are related to construct. For example, the number of options available to a consumer can affect the process of service assembly. Generally, the more options available to a consumer the greater the cost to produce and deliver the service. Table 3 shows the various concepts that are related to the process of service assembly and the researcher who wrote about the idea. These elements will be used in the pretest to assess the construct.

The preceding section has shown that Shostack (1987) offers a way to classify the process of service assembly. Broader work on the characteristics of process, the service delivery system, and service quality underscore the importance of empirically studying the process of service assembly. The next section reviews the literature on price in the area of services marketing.

Price

Curry and Riesz (1988) made the following comment on price research:

The role of price has been studied from many different viewpoints in classical economic (price as a budget constraint), neoclassical (price as a demand/supply equilibrium), and psychological (price as an information cue) contexts (p. 36).

A complete literature review on each of these areas would be impossible. This review will focus on price research involving services marketing in the last area, psychological. Like other areas in marketing, pricing

TABLE 3

CONSTRUCT DOMAIN FOR THE PROCESS OF SERVICE ASSEMBLY

<u>Element</u>	<u>Researcher</u>
Choice of Options	Kelley et al 1990 Levitt 1972 Lovelock 1981, 1983, 1985 Sasser, Olsen, Wyckoff 1978 Shostack 1984a, 1987 Surprenant & Solomon 1987
Procedures/Actions	Bell 1981 Berry 1985 Booms & Bitner 1981 Booms and Nyquist 1981 Levitt 1972 Lovelock 1981, 1983, 1985 Marshall 1975 Mills & Moberg 1982 Sasser et al 1978 Shostack 1987
Behavior	Andrews & Withey 1976 Bitner 1990 Gronroos 1983 Surprenant & Solomon 1987
Participants	Bitner 1990 Booms & Nyquist 1981 Crosby & Crowles 1986 Gillett 1986 Kelley, et al 1990 Surprenant & Solomon 1987
Service Delivery Systems (Includes Time & Visibility)	Bitner 1990 Bitner et al 1990 Garfein 1987 Gronroos 1983 Kelley et al 1990 Lovelock 1985 Sasser et al 1978 Schneider 1980 Shostack 1987 Solomon et al 1985 Surprenant & Solomon 1987

TABLE 3 (Continued)

Quality	Brown & Swartz 1989 Carman 1990 Parasuraman et al 1985, 1988 Swartz & Brown 1989 Zeithaml et al 1985, 1988
Price	Davis et al 1979 Guiltinan 1987 Parasuraman et al 1985 Shostack 1987 Zeithaml 1988 Zeithaml & Grahm 1981
Skills	Lovelock 1981, 1983, 1985 Marshall 1975 Shostack 1987
Demand	Lovelock 1983, 1985 Marshall 1975 Sasser et al 1978

research has become specialized. Examples of recent pricing studies in marketing are: retail price promotions (Cox and Cox, 1990; Walters, 1991; Walters and MacKenzie, 1988), formation of expected future prices (Jacobson and Obermiller, 1990), promotions and price cuts (Inman, McAlister, and Hover, 1990), price seeking and price aversion (Tellis and Gaeth, 1990), price knowledge and search (Dickson and Sawyer, 1990), and price/quality relationships (Curry and Riesz, 1988; Zeithaml, 1988).

Price/Quality Relationships

The central research issue in marketing continues to be price/quality relationships. Zeithaml (1988) stated:

Through consumers perceptions of price, quality, and value are considered pivotal determinants of shopping behavior and product choice, research on these concepts and their linkages has provided few conclusive findings (p. 2).

In fact, she notes that over the last 30 years there have been 90 studies that tested the price/quality relationship (Zeithaml, 1988).

Studies indicate that consumers use price as a quality indicator more with some product categories than others. Zeithaml (1988) notes in her review that the most positive links between price and quality have been found with durable goods, as opposed to nondurable products or consumables.

Price and Services Marketing Research

Researchers in the area of services marketing have devoted little effort to studying price and its relationship with services. There has been only one major conceptual work and few empirical studies involving price (Guiltinan, 1987; Parasuraman, Zeithaml and Berry, 1985; Zeithaml and Graham, 1983).

Guiltinan (1987) studied the price bundling of services. Bundling is "the practice of marketing two or more products and/or services in a single package" (Guiltinan, 1987, p. 74). There are two reasons for a firm to consider price bundling. First, most service businesses have a high ratio of fixed to variable costs and large amounts of sharing equipment and personnel to perform multiple tasks (Guiltinan, 1987). Second, "most services offered by businesses are interdependent in terms of demand" (Guiltinan, 1987, p. 79). The remainder of the article defends the economic rationale for price bundling and develops a normative model. There was no empirical investigation of the model.

Parasuraman, Zeithaml, and Berry (1985) developed a model of service quality that did not include price as an essential attribute. Zeithaml, Parasuraman, and Berry (1985) found that firms use cost-oriented pricing strategies more than demand or competition oriented strategies.

Neither of these studies examine how consumers viewed their prices with regards to the service process itself.

Research has indicated that consumers have a difficult time correctly recalling the price paid for goods (Dickson and Sawyer, 1985). Zeithaml and Graham (1983) checked consumers accuracy of reported reference prices for professional services. The results indicated that consumers were uncertain about their knowledge of prices for dental, medical, and legal services. One explanation for this finding was offered by Zeithaml (1982) who stated that price information for professional services is limited or inaccessible especially prior to a purchase.

There has not been an empirical study that has examined various price levels with types of service processes. Shostack (1987) suggests that highly complex and divergent service assembly processes increase production costs. An increase in costs often causes a firm to raise its price. Such a pricing strategy may allow competitors who specialize in one service to gain a strategic advantage. However, if a firm reduces its divergence (e.g., become standardized) its costs are going to fall and the firm may lower the price charged for the service.

Consumers will have price expectations about customized and standardized services. These expectations are the basis for satisfaction evaluations. One of items that this research will address is what happens to the consumers

satisfaction evaluation when the price charged is not what is expected by the consumer.

Price, to a consumer, is an extrinsic cue. It is associated with a product, but is not part of the physical product (Zeithaml, 1988). This becomes more apparent with a service which is intangible. Price becomes important when making a satisfaction evaluation of a service because there are so few attributes for a consumer to judge. With a service, evaluation judgments revolve around the process of service assembly, participants, and physical evidence as opposed to product performance and attributes. After these items have been analyzed all a consumer has left to evaluate is price. There is need for additional price research with regard to services marketing.

The aim of this brief review on pricing is to show that there is a shortage of pricing research in the area of services marketing and to support the use of the construct in the study. The next section of this chapter reviews the literature on satisfaction.

Satisfaction

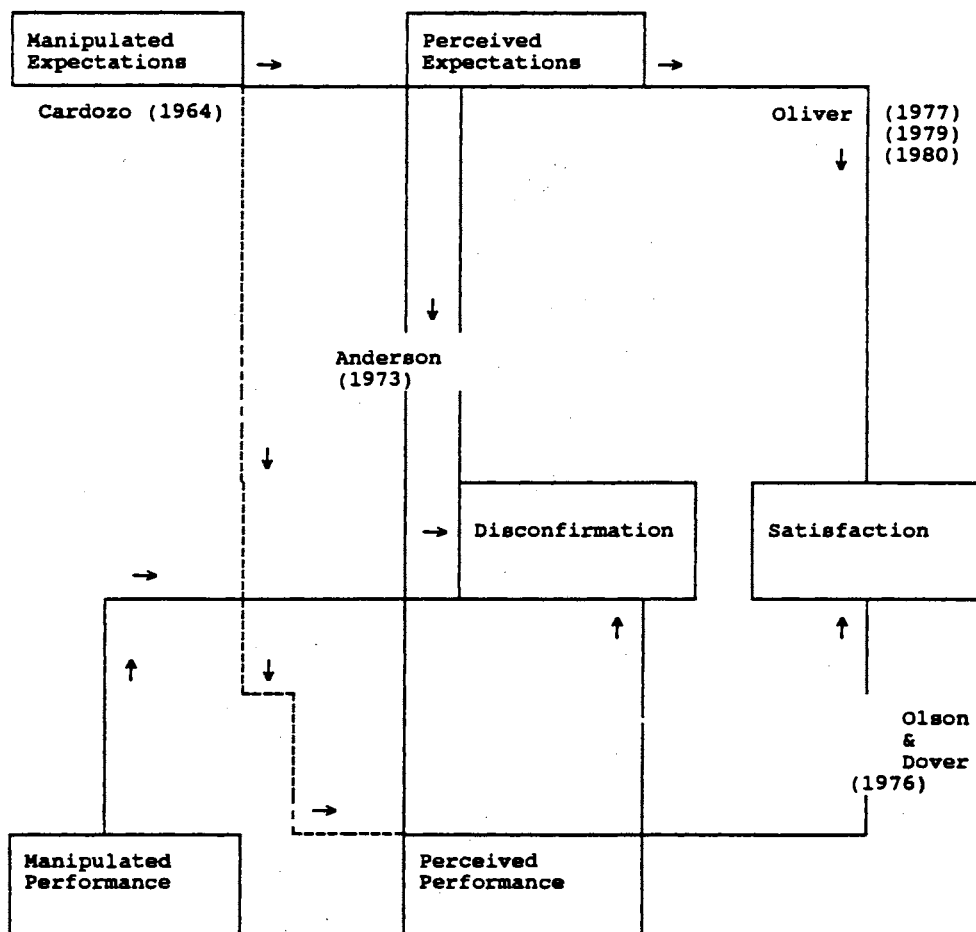
One of the critical concerns of this research is to investigate how the constructs of the process of service assembly and participants affect satisfaction within a service encounter. Another concern of service marketers is how to correctly analyze satisfaction. This section of the manuscript will define satisfaction, review the research on

satisfaction formation, and investigate the disconfirmation paradigm. There is a volume of marketing research dealing with the construct of satisfaction. This review will only include the area of satisfaction research that deals directly with services marketing.

Satisfaction Defined

The concept of expectations has been intertwined with the concept of satisfaction since marketers began researching the topic (see Churchill and Surprenant, 1982; Oliver, 1980, 1981; and Tse and Wilson, 1988 for reviews). However, most researchers agree that the two concepts are distinct. In the latest review of the literature, Tse and Wilson (1988) offer this definition of satisfaction: "the consumers' response to the evaluation of the perceived discrepancy between prior expectations (or some other norms of performance) and the actual performance of the product as perceived after its consumption" (p. 204).

Expectations are a sub-component of satisfaction (see Figure 7). Oliver (1981) defines expectations as "consumer defined probabilities of the occurrence of positive or negative events if the consumer engages in some behavior" (p. 33). Expectations have two components: (1) a probability of occurrence and, (2) an evaluation of that occurrence. According to Churchill and Surprenant (1982) expectations reflect "anticipated performances" (p. 432).



Source: Churchill, G. A. and Surprenant, C. F. (1982).
 "An Investigation into the Determinants of
 Customer Satisfaction." Journal of Marketing
 Research, 19 (November), p. 492.

Figure 7. Linkages Tested in Prior Research

Sources of Expectation Formation

The desired end result of a purchase, whether it be a good or service, is a satisfactory outcome. The basis for expectation formation about a product could be advertising, word-of-mouth, or accumulated usage experience (Bettman 1979). Unfortunately, according to Bettman (1979):

Consumer research on the impacts of out-comes has typically focused on summary measures of these effects, rather than on the details of the underlying processes (p. 275).

This criticism can be applied to services marketing research regarding satisfaction formation. Except for the Zeithaml, Parasuraman, and Berry (1985), Zeithaml, Berry and Parasuraman (1988) and Parasuraman, Zeithaml, and Berry (1985) studies, there has not been any empirical investigation into the process of these sources of expectation and satisfaction formation. Parasuraman, Zeithaml, and Berry (1985) followed up this exploratory study by developing a model of service quality. In the model, expectations about a service were derived from word-of-mouth, personal needs, and past experience. In fact, the study only stated that service firms attempt to encourage word-of-mouth advertising. The findings did not mention word-of-mouth as a specific source of expectation formation. Also, satisfaction is the result of a single service encounter while service quality is the result of multiple interactions (Parasuraman, Zeithaml, and Berry, 1988).

Respondent firms in the study also gave off mixed signals regarding the importance of the consumer orientation. Firms stated that they attempted to "coordinate activities to ensure customer satisfaction" (p. 41). Yet, the firms also showed little sensitivity to customer needs by balking at performing the service over if the customer was dissatisfied. Thus, there seems to be little focus on expectation formation.

