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Managing Service Organizations: Does Having a "Thing" Make a Difference?

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The authors conducted an extensive review of literature to see if there was evidence indicating there are differences in the management of services and manufacturing organizations. The literature identified differences that related to measurements used to assess effectiveness and efficiency, differences in production strategies and differences in production processes between organizations producing tangible goods and those producing intangible services. The results of the review indicate that there are a number of important and defendable differences between managing a manufacturing firm and a service. The authors also provide tables summarizing the differences and provide research implication for each difference. The review serves as a foundation for future academic efforts to better understand the unique challenges of managing organizations in the services sector.

Introductory economics textbooks differentiate between goods and services on the basis of tangibility (e.g., Miller, 2000). Goods are tangible and services are not. Discussions of the differences in management practices of organizations that produce tangible goods and organizations that produce intangible services go back several decades and are summarized in management and marketing textbooks (e.g., Chase & Aquilano, 1992; Kotler, 2000). The question is to what extent do these differences actually have a substantive effect on managerial style or strategy? Intuitively, it seems reasonable to expect that there are differences between managing an organization that produces something that can be seen, touched, and held and managing an organization that produces something that is perceived, sensed, and experienced.

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Even though the effect of these differences between goods and services seems significant, management scholars have not spent much time investigating them. While our colleagues in marketing have been energetically discussing these differences for over three decades (Judd, 1964; Rathmell, 1966; Shostack, 1977) and have amassed considerable literature on services (e.g., Berry & Parasuraman, 1993; Fisk, Brown & Bitner, 1993; Iacobucci, 1998; Swartz, Bowen & Brown, 1992), efforts in the management literature are more modest. Much of the early writing in management focused on the similarities of managerial concepts and challenges across the two sectors rather than investigating any differences. Indeed, a number of writers argued that service organizations could and should adopt a manufacturing approach to providing service