In the retail field, expectation and satisfaction formation has been included with the "retail image" literature. The research uncovered consumers' expectations about the stores image, not just general expectations about products or services (Oliver, 1981). Expectation formation is categorized in the following manner by Oliver (1981):

Expectations	Shopper' Anticipation
"High"	Desirable events will occur Undesirable events will not occur
"Low"	Desirable events will not occur Undesirable events will occur

(p. 34).

Satisfaction Measurement

As previously stated, the concept of expectation is a subcomponent of satisfaction. Thus, in order to measure and evaluate satisfaction it is necessary to also evaluate expectations. A brief review of some of the expectations research and the topics studied appears in Table 4. The research has focused on three areas of interest: (1) expectations which salespeople have about their jobs and/or

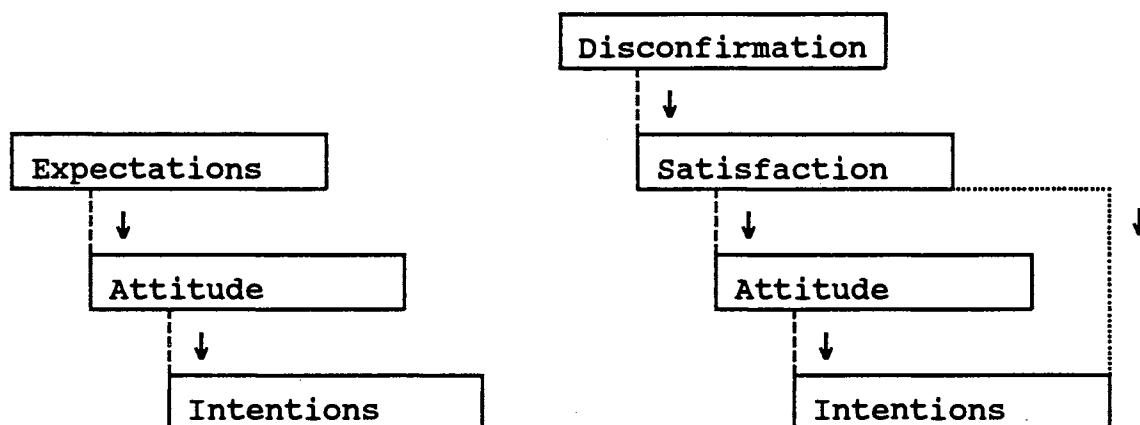
TABLE 4
SATISFACTION/EXPECTATION STUDIES

Topic	Researcher
Salesforce Expectations	Sujan, Bettman, and Sujan (1986) Teas & McElroy (1986) Teas (1981)
Products	Churchill & Surprenant (1982) Westbrook (1980) Olson & Dover (19973) Anderson (1973) Olshavsky & Miller (1972)
Services	Bitner (1990) Brown & Swartz (1989) Swartz & Brown (1989) Cadoote, Woodruff, & Jenkins (1987) Bearden & Teel (1983) Swan & Trawick (1981) Oliver (1981, 1980) Westbrook (1981, 1980)

clients, (2) expectations which consumers have about products (both durable and non-durable), (3) expectations which consumers have about services. While the first two streams of research are important, the major focus of this review will be on the third area. One of the first satisfaction studies to specifically include expectation hypotheses was undertaken by Westbrook (1980) who adopted and tested a simple rating scale for measuring product/service satisfaction. He used Andrews and Withey's (1976) sociological research on the Delighted-Terrible (D-T) scale. The evidence from three separate studies supported the use of this scale for products (autos, washing machines, and TV's) and services (banking). The study also supported two hypotheses that focused on the realization of positively-valued and negatively-valued expectations.

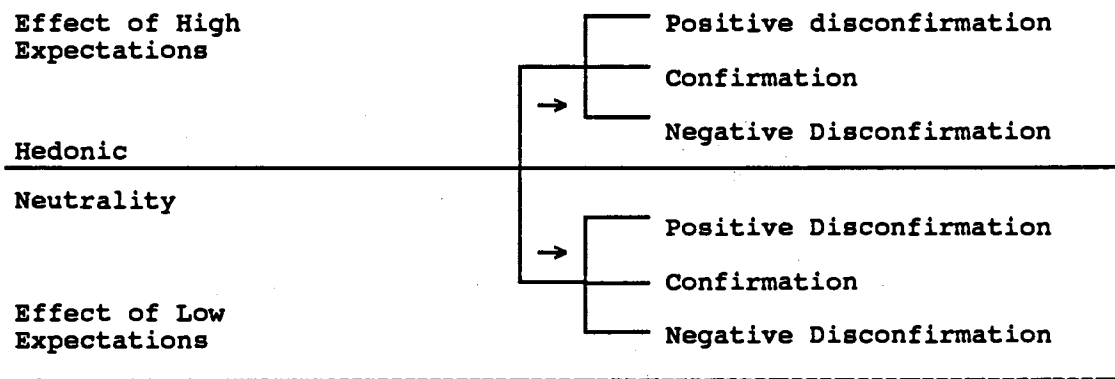
Disconfirmation of Expectations Paradigm

The most recent research uses the disconfirmation paradigm to measure satisfaction. Oliver (1980) presented a cognitive model of antecedents and consequences of satisfaction decisions. Expectancy disconfirmation and performance-specific expectations play a major part in satisfaction decisions (Oliver, 1980). Howard and Sheth's (1969) work served as the base for Oliver's model.



Source: Oliver, R. L. (1980). "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions." Journal of Marketing Research, 17 (November), p. 462.

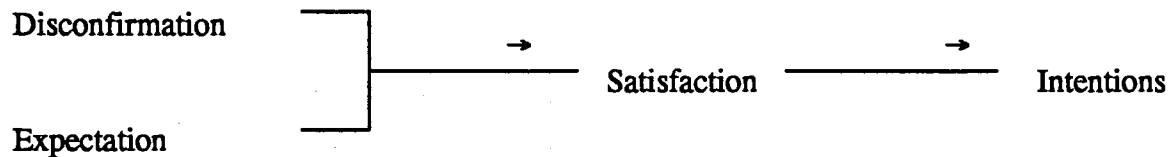
Figure 8. Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions



Source: Oliver, R. L. (1981). "Measurement and Evaluation of Satisfaction Processes in Retail Settings." Journal of Marketing Research, 57 (Fall), p. 27.

Figure 9. Expectation and Disconfirmation Effects on Satisfaction Consistent with Adaptation-Level Theory

Swan and Trawick (1981) offer this model:



This disconfirmation--expectation model assumes that satisfaction is the outcome of a four-step process. Step one is prepurchase expectations, which are beliefs that a product/service will achieve a specific performance level. In step two, the consumer uses the product/service and forms a perception about the product/service. There are three possible expectation outcomes in this step:

- (1) positive disconfirmation
(performance exceeds expectations),
- (2) negative disconfirmation
(performance fails to meet expectations),
- (3) confirmed (performance and expectations are equal). Step three notes the disconfirmation with the product/service will determine a satisfaction level. Finally, in step four the satisfaction will determine if the consumer has intentions of using the product/service again (Swan and Trawick, 1981).

There have been two major attacks on the expectations paradigm. Churchill and Surprenant (1982) investigated whether satisfaction is affected by disconfirmation as hypothesized by other researchers (e.g., Swan and Trawick, 1981; Oliver, 1980, 1981). They found for a non-durable good the results were as hypothesized, that is disconfirmation has an effect on satisfaction. However, for durable goods the results were quite different. The researcher's results revealed that neither consumers' expectations or the disconfirmation experience affected customers' satisfaction. Product performance of the durable good was the sole determinant of satisfaction (Churchill and Surprenant, 1982).

The Churchill and Surprenant (1982) study found a statistically significant (negative) correlation between expectations and disconfirmation. This finding does not support the work by Oliver (1980) who found no correlation between expectations and disconfirmation. One explanation may be consumer judgements were objective as opposed to subjective as claimed by Oliver (Churchill and Surprenant 1982). Another explanation may be due to the fact that Oliver did not manipulate expectations (Churchill and Surprenant, 1982).

The second attack on the disconfirmation paradigm comes from Woodruff, Cadotte, and Jenkins (1983). These authors believe expectations can be replaced with experience-based norms. Their argument is as follows (p. 301):

Under the traditional paradigm, the use of expectations as the comparison standard limits the consumer's set of experiences to those concerned with the focal brand. Consequently, satisfaction/dissatisfaction would depend only on what a consumer believes about that brand. The norms concept suggests a different scenario. Expanding the base of experiences to include other brands means that consumers will probably go through a sequence of judgements leading to the choice of a standard for evaluating a perceived brand performance.

Cadotte, Woodruff, and Jenkins (1987) researched this concept in a restaurant setting. The results supported both the disconfirmation of expectations paradigm and the experience based norms concept (Woodruff and Jenkins, 1987). Thus, experience-based norms offer an alternative to expectations, but in no way replace them as comparison standards.

A final point about the disconfirmation of expectations paradigm and its relationship to scripts, services and physical goods is made by Smith (1983). She states:

The expectations which serve as the foundation for script-based evaluations concern an event, whereas those which are the focus of the disconfirmation of expectations paradigm are related to an object, specifically a product or product class (Smith 1983, p. 6).

This final point helps underscore why the study will use a role-playing technique to examine perceived levels of satisfaction within a service encounter instead of the disconfirmation of expectations paradigm to study the process of service assembly and participants.

One of the issues this research addresses is what happens to consumers' level of perceived satisfaction when

their expectation about the process of service assembly or price is violated with regard to the service encounter? This question can be answered by using a contingency framework with a match/mismatched concept to help explain the relationship. The following section discusses contingency frameworks and the match/mismatch concept.

Contingency Frameworks

A contingency framework using the match/mismatch concept may help explain the interaction between process and price, especially the consumer response to a low-priced, highly customized service process. Contingency frameworks have been used to investigate personal communication in marketing (Wiener, LaForge and Goolsby, 1990), salesperson stereotyping (Sujan, Bettman, and Sujan, 1986), and effectiveness in sales encounters (1981).

The match/mismatch concept was used by Sujan, Bettman, and Sujan (1986) to measure the effects of consumer expectations on information processing in selling encounters and is based on the schema-triggered affect model (Fiske 1982; Fiske and Pavelchak, 1984). The schema-triggered affect model provides a conceptual framework for studying how prior consumer expectations about service processes and prices influence satisfaction evaluations in a service encounter.

According to Mandler and Parker (1976) a schema is an "internal structure developed through experience which

organizes incoming information relative to previous experience" (p. 39). The schema-triggered affect model relates previous expectations to information processing and affective reactions in individual perceptions. For example,

if an unknown politician matches one's expectations of the typical politician (Fiske, 1982), the affect associated with the politician category--usually negative--is triggered and one has a spontaneous reaction toward the individual (Sujan, Bettman, and Sujan, 1986, p. 346).

However, if a mismatch occurs with a specific category, the evaluator is likely to engage in greater cognitive processes to analyze the situation. It is out of this schema-triggered affect model or category based model that Sujan, Bettman, and Sujan (1986) developed the match/mismatch concept to test salesperson stereotyping.

This same match/mismatch concept can be used to help explain what happens when a consumers' expectation is met or violated regarding the process of service assembly and price within a service encounter. A match occurs when the consumers' expectation about process and price are met and a mismatch occurs when they are violated. Thus, the consumers' satisfaction level is contingent upon what process of service assembly and price is received in the service encounter and whether the process of service assembly and price matched or mismatched the consumers' expectation.

Summary

This chapter reviewed the literature that is pertinent to the study. The review started with an examination of the concept process, followed by discussions of the process of service assembly, price, satisfaction, and contingency frameworks. The constructs of the process of service assembly and price are important because they are the independent variables used in the study. The dependent variable used in the study is satisfaction. Chapter three discusses how these constructs fit into the research design, hypotheses, and methodology of this experiment.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

The design and methodological approach of this study are intended to help answer the research question in Chapter One. In order to set the stage for a discussion of the study, the following section will quickly review the research question. Following the restatement of the research question, this chapter will list the criteria for choosing a service for the study, conceptually define the independent variables, present and discuss the hypotheses, research design, and methodology.

Research Question

The main objective of this study is to investigate consumers' level of perceived satisfaction with elements of the services marketing mix within a service encounter, specifically the process of service assembly and price. The literature review provided support for this research idea.

As McLuhan (1964) stated, with a service, the process is the product. Even without any prior experience with a specific service, consumers will have some expectations and perceptions about the impending service encounter. These

expectations and perceptions will be based on such items as the process of service assembly, the participants involved within the service encounter, physical evidence, and the price charged for the service. Because all of these constructs can be manipulated by marketers it is necessary to investigate how certain items interact in a service encounter. Therefore, the guiding research question for this study is:

How do various levels of the process of service assembly and price affect the consumer's perceived level of satisfaction within a service encounter?

This question specifically responds to Brown and Swartz's (1989) and Bitner's (1990) call for research into process quality and for more in-depth research into the services marketing mix, respectively. The interaction between the process of service assembly and price can be examined by applying a contingency framework with a match/mismatch concept. It is also important to note that besides the service participants or the physical surroundings the only other concrete cue a consumer may have to aid his satisfaction evaluation in a service encounter is price.

Selection of Services

The selection of the service for use in this study will be based on the following criteria: 1) personal (instead of business) service; and 2) familiarity. Personal services were selected because most consumers have had experience

with these forms of services in their everyday lives. A consumer service that most people are familiar with will be picked, because it will provide greater external validity to the overall population. Also, the problem of finding a subject population that is familiar with industrial or business services may be too difficult to overcome.

Conceptual Definitions

Before the hypotheses and research design are presented it is necessary to define the terms that will appear in these sections. The following conceptual definitions are derived from the services marketing literature:

Service Encounter: a period of time during which a customer directly interacts with a service (Shostack, 1985, p. 243.)

Service Marketing Mix: participants, process of Service assembly, physical evidence, price, promotion, product, and distribution (Booms and Bitner, 1981).

Process of Service Assembly: is the actual procedures, mechanisms, and flow of activities through which the service is delivered (Booms and Bitner, 1981).

Lovelock (1984) anchors the process continuum with the words "standardized" and "customized." A standardized process implies a non-varying order of steps and procedures, whereas a customized process refers to variance in the operation to meet the need of an individual customer. Process can also be defined according to its complexity and

divergence (Shostack, 1987). Complexity is defined by the number and intricacy of the steps and sequences of the process. Divergence is defined by the executional latitude (variance) of the steps and sequences.

Participants: all persons (e.g., customers, employees) who play a part in the service delivery system and thus influence the buyer's perceptions (Booms and Bitner, 1981).

Price: what is given up or sacrificed to obtain a product (Zeithaml, 1988).

The definitions help clarify the concepts and variables that are being investigated in this study. The following section discusses the hypotheses under study in this experiment.

Hypotheses

Price Relationships

One of the first issues to be discussed is the price/quality relationship. Despite the obvious expectation of a positive relationship between price and quality, marketing research provides no clear support for this hypothesis (see Zeithaml 1988 for review). However, research has found positive links between price and satisfaction with durable goods, but not nondurable or consumable goods (Gardner, 1970; Peterson and Wilson, 1985). The same positive relationship that has been found with durable goods also holds with services because they are

evaluated by extrinsic cues due to the lack of intrinsic cues. Thus, the first hypothesis:

H1: There is a positive relationship between price and satisfaction with regard to personal services.

Customized and Standardized Service Processes

Consumers expect more personalized attention with a customized service offering. There is support for this statement in Bowen's (1990) service taxonomy. His research found that when there is a high degree of customization the consumers' believe that service employees are important, and that there will be a high degree of customer contact.

The focus of the service encounter is on the consumer. A customized service uses a "job-shop" process approach (Shostack, 1987), thus leading the consumer to believe it is tailored specifically to him. Custom service firms are believed to be "full-service" firms (Shostack, 1987). According to Lovelock (1983) there is "far more scope for tailoring a service to meet the needs of an individual customer" because the consumer is actually involved in the process. Shostack (1987) states that the service process can be categorized by its complexity and divergence. A highly divergent and complex service process is unique in its delivery to each customer.

Consumers have been conditioned to believe that a box of Tide is the same as every other box of Tide. Once a "production" system is in place, the focus of an operation

is on efficiency. Consumers will recognize this same phenomena in a service. Bowen's (1990) taxonomy states that consumers' expect little employee involvement and moderate contact when the service is standardized. The focus is on getting the job completed as quickly as possible. The restaurant industry serves as a good example of the difference between the two service processes. The customized service in the restaurant industry is a Five Star facility, the standardized service is a fast food service outlet. The focus of the standardized service process is on volume and therefore less personalized (Shostack, 1987). Typically, a standardized service "produces" only one service, whereas customized services may offer a wide variety of choices (Lovelock, 1983). A service process that is characterized by low divergence and complexity is largely standardized (Shostack, 1987).

However, the question remains what happens when a consumer is faced with a standardized service at a low price and a customized service at a low price? Which of the two services will the consumer perceive as providing a higher level of satisfaction?

A contingency framework using a matched/mismatched concept found in the expectations' literature can be used to help answer these questions. Sujan, Bettman, and Sujan (1986) used schema-triggered affect to study consumer expectations on information processing in a sales encounter. Schema-triggered affect relates consumers prior expectations

to information processing (Fisk and Pavelcheck, 1984). In an encounter a consumer can experience a match or mismatch with an individual. In a matched encounter, the consumer experiences a salesperson who is similar to what he expected. A mismatched encounter occurs when the consumer interacts with an individual that does not meet his expectations. This violation of expectations will cause the consumer to engage in greater information processing.

This idea can be applied to a service encounter. The consumers' expectation of a customized service at a high price has been violated. This violation of the consumers' price expectations will get the consumer to engage in greater cognitive analysis of the entire service process.

Consumers will look for a reason to explain why their expectations have been violated with regard to a low-priced, highly customized service. Since the consumers attention is now aroused, the consumer becomes suspicious of a situation that appears to be "too good to be true." This heightened awareness may get the consumer to question the validity of the service process, the participant's skill level or expertise.

Thus, the following hypotheses:

H2: There is an interaction between the process of service assembly and price such that:

a: A customized process of service assembly provides a higher level of perceived satisfaction than a

standardized process of service assembly when the price charged for the service is high.

- b: A standardized process of service assembly provides a higher level of perceived satisfaction than a customized process of service assembly when the price charged for the service is low.

Research Design

Independent Variables

The design will be a two by two factorial: process of service assembly (standardized vs. customized) by price (high vs. low). Shostack's (1987) concepts of complexity and divergence will be used to help conceptualize the process of service assembly. The two forms of process will be collapsed into one form of process. Thus, a process can then be defined as either standardized or customized. Also the number of steps of each process will be manipulated.

The constructs will be operationalized through a role playing scenario (Bitner, 1990; Surprenant and Solomon, 1987). A pretest will help determine the manipulations and operationalizations of the independent variables. This is further clarified in the following section.

Dependent Variable

The dependent variable in this study is satisfaction. It will be measured by a semantic differential to assess

overall satisfaction (Oliver and Desarbo, 1988; Westbrook, 1980).

Procedure

Construct Domain

In order to study the process of service assembly, the domain of this construct must be defined in order to operationalize the variable. Based on previous research by Surprenant and Solomon (1987) characteristics of participants will be placed in the domain of the process of service assembly. Consumers' expectations and perceptions of the process of service assembly can be found in its construct domain. The exploration of the construct domains helps to answer part of the research question. Of the two independent variables in this study, only one, process of service assembly, needs to be clarified. Price will be defined as either high or low. The process of service assembly domain will focus on Lovelock's (1984) process continuum and Shostack's (1987) concept of process. The participant items under process do not have any major marketing research contributors. The construct domain for the process of service assembly can be found in Appendix One. The domain constructs will be used to determine the actual manipulations of the independent variable, process of service assembly, in the experiment.

Pretest of Measurement Items

Based upon the list of construct domain characteristics, a series of items will be identified for use in measuring the process of service assembly. The pretest of these measurement items for the process of service assembly construct will occur in the following manner. First, two groups will be given distinct service processes (one clearly customized and one clearly standardized). Examples can be found in Appendix Two and Three. The subjects will answer a series of ten to twelve questions about their assigned service process. Examples can be found in Appendix Two and Three.

Reliability and Validity Issues

Factor analysis will be used after the pretest to identify the factors of the construct process of service assembly. Items that do not load cleanly on a factor will be dropped from the scale before administration of the main test. The reliability of the measurement items will be determined by using Cronbach's Alpha. The research plan will follow Nunnally's (1978) recommendation of using a minimum standard for reliability of .70.

Validity will be assessed in the following manner:

Construct Validity - can be assessed by high reliabilities and consistent factor structures. However, these conditions are "necessary but not sufficient" for determining construct

validity. A scale must also satisfy other conceptual and empirical factors in order to have good construct validity. Two ways of increasing construct validity are to assess a construct's content and predictive validity. (Construct validity cannot be assessed directly but inferred).

Content Validity - Assessing a scale's content validity is more of a qualitative rather than a quantitative task. The domain of the construct process of service assembly was thoroughly explored (Appendix One), and items for the pretest measure came out of this construct domain.

Criterion or Predictive Validity - can be assessed by comparing two different subject groups on the two different forms of process of service assembly, standardized service and customized service. This helps determine if the measure behaves as expected.

Development of Main Test Scenarios

Based upon the list of items that are drawn from the construct domain and purified through the factor analysis two scenarios will be developed for use in the main test. One scenario will be a customized process of service assembly and the second scenario will be a standardized process of service assembly. Examples of the Main Test Scenarios can be found in Appendix Four.

Pretest of Scenarios

The specific scenarios will be pretested using the measurement items that were previously developed (Similar to those found in Appendix Three). Manipulation checks will be conducted for each of the independent variables. Also, coefficient alpha will be calculated to help determine the internal consistency of the measure. Finally, a pretest will help determine the clarity of the instructions for the main experiment.

Main Test

Once scenarios are developed that work, the main test will be run. Subjects will be randomly assigned to one of the four cells in the matrix and be asked to read a scenario about a specific service encounter. Subjects will be asked to imagine they are the consumer in the scenario they are reading (see Appendix Four). After reading the scenario, the subjects will respond to a series of measures about satisfaction (see Appendix Four). After the dependent measures are taken, the subjects will be asked to respond to a series of manipulation checks. Demographic and service usage data will also be collected.

Subject Sample

The pretest subject sample will be on campus MBA students. A minimum of ten subjects will be used for each of the process of service assembly measurement items. For

example, if the pretest has 13 process of service assembly questions a minimum of 130 subjects will be used.

The subject sample for the main test will come from the off campus MBA program at Western Illinois University in Peoria or Rock Island. This group is similar to the UCAT MBA's.

Analysis

The analysis of the results of this experiment will follow traditional ANOVA procedures. A single ANOVA (PROC GLM; Model SAT = X1, X2; X1 * X2) will be run. A single experiment will test both hypotheses. The first step will be to test for the main effect of price (Hypothesis 1). F-tests will determine if there is a difference in the mean ratings for high and low prices. The second step will involve testing for the interaction effect of price and the process of service assembly (Hypotheses 2a and 2b). For example, looking at the overall difference between prices, is this difference the same when examined separately for the process of service assembly (customized or standardized)? Again, the F-statistic will determine if there is a significant difference in the cell means.

Methodological Considerations

While a role-playing technique has been used in other marketing studies (Bitner, 1990; Folkes, 1984; Surprenant and Solomon, 1987), there are some limitations. While this

method reduces "noise" and increases control over the independent variable manipulations to increase internal and statistical conclusion validity, it loses control over external validity (Cook and Campbell, 1979).

Bitner (1990) notes the role-playing technique has long been used in psychological research. The major advantages are: easy operationalization of difficult variables, less expensive than field experiment manipulations, time compression (Bitner, 1990). The other disadvantages are: subjects who do not "imagine" themselves into playing the role requested and demand effects associated with subjects trying to guess what hypotheses are being studied. Pretesting will help determine if the subjects have guessed the hypotheses. Sawyer (1975) states that the use of a between-subjects design will limit the chance of demand effects.

Summary

This chapter discussed how the research design and methodology of the study. Specifically, it addressed how the service is to be selected for the study, conceptual definitions of the constructs under study, presented the hypotheses, discussed how the results would be analyzed. Chapter Four will discuss the scale and scenario development.

CHAPTER IV

SERVICE SELECTION, SCALE DEVELOPMENT AND SCENARIO DEVELOPMENT

Introduction

To date the only research on the process of service assembly is conceptual (see chapter two review). In order to answer Bitner's (1990) and Brown and Swartz's (1989) call for investigation into this services marketing construct an adequate measurement device needed to be constructed. The first section of this chapter discusses how the service was selected for the scale development and the experiment. The second section of this chapter discusses the scale development for the construct the process of service assembly. The scale will be used for the main test. Churchill's (1979) paradigm for developing measures of marketing constructs served as the guiding force for scale development. Finally, the last section discusses the scenario development for the experiment.

Service Selection

Selection of a service for use in the experiment, was performed by developing a list of criteria with which to evaluate prospective services. The criteria are:

1. Research question relevance
2. Process of Service Assembly Relevance
3. Price Relevance
4. Familiarity of Service
5. Credence Nature of Service
6. Operationalization of Service.

The first three criteria must be fully satisfied before a service is selected for use in the study. The fourth and fifth criteria will help increase the strength of the study. Meeting the first criterion requires that a consumers' level of satisfaction/dissatisfaction can be measured with the particular service chosen. In order to assess consumers' perceived levels of satisfaction criteria two and three become critical.

Meeting the second criterion is important for two reasons. First, the process of service assembly is one of the independent variables under study in this experiment. Second, criterion two is concerned with finding a service that can be explained in scenarios as either customized or standardized and still be believable. The scale items of number of steps, number of options, amount of contact with the service provider, degree of visibility of the service task performance, technological factors and the time dimension will play an essential part in developing scenarios with the process of service assembly. It is important to pick a service that has a majority of these dimensions. It should be a service that can easily flow on

a continuum from standardized to customized with the addition or alteration of any of the scale items.

The third criterion is important for two reasons. First, like the process of service assembly, price is also one of the independent variables under study. Second, the price manipulations must be realistic and believable with regard to the service being studied. Because of the contingency framework being utilized the prices charged in the mismatched cells (low price-customized service; high price-standardized service) must be unexpected but not unrealistic.

Using a service the consumer is familiar with is the fourth criterion. It is also one of the easiest criteria to meet. The subjects who are being used for this study are more familiar with consumer services than industrial or business-to-business services. Thus, there would be more external validity with regards to the study if consumer services are used.

The fifth criterion is the credence nature of the service. A high credence laden service is difficult to evaluate because of the lack of knowledge and physical cues available. Credence laden services are also difficult to understand with regard to the outcome of the service. This type of service cuts out any bias subjects might have about physical cues or expected outcome. Examples of high-credence services are: television repair, legal services, root canal, auto repair, medical diagnosis. The important

point is to have the subjects analyze the process of service assembly, not the quality. Subjects will be able to make fewer quality judgements with high credence services.

The final criterion is the operationalization of the service. It is important that the service can be easily operationalized and manipulated within a descriptive scenario. The easier it is to operationalize a service within a written scenario the clearer the process of service assembly will be to the subjects. Subjects must be able to understand the manipulation of the process of service assembly items within the written scenario for the experiment to be effective. Manipulation checks will confirm whether the variables were properly manipulated.

There have been several attempts to classify services (Bowen, 1990; Day and Bodur, 1978; Kelly, Donnelly, and Skinner, 1990; Lovelock, 1983). Only two (Bowen, 1990; Kelly, Donnelly, and Skinner, 1990) of these studies specifically deal with service customization which is critical to this experiment. Kelly, Donnelly and Skinner (1990) used the concept of organizational socialization to analyze customer participation in service production and delivery. Their service classification scheme is based on customization and the nature of the service act. It is a two by three matrix. Customization can either be high or low. The services act can be directed towards people, towards intangible things, and tangible things. The nature of the service act is based upon employee technical quality,

employee functional quality, customer technical quality, and customer functional quality.

Kelly, Donnelly, and Skinner (1990) places these services in the following cells of the matrix:

- 1-High level of Customization/Service Directed toward People
 - * Medical Services
 - * Health Clubs
- 2-Low level of Customization/Service Directed toward People
 - * Public Transportation
 - * Fast Food
- 3-High Level of Customization/Service Directed toward Intangible Things
 - * Trust Banking
 - * Stock Broker
- 4-Low Level of Customization/Service Directed toward Intangible Things
 - * Routine Banking Transactions
 - * Group Investment Programs
- 5-High Level of Customization/Service Directed toward Tangible Things
 - * Repair Service
 - * Freight Transportation
- 6-Low Level of Customization/Service Directed Toward Tangible Things
 - * Dry Cleaning
 - * Lawn Care

Bowen (1990) created a taxonomy of services. He used the members from the 1985 AMA Consortium on Services Marketing to come up with the following nine (unanimously chosen) characteristics to classify services: 1) Intangible/Tangible, 2) Degree of Customization, 3) Employee/Customer Contact, 4) Importance of People, 5) Differentiation, 6) Ability of the Customer to Switch Firms, 7) Services Affecting People or things, 8) Customer Participation, 9) Continuous versus Discrete Transactions.

A survey revealed the following three groups:

- 1-"High-Contact, Customized, Personal Services"
 - * Restaurants, Hotels, Medical Clinic, Hospital
- 2-"Moderate-Contact, Semi-Customized, Non-Personal Services"
 - * Photofinishing
- 3-"Moderate Contact, Standardized Service"
 - * Cafeteria, Fast Food, Budget Hotel, Movie Theater, Amusement Park.

Both of these articles point to degree of customization. The one industry that appears in both studies and is mentioned by Zeithaml (1981) with regard to credence services is the medical industry. Thus, a medical scenario, with various levels of customization and pricing may prove to be the most effective industry for this study. The pre-test included a customized dental service (having one's tooth filled) and a standardized dental service (having one's teeth cleaned). The main test will follow with the specific role-playing scenarios, employing the relevant scale items that fell out of the pre-test. The next section discusses the development of the scale.

Scale Development

Construct Domain

The first step in scale development is to specify the domain of the construct. This step not only defines the construct under study, but also helps develop a collection of scale items that represents the sample of the domain. This task can be accomplished through a literature search. Specifically, the construct must be defined. The services marketing literature provides one definition of the process of service assembly. According to Booms and Bitner (1981) the process of service assembly can be defined as: "the actual procedures, mechanisms, and flow of activities through which the service is delivered" (p. 47).

Selection of Components

The second step in the procedure is to generate a sample of items. Churchill (1979) advocates generating a sample list of items which "tap each of the dimensions of the construct" (p. 68). The literature review (see chapter two and appendix one) revealed the following pool of items that tap the core of the process of service assembly: number or choice of options, number of steps, amount of contact with the service personnel, visibility of service delivery area, amount of time necessary to deliver the service, and technology involved with delivering the service.

Selection of Scale Items

First, several focus groups were run to help identify the correct dimensions of the process of service assembly for the main test. A dental scenario was presented to several small focus groups of students and staff at a medium sized university to determine if the pool of items revealed by the literature (appendix one) were also identified by subjects in a pre-test. The item pool that was identified by the literature and subjects now included: number of steps in the process of service assembly, technology necessary to perform the service, amount of time needed to perform the service, number of options available, and amount of contact with the service personnel. After completion of the focus

groups a questionnaire was constructed that covered all five items. Approximately half of the questions were negatively stated to avoid bias responses. A seven point Likert scale (strongly agree--strongly disagree) accompanied each question.

Scale Purification

The next task was to purify the measure. A pre-test was run to accomplish this task. Two separate scenarios and questionnaires were administered to student samples at three different universities (see appendix two and appendix three). The first scenario was a standardized dental service (having one's teeth cleaned--appendix two) and the second scenario was a customized dental service (having one's tooth filled--appendix three). Four hundred and ten surveys were administered. Three hundred and eighty seven fully completed surveys (94%) were used for analysis. Fifty-two percent of the subjects were female and forty-eight percent of the subjects were male.

Principal factor analysis with a varimax rotation procedure was used to obtain the factors. The eigen value was set at one. All items which did not load on a factor at .50 or greater were eliminated. Also, items which loaded heavily on more than one factor (e.g., contained "noise") were dropped. The five underlying dimensions and nineteen items were reduced to four factors and fourteen and fifteen items within the standardized and customized data sets,

respectively. The four factors are Time/Steps, Contact, Options, and Technology.

Time and Steps which were a priori separate components collapsed together into one factor. All four Time questions loaded on both the standardized and customized data sets. Two of the four Steps questions loaded on each scale. All three Contact questions loaded on each scale. Two of the four Option questions loaded on each scale. The Technology construct split across the data sets. Since no Technology questions loaded on both data sets this element will be dropped from the scale. The final results are Time/Steps which will be measured by six questions, Contact which will be measured by three questions, and Options which will be measured by two questions. All results are reported in Table 5 and Table 6 and 7.

Reliability Assessment

The next step in scale development is to assess the reliability of the data. The interitem correlations were checked for low correlations among like items. Satisfactory correlations existed among the items. The internal consistency of the remaining items was further checked through the calculation of coefficient alphas for each of the dimensions within each data set. The alpha levels are within range of Nunally's (1978) suggestion for a minimum standard of .70 for research. Table 8 lists Cronbach's alpha for each of the dimensions after the factor analysis.

TABLE 5
 ROTATED FACTOR PATTERN
 STANDARDIZED PROCESS
 OF SERVICE ASSEMBLY

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
T2	0.752	-0.007	0.015	-0.037
T4	0.694	0.142	-0.129	-0.010
T1	0.628	-0.139	-0.020	-0.002
T3	0.585	-0.037	0.020	0.097
S3	0.529	0.079	0.114	0.236
S1	0.517	-0.115	0.015	0.053
C2	0.008	0.801	-0.016	0.042
C1	-0.043	0.776	0.063	0.021
C3	-0.068	0.696	0.070	0.180
O4	0.070	-0.032	0.872	0.072
O1	-0.059	0.128	0.726	0.092
TX3	0.039	0.117	0.027	0.730
TX2	0.125	0.067	0.123	0.674

TABLE 6
 ROTATED FACTOR PATTERN
 CUSTOMIZED PROCESS OF
 SERVICE ASSEMBLY

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
T4	0.822	0.129	-0.155	0.056
T3	0.743	-0.058	0.234	0.044
T2	0.712	-0.084	0.181	0.064
T1	0.686	-0.010	-0.076	0.054
S3	0.633	0.086	0.153	0.173
S1	0.546	0.045	-0.108	0.153
C2	0.046	0.821	-0.030	-0.001
C3	0.030	0.715	-0.003	-0.115
C1	-0.010	0.640	0.162	-0.017
O1	0.040	0.072	0.801	0.075
O4	0.044	0.054	0.681	-0.096
TX1	0.016	-0.156	0.058	0.752
TX4	0.186	-0.075	0.052	0.700
TX2	0.167	0.080	-0.153	0.635

T = Time
 S = Steps
 C = Contact
 O = Options
 TX = Technology

TABLE 7
 NUMBER OF ITEMS IN EACH SCALE
 COMPONENT BEFORE AND AFTER
 THE ELIMINATION OF ITEMS

Component	Number of Items Before	Number of Items After Standardized	Number of Items After Customized
Time	4	4	4
Steps	4	2	2
Contact	3	3	3
Options	4	2	2
Technology	4	2	3

TABLE 8
CRONBACH ALPHAS

Standardized Service			Customized Service		
1	T2 T1 T4 T3 S1 S3	.7856	1	T4 T3 T2 T1 S3 S1	.8464
2	C2 C1 C3	.8057	2	C2 C3 C1	.7701
3	O4 O1	.7762	3	O1 O4	.7406
4	TX3 TX2	.6938	4	TX1 TX4 TX2	.7415

Validity Assessment

Validity assessment of the construct is the next step in scale development. The primary purpose of the pre-test is to develop an instrument that measures the process of service assembly. Thus, construct validity is of utmost concern. Construct validity can be assessed through high reliabilities and consistent factor structures. Both the standardized and customized data sets revealed high reliabilities and consistent factor structures. A scale must also satisfy other conceptual and empirical factors in order to have good construct validity.

Two ways of increasing construct validity are to assess a construct's content and predictive validity. Content validity assessment is more of a qualitative rather than a quantitative task. The literature on services marketing was thoroughly examined and the items used in the pre-test for scale development came out of this literature.

The criterion or predictive validity of this scale was assessed by comparing the two different subject groups on the two different forms of the process of service assembly. This was completed by performing t-tests on each of the summed constructs between the standardized data set and the customized data set.

Table 9 reveals the T-test results. The purpose of the T-tests is to determine if the measures behave as expected. The Time/Steps and Option items were all in the positive

TABLE 9
PAIRED SAMPLE T-TEST RESULTS
COMPARISON OF STANDARDIZED
& CUSTOMIZED DATA SET

Item	Mean Difference	SD Difference	T Value	Prob.
Time/Steps	1.131	0.671	4.126	.009
Options	1.904	0.068	39.540	.016
Contact	-0.435	0.144	-5.126	.035

direction. That is, the subjects saw the customized process of service assembly taking more time and having more steps, with a greater number of options, than the standardized process of service assembly.

However, the Contact questions were all significant but in a negative direction. This could be explained by the nature of the service process. The standardized service (having one's teeth cleaned) would allow the service provider and the customer to engage in more discussion. The customized service (having a tooth filled) prevents the service provider and customer from visiting. Thus, subjects interpreted contact as conversation, and not the length or amount of actual physical interaction.

The final factor Technology is difficult to assess because of the split that occurred during the factor analysis. While the factor analysis results show the item is important, a t-test could only be performed on one question, not the entire group of technology questions because only one question loaded on both data sets. Thus, it is difficult to determine if the scale items behave as expected. Therefore, the Technology items were dropped from the scale.

The completed scale for the process of service assembly includes measures for Time/Steps, Options, and Contact. The specific scale questions for the standardized and customized scales are presented in Table 10. (Note: The Technology

TABLE 10
SCALE ITEMS

Time/Steps

- I usually have to wait a long time for the individual who cleans my teeth to complete the task.
- The individual who cleans my teeth usually does it quickly.
- The task of having my teeth cleaned can be performed quickly by the individual performing the task.
- The process of having my teeth cleaned is time consuming.
- The dental procedure of having my teeth cleaned is composed of many stages.
- The person who cleans my teeth can perform this task on me in just a few steps.

Contact

- The person who cleans my teeth only has brief contact with me when I have this service performed.
- I have a great deal of contact with the individual when I have my teeth cleaned.
- I rarely interact with the individual who performs the task when I have my teeth cleaned.

Options

- The individual who performs this task usually gives me numerous options from which to choose when I have my teeth cleaned.

TABLE 10 (Continued)

-
- A large number of choices are available to me when I have my teeth cleaned.

Technology

- Technology is unimportant with regard to the individual cleaning my teeth.
 - The person who cleans my teeth does not need fancy equipment to perform the task.
-

questions are presented for the reader, they are not part of the final scale.)

The next section of this chapter discusses how the scenarios were developed for the main experiment.

Main Test Scenario Development

The research question this dissertation is attempting to answer is:

How do various levels of the process of service assembly and price affect consumers' perceived level of satisfaction?

In order to run an experiment to answer this question two tasks had to be completed. First, a scale had to be developed to assess the construct - process of service assembly. Following Churchill's (1979) paradigm a scale was developed. This procedure revealed the following items to be important factors: time/steps, options, and contact (see previous section for pre-test, factor analysis and cronbach alpha results).

The second task was to develop and pre-test scenarios to be used in the main test. Selection of a service for use in the experiment was performed by developing a list of criteria with which to evaluate prospective services (see section one of this chapter for a detailed discussion of the criteria used for selection). Medical services, specifically dentistry, were chosen as the service to use in the role-play experiment. The purpose of the next section

is to show how the scenarios were developed and to present the pre-test results.

The intent of the scenario development was to come up with two stories (one standardized, one customized) about having a tooth filled. Three dentists were interviewed about the process of service assembly with regard to filling a cavity. Two of the dentists were interviewed by phone, the third participated in a personal interview.

The interviews with the dentists covered these areas:

- 1-The enumeration of the steps, procedures, and actions that they engage in when filling a tooth.
- 2-The options available to a patient when receiving a filling.
- 3-The time necessary to complete the task.
- 4-The price charged for the service.

Each dentist mentioned that there are infinite variations possible, but for a straight filling the steps listed below are all that are necessary. They are:

- 1-Apply topical anesthetic to gum
- 2-Inject anesthetic into gum by affected tooth
- 3-Clean decayed tooth with pick
- 4-Drill out decay
- 5-File inside of cavity
- 6-Line cavity with bonding sealant
- 7-Fill tooth with amalgam
- 8-File off excess.

The options available to a patient are:

1-Option of receiving nitrous oxide (gas).

Because of smaller needles and stronger anesthetics it is no longer necessary to automatically administer gas to a patient as was the custom fifteen to twenty years ago. However, dentists do offer gas to a patient if they show a tremendous fear of needles or signs that they are full of anxiety about being at the dentist.

2-Option of receiving extra bonding sealant.

After the decay in a cavity is drilled away dentists line the cavity with resin to help the filling bond better. However, patients have the option of having a second sealant, calcium hydroxide, applied to help extend the life of the cavity. If the second sealant is applied it takes longer to dry before the amalgam can be inserted.

3-Option of amalgam (filling material).

Patients have the option of receiving one of three types of amalgams; porcelain, silver, or gold. Porcelain amalgam matches the tooth but wears out the quickest and is weak material. Silver lasts longer, but eventually blackens. Gold amalgam has the longest life and discolors the least.

The dentists' reported that the time it takes to fill a cavity varies from twenty to sixty minutes. The time difference can be accounted for due to the extra time necessary to administer gas and allow it to take effect, the

application and drying time of the second sealant, and the location of the tooth in the mouth.

All three dentists charged the same price for a standard filling--\$35. However, all three dentists' charged more if something "extra" was required. Then the cost could go up to \$50.

After reviewing the lists generated by the dentists it was determined that the subjects may view them as two different services and the descriptions too technical. In order to eliminate this problem it was decided that the number of (discrete) steps must be the same in both scenarios.

In order to develop consistent lists and less technical descriptions several focus groups were formed to obtain opinions about the number of steps and procedures involved with filling a tooth. Subjects were asked to write out the steps they believed dentists' went through to fill a cavity and to state the price they would pay for such a service. Thirty six subjects participated in the exercise. The range for the number of steps was from three to eleven. The mode number of steps was five (ten people). The mean was 5.7 steps. The breakdown was as follows:

Number of Steps	Subjects
3	5
4	6
5	10
6	6
7	2
8	4
9	2
10	0
11	1

The range for the cost of having a tooth filled was \$15 to \$150. The mode price was \$60 (9). The mean price was \$61. The breakdown was as follows:

Price	Subjects
\$15	1
20	2
30	1
40	7
50	5
55	3
60	9
75	4
80	1
100	2
150	3

The price differences between the dentists and subjects can readily be explained. The three dentists interviewed all live in Macomb, IL. Macomb is the county seat and home of a 14,000 student university. Thus, the state of Illinois employees approximately 4300 people in the area. The state insurance program pays thirty-five dollars for a filling. Seventy percent of the students are from Chicago, St. Louis, Peoria, Springfield, and the Quad Cities where medical costs are higher.

Using the information gained from the dentists and subjects two scenarios were developed (see appendix four). It was important that the steps be held constant in the two scenarios. Every attempt was made to make sure the subjects did not feel like they were receiving two different services. Each scenario held the four specific steps constant. The service was customized by manipulating the three different options offered to client. The time to deliver the service and the price were also manipulated. The main test will have four treatments (high and low priced customized service and a high and low priced standardized service).

The purpose of the pretest was to see if the manipulations within the two scenarios were significant. Manipulation checks were measured by the scale that was developed earlier (see appendix two). The pre-test results are presented in Table 11. The means, standard deviations, T-Values, and probabilities are shown for each question. The manipulations were significant except for question number seven (contact #2). Also, all the results are in the right direction. The subjects were from one MBA Accounting class and two senior level Cost Accounting classes. There were 58 usable questionnaires.

A Kolmogorov-Smirnov test revealed each question to be normally distributed. A second more restrictive test (Lilliefors) also showed the responses on each question to be normally distributed.

TABLE 11
Pre-test Results

Question	<u>STANDARDIZED</u>		<u>CUSTOMIZED</u>		T-Value	Prob.
	Mean	SD	Mean	SD		
1-TIME	2.467	1.306	4.607	1.423	5.817	.000
2-STEPS	2.767	1.223	4.000	1.247	3.327	.003
3-OPTIONS	5.733	1.639	2.071	1.086	8.639	.000
4-CONTACT	3.933	1.639	2.821	1.278	2.868	.008
5-TIME	5.400	1.429	3.607	1.969	4.026	.000
6-STEPS	4.567	1.612	3.071	1.412	3.930	.001
7-CONTACT	4.267	1.639	4.607	1.524	0.690	.496
8-TIME	4.933	1.337	3.607	1.571	3.438	.002
9-OPTIONS	5.867	1.196	2.500	1.232	9.816	.000
10-CONTACT	3.500	1.757	4.929	1.489	3.003	.006
11-TIME	3.133	1.358	4.429	1.345	3.327	.003
12-PRICE	6.00	.947	2.607	1.370	9.477	.000

N = 50

Question seven will be altered slightly. The other two questions that deal with the contact construct (#4, #10) were significant. These two questions deal with contact as it relates to the service provider who delivers the process of service assembly. Question seven dealt with contact as it relates to the task. Factor analysis results indicated contact related to the service provider. Thus, in the main test question seven would read: "The dentist would only have brief contact with me". The completed scenarios and questionnaire to be used in the main test are in appendix four.

Summary

The purpose of this chapter was to discuss the criteria used for service selection. The criteria led to the selection of a medical service, dentistry. The second section of the chapter discussed the development of a scale to assess the construct--the process of service assembly. The third section of the chapter discussed the scenario development for the main test. Chapter five will present the results of the experiment.

CHAPTER V

RESEARCH FINDINGS

Introduction

The previous chapter discussed the criteria used to select the service, the development of the scale for the construct--process of service assembly, and the scenario development for the main experiment. The purpose of this chapter is to discuss the results of the experiment and the hypotheses tested. First, the descriptive statistics will be presented, followed by the manipulation check and factor analysis results, finally, the results of the hypothesis tests will be presented.

Descriptive Statistics

The main test was presented to one hundred and seventy two (172) subjects. There were one hundred and sixty (160) useable questionnaires (93 percent). The average age of the subjects was 25.49 years old. Eighty-six females (53.75%) and seventy-four males (46.25%) participated in the experiment. The breakdown of the subjects as to their last visit to the dentist was as follows: seventeen (10.6%) subjects had been to the dentist in the last month, thirty-one (19.4%) subjects had been to the dentist during the last

three months, 38 (23.8%) subjects had been to the dentist during the last six months, 39 (24.4%) subjects had been to the dentist during the last year, and 35 (21.8%) subjects had not been to the dentist in over a year.

Subjects were also asked about the various types of dental services that they had received in the past. The following list details the type of service and the number and percentage of subjects who have received each.

<u>Service</u>	<u>Number</u>	<u>Percentage</u>
Teeth Cleaned	157	98%
Tooth Filled	141	88%
Mouth X-Rayed	143	89%
Root Canal	19	12%
Bridge Work	8	5%
Tooth Capped	39	24%
Tooth Removed	84	53%
Fitted for Retainer	68	43%
Sealants Applied	27	27%
Tooth Filed Down	60	38%
Denture Work	6	4%
Cosmetic Work	18	11%
Treatment for Gum Disease	1	.006%
Tempo Mandibular Joint Work	1	.006%

These numbers show that the subjects were highly familiar with dental services. Specifically, 88% of the subjects had received a dental filling. Therefore, when subjects read the role-play scenario they were able to easily place themselves in the role required because of previous experience.

In an experiment it is critical to determine if the desired experimental manipulations occurred. If the manipulations are not significant then the experiment did not work. The next section presents the manipulation check results of the experiment.

Manipulation Checks

The scale that was developed to assess the construct, process of service assembly, was used to perform manipulation checks for the main experiment. Campbell and Stanley (1968) note that the internal validity is strongly influenced by the effectiveness of the manipulations in an experiment. Subjects' perceptions of price and the process of service assembly were evaluated through the use of a seven-point semantic differential. The scale was anchored by "strongly agree" and "strongly disagree" items. Price was the only manipulation measured by a single item. The process of service assembly items, Time/Steps, Contact, and Options were measured by six, two, and three items respectively.

The manipulation check results are shown in Table 12 for the main test experiment. The results are the comparison of the subjects who received the customized role-play scenario versus the standardized role-play scenario. The basic purpose of the T-test is to show that there was a significant manipulation of the construct within the role-play scenario. All three of the constructs manipulated revealed significant results, Time/Steps ($P = .000$), Contact ($P = .007$), and Options ($P = .000$). The price manipulation was significant ($P = .000$).

TABLE 12
Manipulation Check on Summed Items

Item	Mean Difference	SD Difference	T Value	D.F.	P-Value
1-TI/STPS	-3.700	5.392	-6.138	79	.000
2-CON	1.50	4.852	2.765	79	.007
3-OPT	-1.425	2.469	-5.162	79	.000

N = 80

Hypothesis Test Results

The first hypothesis tested was:

H1: There is a positive relationship between price and satisfaction with regard to personal services.

While price/quality relationships have never been clearly supported in the marketing literature (see Zeithaml 1988 for a review), research has found positive links between price and satisfaction with durable goods (Peterson and Wilson 1988). It was felt that the same positive relationship that held with durable goods would be found with services because extrinsic cues would be used in the evaluation.

The hypothesis of a main effect for price was not supported. Subjects did not feel any more satisfied with higher priced services than lower priced services ($F = 0.484$; $df = 1, 156$; $P = 0.359$). Potential reasons for this finding are discussed in chapter six.

The second hypothesis dealt with the interaction between the two independent variables--price and process of service assembly. The second hypothesis was:

H2: There is an interaction between the process of service assembly and price such that:

a: A customized process of service assembly provides a higher level of perceived satisfaction than a standardized process of service assembly when the price charged for the service is high.

- b: A standardized process of service assembly provides a higher level of perceived satisfaction than a customized process of service assembly when the price charged for the service is low.

Hypothesis two produced a significant fan effect ($F = 5.758$; $df = 1, 156$; $P = .018$), but was not supported. Table 13 shows the ANOVA results for hypotheses one and two. This ANOVA was run on a summed measure of the dependent variable questions (satisfaction questions 1, 2, and 3).

The finding of a significant fan effect is important. Subjects were more satisfied with a standardized service than a customized service when the price was high. This finding contradicts the hypothesis that subjects would be more satisfied with a high priced customized service. Apparently different schema were invoked by the subjects than hypothesized. Findings are discussed in more detail in chapter six.

The treatment means from the experiment are presented in Table 14 for the dependent measure satisfaction. T-tests were conducted to identify any differences between these treatment means. Table 15 displays these results.

The only significant differences were found between the standardized and customized data sets in the high priced scenario and customized high and low priced scenarios. Just as important is what was not found in this experiment.

TABLE 13
ANOVA RESULTS

Source	Sum-of-Squares	D.F.	Mean-Square	F-Ratio	P Value
Process	25.186	1	25.186	3.337	0.070
Price	6.401	1	6.401	0.048	0.359
Process* Price	43.467	1	43.467	5.758	0.018
Error	1177.563	156	7.548		

Dependent Variable: Satisfaction (Summed) N = 160

TABLE 14
TREATMENT MEANS FOR SATISFACTION

Service	Price	
	High	Low
Customized	N=38 5.342	N=42 6.786
Standardized	N=39 7.179	N=41 6.537

(Note: Higher numbers indicate higher levels of Satisfaction).

TABLE 15
T-TEST RESULTS FOR TREATMENT MEANS

Item	Mean Diff.	SD Diff.	T-Value	D.F.	P-Value
S100 vs. C100	1.921	3.275	3.616	37	0.001
S20 vs. C20	-.268	3.962	0.434	40	0.667
S20 vs. S100	-.821	4.471	-1.146	38	0.259
C20 vs. C100	1.605	3.175	3.116	37	0.004

(Note: C = Customized, S = Standardized, 20 and 100 represent price levels).

Subjects found no difference between the two price levels with regard to satisfaction and the standardized process of service assembly. Apparently, the subjects did not let price affect their evaluations of the process of service assembly in the standardized case. Yet, price did affect their evaluations in the customized case. Finally, Table 16 presents summary cell mean statistics for the experiment.

Dependent Measure Results

The dependent measure, satisfaction was measured by a three item scale drawn from the literature. The inter-item correlations for the three questions were .870, .608, .593, respectively. The cronbach alpha for the scale was .87. These numbers indicate that the satisfaction items were reliable measures.

Summary

This chapter presented the results from the main test experiment. While neither hypotheses was supported there were some significant fan effect results. This chapter also presented the manipulation check results and the final scale. Chapter Six will summarize the study and discuss future research ideas.

TABLE 16
SUMMARY EXPERIMENT STATISTICS

Service Process	Price	
	High	Low
Customized	DATA = C100 N=38	DATA = C2 N=42
	C100 TS = 9.079	C2 TS = 10.476
	C100 CON = 7.737	C2 CON = 8.881
	C100 OPT = 4.263	C2 OPT = 4.310
	PRICE (PC1) = 3.158	PC2 = 6.310
	C100 V = 7.553	C2V = 5.905
	C100 Q = 5.947	C2Q = 6.595
	C100 SAT = 5.342	C2SAT = 6.786
	DATA = S100 N=39	DATA = S20 N=41
	S100 TS = 5.897	C20 TS = 6.341
S100 CON = 9.846	C20 CON = 9.829	
S100 OPT = 2.769	C20 OPT = 2.951	
PSI = 2.077	PS 2 = 6.244	
S100 V = 9.769	S20 V = 5.805	
S100 Q = 8.359	S20 Q = 6.902	
S100 SAT = 7.179	S20 SAT = 6.536	

CHAPTER VI

SUMMARY AND CONCLUSIONS

This chapter summarizes the research study, interprets the findings, discusses the potential contributions, and suggests future research directions.

Summary

The basic purpose of this study was to investigate whether consumers' level of perceived satisfaction is influenced by the process of service assembly and price within a services marketing encounter. This research proposed that consumers' will be more satisfied with a customized service at a high price than a standardized service at a high price and more satisfied with a standardized service at a low price than a customized service at a low price.

A conceptual framework for this research was created by modeling the research question into a contingency framework using a match/mismatch concept. The match/mismatch concept can be used to help explain what happens when a consumers' expectation is met or violated regarding the process of service assembly and price.

A scale was developed to measure the construct, process of service assembly. An experiment was conducted (2 X 2

Factorial Design) to test the hypotheses. Subjects were presented with a role-play scenario in which they evaluated a dental service (having a tooth filled). Two independent variables were manipulated to create matches and mismatches of the process of service assembly with price. Price was operationalized by offering the dental filling at two different levels; 1--twenty dollars, 2--one hundred dollars. The process of service assembly was operationalized through the role-play scenarios. Time/steps were operationalized at two levels; 1--twenty minutes, 2--fifty-five minutes. Options were operationalized at two levels; 1--no options, 2--three options (choice of nitrous oxide, choice of second sealant, choice of filling material). The dependent variable in this experiment was satisfaction.

Subjects from graduate and senior level business classes from three different universities were asked to role-play the process of service assembly with regard to dental services. Subjects were given a scenario to read and imagine that they were in the situation described. After reading the role-play scenario subjects were asked to complete a survey with twenty-five questions. Subjects were given as much time as they wanted to read the scenarios and answer the questionnaire. Subjects generally took between fifteen and twenty minutes to complete the exercise.

Interpretation of Major Findings

Two hypotheses were tested in this research experiment. Hypothesis One proposed that there is a positive relationship between price and satisfaction with regard to personal services. This hypothesis was not supported. There are five potential explanations for why this hypothesis was not supported.

First, subjects may have been making a quality judgement with regard to the process of service assembly instead of a satisfaction judgement. Satisfaction is a consumers' evaluation of the perceived discrepancy between prior expectations and actual performance. Because dental services are so difficult to analyze, subjects may not have been able to identify any discrepancy between their expectations and the performance described in the role-play scenario. This would cause the subjects to think more along the lines of quality issues instead of satisfaction. Despite the obvious expectation of a positive relationship between price and quality, there is little empirical support for this hypothesis. Thus, subjects may not have considered how satisfied they were with the process of service assembly, but what kind of quality they were receiving. The two constructs are closely linked and differentiating them may have been difficult. Most marketing issues are presented in a price/quality realm, instead of a

price/satisfaction framework, which may also explain potential confusion.

Second, the positive link between price and satisfaction with regard to durable goods, based on extrinsic cues, cannot be transferred to services. Studies that examined durable goods have found positive relationships between price and satisfaction. These studies indicate that consumers focus on extrinsic cues to help make these evaluations. Figuring that dental services are difficult to analyze, it was hypothesized that consumers' would rely heavily on the extrinsic cue of price to evaluate what level of satisfaction they would receive from the service provider. Apparently, this line of thought was incorrect. It may be that consumers rely more on the intrinsic cues than extrinsic cues to evaluate services.

Third, subjects may not have possessed a standard knowledge base about price levels for dental services and were therefore unable to make a clear decision about price/satisfaction relationships. Research indicates that consumers accuracy of reported reference prices for services is weak. Thus, while the price manipulation was significant, the actual prices used in the experiment may have confused the subjects in their attempt to make price/satisfaction evaluations. Consumers rarely receive price information before purchasing a service, thus it may actually be of little concern to them when it comes to receiving needed medical care.

Fourth, price is not used as an indicator of satisfaction levels with the category of dental services. Research indicates that price is more likely to be used as a quality indicator with some categories of products over other categories of products. This logic could be transferred to the concepts of satisfaction and services. Thus, different service categories are likely to have different price/satisfaction relationships. Thus, price/satisfaction relationships may exist in the food service industry but not in the medical service industry.

Fifth, third party payments for services may affect consumers evaluations. The experiment did not ask subjects if they paid for dental services themselves or if they were paid for by a third party. However, who pays for the service may have some effect on subjects' opinions regarding a price/satisfaction evaluation. A mixture of subjects who pay for their own dental work versus those who have insurance coverage may wipe out any significant finding with regard to a price/satisfaction relationship.

In summary, five possible explanations have been offered to explain why the first hypothesis was not supported. Further research would be needed to determine if the hypothesis was not supported due to an experimental error or a conceptual/theoretical error.

Hypotheses 2a and 2b proposed that the process of service assembly and price interact to increase or decrease consumers' level of satisfaction. Neither part of this

hypothesis was supported. Parts of the interaction within the experiment were significant. However, the original hypothesis and potential explanations for why the hypothesis was not supported will be discussed.

First, subjects did not invoke the schema that was hypothesized to occur within the match/mismatch framework. Prior research has found that one consequence of violated expectations is that the consumer will begin to view the situation in terms of a schema (Wiener, LaForge and Goolsby, 1990; Wright, 1986). For example in this experiment it was hypothesized that when consumers were presented with a customized service at a low price potential schema invoked would be: "This deal is too good to be true", "This firm is trying to pull one over on me." However, the results did not support this line of thought. Subjects were more satisfied with a standardized service at a higher price than a customized service at a higher price. They were also more satisfied with a customized service than a standardized service in a low price situation.

Instead of paying more attention during the mismatch in the high priced role-play scenario as expected, subjects simply viewed the scenario as an unpleasant situation (dental services) and choose not to pay much attention. Thus, it may be that subjects' expected a high price and therefore did not focus on the scenario as they should have because they view dental services as unpleasant.

However, in the low-priced role-play scenario it may be that subjects' recognized a good deal and therefore invoked schema such as: "This is a great deal," or "This is a super value." Instead of reacting in a negative manner, subjects reacted in a positive manner. This reaction may have something to do with the subject pool. They recognized the fact that twenty dollars was an excellent price for dental work.

The second reason that the hypothesis may not have been supported is the subjects' desire for simplicity in the dentist's explanations. The standardized role-play scenario was rated at a higher level of satisfaction than the customized role play scenario in the high priced scenario. In the low priced scenario there was no significant difference in satisfaction levels. Subjects may have been able to understand the standardized scenario better than the customized scenario. Every attempt was made to only alter the number of options between the two scenarios and the time it took to perform the service. However, in the customized scenario when subjects were offered more options a few technical terms were used. While these terms were explained in the scenarios they may still have confused some subjects therefore resulting in a lower satisfaction rating with the customized service.

Additionally, because the process of service assembly involving dental services is generally viewed as a negative experience it may be that the consumer does not really care

to hear an explanation. A simple explanation would be appreciated more because it does not dwell on the process of service assembly.

The third reason that the hypothesis may not have been supported is because consumers expect high prices to be charged for medical services. Couple high price expectations with a desire for a simple explanation of an unpleasant process and you arrive at the results of the experiment. Satisfaction levels are higher because subjects understood the standardized explanation better, but they also expected to pay a high price.

The fourth reason that the hypothesis may not have been supported is that consumers may prefer a "standardized" service when they are incapable of properly evaluating the process of service assembly. This explanation is partially tied in to the simplicity issue. Dental services, like many services, are difficult or next to impossible for consumers to properly evaluate. Subjects may have been reflecting back on past experiences and remembered that they were incapable of evaluating other medical services they had received. Thus, subjects were more satisfied with the standardized dental service than the customized dental service because they understood the explanation better since they knew they would not be able to properly evaluate the outcome of the service encounter.

The fifth reason that the hypothesis may not have been supported is methodological. This is the first attempt to

study the process of service assembly. There is no recommended methodology. It may be that a role-play technique was not able to overcome subjects' previous biases with dental services. Therefore even though the subjects were told to imagine themselves in the scenario provided they were unable to keep from interjecting personal experiences into their responses. The only possible way to overcome this problem would have been to perform a field study with real dental patients. Unfortunately, there would have been no way to ensure that each patient received the same process of service assembly.

A sixth reason that the hypothesis may not have been supported was no outcome of the service was offered in the role-play. Berry (1985) notes that process quality and outcome quality are interrelated. This experiment did not offer the subjects an outcome to evaluate, it was focusing on the process of service assembly. Berry (1985) argued that the interaction was not as important as when the evaluation of the service occurred. Operating on this premise an outcome was not provided. It may be that both the process of service assembly and outcome should have been included in the role-play scenarios.

Finally, a seventh reason that this hypothesis may not have been supported was the failure to consider the impact of interactive quality on the process of service assembly. Interactive quality involves the interactive nature of a service and refers to the two-way flows of information

between the service provider and customer. This study examined how subjects' evaluated the process of service assembly without providing any input. The customized process of service assembly offered the subjects three options, but it did not actually allow them to pick the options. Also, the role-play scenarios only involved discussion from the dentist, there was no customer input or dialogue. Thus, the role-play was not completely interactive. This may have caused some subjects to actually be less satisfied with the customized service than the standardized service.

In summary seven possible explanations have been offered for why hypothesis two was not supported. Of course, it is impossible to actually determine why the hypothesis was not supported. The problem may have been theoretical, methodological, or even operational. Despite the failure of the experiment to support the hypotheses there were two positive results gained from the experiment.

The first result indicated a positive, although not significant, main effect for the process of service assembly ($P = .07$). It was hypothesized that the process of service assembly would interact with price based on Shostack's (1987) work. It is important to note that Shostack considered other elements of the services marketing mix when she wrote her proposition.

The result of a positive main effect should not be a total surprise. This experiment only incorporated one major

element of the services marketing mix. The process of service assembly did not have the opportunity to interact with participants or physical evidence. Evidently, the process of service assembly simply overpowered the price construct in this case. The results indicate that the process of service assembly is an important construct all by itself. This is important because it encourages managers to think about the design of the process of service assembly without always considering the interactive effects.

The second positive result was the significant fan effect found between price and the process of service assembly. Although the hypothesis was not supported in the right direction the significant fan effect indicates that the two variables are important. The results indicate that managers should indeed consider the effects of pricing policies on the design of the process of service assembly. The next section discusses the contributions of the study.

Contributions

The results of this research hold promise for both academics and service practitioners. However, since the results were not positive the greater benefit is for academics, who will use this information to alter and enhance their own research.

First, this experiment was the first attempt to empirically investigate the construct the process of service

assembly. It was an attempt to answer Bitner's (1990) call for research on the topic.

From an academic perspective the scale developed for the experiment is beneficial. It was not known what elements of the process of service assembly were critical to consumers. The scale development of the construct assembly revealed that time, steps, number of options, and contact are the essential elements of the process of service assembly within dental services.

From a managerial perspective these items are important because they indicate what elements of the process of service assembly they should pay close attention to in delivering a service to a client. While these constructs are not transferrable to all service industries they are most likely important within the medical service industry.

Second, this research does support Lovelock's (1983) and Shostack's (1987) belief that there is an interaction between consumer satisfaction and various levels of service customization. This belief had not been empirically investigated. The research revealed a statistical difference between customized and standardized processes of service assembly in the high price category.

From an academic standpoint it provides empirical support for a previously untested proposition. This contributes to the knowledge base about the process of service assembly and will serve as a stepping stone to

further research on the interaction between the two constructs.

From a managerial standpoint it would indicate to service providers that consumers like simple explanations of complex processes of service assembly. Service providers should carefully examine how they are explaining their services to their clients. This may involve developing a series of scripts and testing them to determine how various explanations are perceived by service recipients.

Third, there is an interaction between price and the process of service assembly. While the hypothesis was not supported, it was statistically significant. This interaction needs to be investigated further.

From an academic standpoint researchers this is important because it supports that notion that price is important with regard to the process of service assembly. Academicians should probably spend more time looking at this particular interaction because the process of service assembly is often how consumers base their satisfaction evaluations of a service encounter. Also, pricing issues are becoming critical within the medical field.

From a managerial viewpoint this interaction is a contribution because it shows managers that they cannot just ignore pricing issues with regard to developing their service strategies. Even though the recent focus has been on quality and improving the process of service assembly, price is still an integral component.

Even though the contributions to services marketing literature from this research are slight there are several future directions that marketing researchers could take. The next section of this chapter suggests future research directions for the marketing researcher investigating the process of service assembly.

Directions for Future Research

Several directions for future research arise from the findings of this research. Also, several new questions have arisen due to some of the insignificant research findings.

First, further research is necessary on the underlying dimensions of the process of service assembly. This research only looked at one service industry--dental services. While the critical dimensions identified in the scale development may also occur in other medical fields they cannot be transferred to other industries. Thus, it would be important to test to see how critical time/steps, options, and contact are in other service industries. Also, other elements may be critical that did not appear in this study. For example, technology may be an important element in some other industry.

Second, the interaction between the process of service assembly and price needs to be investigated further. Marketing researchers have a tendency to only examine price where it may relate to quality or satisfaction. In a service encounter, price interaction with the process of

service assembly has a direct effect of satisfaction levels. Thus, this research indicates that both elements should be examined together, not as individual constructs.

Third, the match/mismatch framework that utilizes schemas has tremendous potential for explaining how consumers analyze various services. Just because the hypotheses were not supported does not mean that consumers do not utilize schemas in their evaluation of services. Future experiments could ask open ended questions that attempt to capture what cognitive thoughts are going through subjects minds as they evaluate different processes of service assembly.

Fourth, the importance of the service provider in the service encounter with regard to the process of service assembly cannot be overlooked. While this experiment only examined the process of service assembly the service provider is still critical to the delivery of certain service processes. Participants are part of the services marketing mix. The impact they would have on consumers satisfaction levels would definitely interact with the process of service assembly. This interaction needs to be investigated.

Finally, future research should attempt to incorporate all three elements of the services marketing mix (participants, physical evidence, process of service assembly) and price to move towards greater comprehension of the ultimate goal of all marketers--providing satisfaction.

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APPENDIXES

APPENDIX A

**CONSTRUCT DOMAIN FOR THE PROCESS
OF SERVICE ASSEMBLY**

"Standardized" Process

- 1 - Choice of Options
 - * usually very few; the key point is that no alterations are allowed for any of the offered options.
- 2 - Procedures or actions of service provider
 - * repetitive procedures: same actions for every customer.
- 3 - Behavior of Service provider
 - * courteous; however, focus is on task completion
- 4 - Visibility of service personnel
 - * low degree of visibility; focus is on task completion
- 5 - Cognitive effort of consumer
 - * low; similar to that of a repeat purchaser.
- 6 - Cognitive effort of service provider
 - * low due to constant repetition of the same task
- 7 - Delivery of Service (Time Dimension)
 - * fast; focus is on speed; volume is important
- 8 - Quality perception
 - * low - average: everyone gets the same thing, consumer is aware of the need to get the consumer in and out of the operation.
- 9 - Price
 - * usually low; due to volume (economies of scale)
- 10 - Labor Skills (Expertise)
 - * usually basic skills are all that are required.
- 11 - Demand
 - * standardized services are best suited to steady even demand

"Customized" Process

- 1 - Choice of Options
 - * usually many; the key point is that your request for a specific service is honored.
- 2 - Procedures of action of service provider
 - * constantly modified; behavior for each consumer is different
- 3 - Behavior of service personnel
 - * very personalized; use of first name and polite manners are stressed
- 4 - Visibility of Service provider
 - * high degree; key is to get you hooked on coming back to this particular individual for future service
- 5 - Cognitive effort of consumer
 - * high; consumer must think and make more choices
- 6 - Cognitive effort of service provider
 - * high; provider must be listening to what client is requesting and helping client make decisions

- 7 - Delivery of Service (Time Dimension)
 - * slower; focus is on individual client, not volume
- 8 - Quality perception
 - * high; client gets exactly what he requested.
- 9 - Price
 - * high; focus is on personalization not volume, extra time with clients increases costs.
- 10 - Labor Skills (Expertise)
 - * usually a high degree of skill level is required with a degree of flexibility.
- 11 - Demand
 - * customized systems can handle lumpy or uncertain demand.

"Intricacy" of Service Process

- 1 - Detailed
 - * The service task is complex and requires a great deal of time to administer The service provider has often had a great deal of training in order to correctly deliver this type of service.
- 2 - Number of Steps and Procedures
 - * This type of service seems to have a great many steps or procedures in the mind of the consumer.
- 3 - Difficult to understand/Comprehend
 - * Due to the detailed nature of the task the consumer often gets confused about the exact service procedure and what is taking place.
- 4 - Time Consuming
 - * an intricate process may be either a standardized or customized procedure but due to its complexity it is likely to be a time consuming service process.

Participants Involvement

- 1 - Personalized **
 - * Participants can be sincere and address the consumer by name and spend some extra time with client.
- 2 - Impersonal **
 - * Service personnel focuses on task completion and only engages in pro-forma small talk.
- 3 - Time dimension
 - * How long does the service provider interact with the client
 - **Surprenant and Solomon (1987) refer to these items as customized and programmed personalization. However, they believes that they are linked to process.

Degree of Customer Contact

- 1 - Amount of contact (high vs low)
 - * number of actual interactions; are these interactions for short or long periods of time? Are these interactions by phone? through the mail? face-to-face?
- 2 - Technological considerations
 - * the interaction may be with a machine instead of a human being. Thus, degree of customer contact maybe viewed as very small

APPENDIX B

PRE-TEST - STANDARDIZED SERVICE

INSTRUCTIONS

This survey deals with your opinion of the dental service - having your teeth cleaned. Please show the extent to which you think having your teeth cleaned possesses the following features described by each statement. If you strongly agree that having your teeth cleaned possesses a feature circle number 1. If you strongly disagree that having your teeth cleaned does not possess a particular feature, circle number 7. If your feelings are not strong, circle one of the numbers in the middle. There are no right or wrong answers - all we are interested in is a number that best shows your expectations about having your teeth cleaned.

NUMBER OF STEPS

1-The person who cleans my teeth can perform this task on me in just a few steps.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

2-Numerous actions must be completed by the person who cleans my teeth in order to deliver this service to me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

3-The dental procedure of having my teeth cleaned is composed of many stages.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

4-A small number of steps is all that is necessary for the individual who cleans my teeth to complete this task on me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

NUMBER OF OPTIONS

5-The individual who performs this task usually gives me numerous options from which to choose when I have my teeth cleaned.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

6-When I have my teeth cleaned I am usually offered few options by the attending individual.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

7-The individual who performs this task provides me with a limited array of alternatives when I have my teeth cleaned.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

8-A large number of choices are available to me when I have my teeth cleaned.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

AMOUNT OF CONTACT WITH THE SERVICE PROVIDER

9-I have a great deal of contact with the individual when I have my teeth cleaned.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

10-The person who cleans my teeth only has brief contact with me when I have this service performed.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

11-I rarely interact with the individual who performs the task when I have my teeth cleaned.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

TECHNOLOGICAL FACTORS

12-When I have my teeth cleaned it is necessary that the individual performing the task use lots of sophisticated, high-tech equipment.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

13-The person who cleans my teeth does not need fancy equipment to perform the task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

14-Technology is unimportant with regard to the individual cleaning my teeth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

15-The person who cleans my teeth needs complex technology to perform this task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

TIME DIMENSION

16-The task of having my teeth cleaned can be performed quickly by the individual performing the task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

17-I usually have to wait a long time for the individual who cleans my teeth to complete the task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

18-The process of having my teeth cleaned is time consuming.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

19-The individual who cleans my teeth usually does it quickly.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

INSTRUCTIONS: The following questions ask for information about yourself. Please make the appropriate response. All responses will be kept confidential.

20. Age: _____

21. Sex: _____ Male _____ Female

22. When was the last time you visited the dentist?

- _____ during the last month
- _____ during the last three months
- _____ during the last six months
- _____ during the last year
- _____ more than a year ago

23. Which of the following dental procedures have you ever had performed?

- _____ having your teeth cleaned
- _____ having a tooth filled
- _____ dental X-Rays
- _____ Root Canal
- _____ Bridge Work
- _____ Tooth Capped
- _____ Tooth Removed
- _____ Fitted for a Retainer
- _____ Tooth Sealants applied
- _____ Tooth Filed
- _____ Denture Work
- _____ Cosmetic Work (whitening, facings, etc.)
- _____ Treatment for Gum Disease
- _____ Tempo Mandibular Joint Work

Thank you for your cooperation.

APPENDIX C

PRE-TEST - CUSTOMIZED SERVICE

INSTRUCTIONS

This survey deals with your opinion of the dental service - having a tooth filled. Please show the extent to which you think having a tooth filled possesses the following features described by each statement. If you strongly agree that having a tooth filled possesses a feature circle number 1. If you strongly disagree that having a tooth filled does not possess a particular feature, circle number 7. If your feelings are not strong, circle one of the numbers in the middle. There are no right or wrong answers - all we are interested in is a number that best shows your expectations about having a tooth filled.

NUMBER OF STEPS

1-The person who fills my tooth can perform this task on me in just a few steps.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

2-Numerous actions must be completed by the person who fills my tooth in order to deliver this service to me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

3-The dental procedure of having my tooth filled is composed of many stages.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

4-A small number of steps is all that is necessary for the individual who fills my tooth to complete this task on me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

NUMBER OF OPTIONS

5-The individual who performs this task usually gives me numerous options from which to choose when I have a tooth filled.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

6-When I have a tooth filled I am usually offered few options by the attending individual.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

7-The individual who performs this task provides me with a limited array of alternatives when I have a tooth filled.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

8-A large number of choices are available to me when I have a tooth filled.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

AMOUNT OF CONTACT WITH THE SERVICE PROVIDER

9-I have a great deal of contact with the individual when I have a tooth filled.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

10-The person who fills my tooth only has brief contact with me when I have this service performed.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

11-I rarely interact with the individual who performs the task when I have a tooth filled.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

TECHNOLOGICAL FACTORS

12-When I have a tooth filled it is necessary that the individual performing the task use lots of sophisticated, high-tech equipment.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

13-The person who fills my tooth does not need fancy equipment to perform the task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

14-Technology is unimportant with regard to the individual filling my tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

15-The person who fills my tooth needs complex technology to perform this task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

TIME DIMENSION

16-The task of having my tooth filled can be performed quickly by the individual performing the task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

17-I usually have to wait a long time for the individual who fills my tooth to complete the task.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

18-The process of having a tooth filled is time consuming.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

19-The individual who fills my tooth usually does it quickly.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

INSTRUCTIONS: The following questions ask for information about yourself. Please make the appropriate response. All responses will be kept confidential.

20. Age: _____

21. Sex: _____ Male _____ Female

22. When was the last time you visited the dentist?

- _____ during the last month
- _____ during the last three months
- _____ during the last six months
- _____ during the last year
- _____ more than a year ago

23. Which of the following dental procedures have you ever had performed?

- _____ having your teeth cleaned
- _____ having a tooth filled
- _____ dental X-Rays
- _____ Root Canal
- _____ Bridge Work
- _____ Tooth Capped
- _____ Tooth Removed
- _____ Fitted for a Retainer
- _____ Tooth Sealants applied
- _____ Tooth Filed
- _____ Denture Work
- _____ Cosmetic Work (whitening, facings, etc.)
- _____ Treatment for Gum Disease
- _____ Tempo Mandibular Joint Work

Thank you for your cooperation.

APPENDIX D

MAIN TEST SCENARIOS AND QUESTIONNAIRE

INSTRUCTIONS

Please read the following story and imagine that you are the individual receiving the service. Then answer the questions that follow. This survey deals with your opinion of the dental service - having a tooth filled. If you strongly agree that having a tooth filled possesses a feature circle number 1. If you strongly disagree that having a tooth filled does not possess a particular feature, circle number 7. If you do not strongly agree or strongly disagree with a statement, circle one of the numbers in the middle that most closely approximates your views. There are no right or wrong answers - all we are interested in is a number that best shows your expectations about having a tooth filled.

Please read each question carefully and take you time in answering them. Feel free to refer back to the story in order to answer a question.

Thank you for your cooperation.

Scenario One - Standardized/Low-Price

You have recently moved and are visiting your new dentist for the first time. The technician takes x-rays and informs you that the dentist will be right with you. Ten seconds later the dentist walks in and examines the x-rays. The dentist comments that you have one cavity. He states:

Well, I'm sure that you are probably familiar with how a cavity is filled, but since you are a new patient I would just like to explain what I'll be doing. First, I'll be giving you a small injection of anesthetic into the gum by the affected tooth. Don't worry, this does not hurt - in fact it will feel like a small pin prick. The shot will numb your tooth in about three minutes. Then, I will drill out the decay in the tooth. After I finish drilling I will line the inside of the cavity with Resin. This just helps the filling bond with your tooth. Then all I have to do is pack the cavity with the amalgam - that's the filling material. After the filling has set a few seconds I'll file any excess material off the top off your tooth and rinse your mouth out. That's it! The entire process takes me about twenty minutes and costs \$20. Do you have any questions before we start?

Scenario Two - Standardized/High-Price

You have recently moved and are visiting your new dentist for the first time. The technician takes x-rays and informs you that the dentist will be right with you. Ten seconds later the dentist walks in and examines the x-rays. The dentist comments that you have one cavity. He states:

Well, I'm sure that you are probably familiar with how a cavity is filled, but since you are a new patient I would just like to explain what I'll be doing. First, I'll be giving you a small injection of anesthetic into the gum by the affected tooth. Don't worry, this does not hurt - in fact it will feel like a small pin prick. The shot will numb your tooth in about three minutes. Then, I will drill out the decay in the tooth. After I finish drilling I will line the inside of the cavity with Resin. This just helps the filling bond with your tooth. Then all I have to do is pack the cavity with the amalgam - that's the filling material. After the filling has set a few seconds I'll file any excess material off the top off your tooth and rinse your mouth out. That's it! The entire process takes me about twenty minutes and costs \$100. Do you have any questions before we start?

Scenario Three - Customized/High-Price

You have recently moved and are visiting your new dentist for the first time. The technician takes x-rays and informs you that the dentist will be right with you. Ten seconds later the dentist walks in and examines the x-rays. The dentist comments that you have one cavity. He states:

Well, I'm sure that you are probably familiar with how a cavity is filled, but since you are a new patient I would just like to explain what I'll be doing. I think you will find you have more choices than you were aware of. First, I'll be giving you a small injection of anesthetic into the gum by the affected tooth. Don't worry, this does not hurt - in fact it will feel like a small pin prick. However, if getting shots makes you really nervous you have the option of receiving nitrous oxide gas. (Dentist hands you a sheet of paper). This outlines the advantages and disadvantages of receiving gas. There is no extra charge for the gas. The shot will numb your tooth in about three minutes. Then, I will drill out the decay in the tooth. After I finish drilling I will line the inside of the cavity with Resin. This just helps the filling bond with the tooth. You also have the option of having a second sealant placed inside the cavity. (Dentist hands you a pamphlet). This brochure explains the purpose and advantages and disadvantages of the second sealant. There's no extra charge for the second sealant - it just takes longer to apply. The basic purpose of the second sealant is to increase the life of the cavity. Then all I have to do is pack the cavity with the amalgam - that's the filling material. (The dentist hands you a second pamphlet). This information explains the advantages and disadvantages of the three types of fillings, porcelain, silver, or gold. You decide which you would like and I fill the cavity with it. After the filling has set a few seconds I'll file any excess material of the top of your tooth and rinse your mouth out. The entire process takes me about 55 minutes and costs \$100. Why don't you take a few minutes to look over the material and see if you have any questions before we start.

Scenario Four - Customized/Low-Price

You have recently moved and are visiting your new dentist for the first time. The technician takes x-rays and informs you that the dentist will be right with you. Ten seconds later the dentist walks in and examines the x-rays. The dentist comments that you have one cavity. He states:

Well, I'm sure that you are probably familiar with how a cavity is filled, but since you are a new patient I would just like to explain what I'll be doing. I think you will find you have more choices than you were aware of. First, I'll be giving you a small injection of anesthetic into the gum by the affected tooth. Don't worry, this does not hurt - in fact it will feel like a small pin prick. However, if getting shots makes you really nervous you have the option of receiving nitrous oxide gas. (Dentist hands you a sheet of paper). This outlines the advantages and disadvantages of receiving gas. There is no extra charge for the gas. The shot will numb your tooth in about three minutes. Then, I will drill out the decay in the tooth. After I finish drilling I will line the inside of the cavity with Resin. This just helps the filling bond with the tooth. You also have the option of having a second sealant placed inside the cavity. (Dentist hands you a pamphlet). This brochure explains the purpose and advantages and disadvantages of the second sealant. There's no extra charge for the second sealant - it just takes longer to apply. The basic purpose of the second sealant is to increase the life of the cavity. Then all I have to do is pack the cavity with the amalgam - that's the filling material. (The dentist hands you a second pamphlet). This information explains the advantages and disadvantages of the three types of fillings, porcelain, silver, or gold. You decide which you would like and I fill the cavity with it. After the filling has set a few seconds I'll file any excess material of the top of your tooth and rinse your mouth out. The entire process takes me about 55 minutes and costs \$20. Why don't you take a few minutes to look over the material and see if you have any questions before we start.

1-The task of having my tooth filled can be performed quickly by this dentist according to his description.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

2-The dentist will fill my tooth in just a few steps.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

3-The dentist gave me numerous options from which to choose when he described the procedure to me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

4-I would have a great deal of contact with the dentist when he fills my tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

5-It will take the dentist a long time to complete the task of filling my tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

6-This dentist goes through many stages in order to fill a tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

7-The dentist would only have brief contact with me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

8-The process of having a tooth filled is time consuming.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

9-The dentist offered me a large number of choices when he described the procedure of filling a tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

10-I rarely interacted with the dentist who described the task of filling my tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

11-The dentist will be able to fill my tooth quickly according to his description.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

12-The price charged for this dental service is too high.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

13-I feel there is value in the service I would be receiving.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

14-If the dentist performs the procedure just as he described, I feel that I would be getting quality care.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

15-I would be pleased if the dentist followed the above procedures on me in order to fill my tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

16-This dental service, as described, is not worth the price charged.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

17-I feel like I would be receiving inferior service from this dentist if he performed the task as he described it to me.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

18-If the dentist performed the following steps on me in order to fill a tooth I would be very unhappy.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

19-Overall, I feel that I would be getting good value.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

20-Overall, I feel that this dentist would do quality work.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

21-Overall, considering everything described, I would be very satisfied with the dentist's procedure for filling my tooth.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

INSTRUCTIONS: The following questions ask for information about yourself. Please make the appropriate response. All responses will be kept confidential.

22. Age: _____

23. Sex: _____ Male _____ Female

24. When was the last time you visited the dentist?
_____ during the last month
_____ during the last three months
_____ during the last six months
_____ during the last year
_____ more than a year ago

25. Which of the following dental procedures have you ever had performed?

_____ having your teeth cleaned
_____ having a tooth filled
_____ dental X-Rays
_____ Root Canal
_____ Bridge Work
_____ Tooth Capped
_____ Tooth Removed
_____ Fitted for a Retainer
_____ Tooth Sealants applied
_____ Tooth Filed
_____ Denture Work
_____ Cosmetic Work (whitening, facings, etc.)
_____ Treatment for Gum Disease
_____ Tempo Mandibular Joint Work

Thank you for your cooperation.

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VITA

James T. Kenny

Candidate for the Degree of
Doctor of Philosophy

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MARKETING MIX: AN INVESTIGATION OF THE PROCESS OF
SERVICE ASSEMBLY AND PRICE

Major Field: Marketing

Biographical:

Personal Data: Born May 25, 1961 the son of Mr. and
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Education: Graduated from Bishop Kelley High School,
Tulsa, OK in May, 1979; completed requirements
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Administration degree from Oklahom State
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Professional Experience: 1983-1986, Operations
Manager, Westin Hotels, Inc., Tulsa, OK; 1987-
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Illinois University, Macomb, IL.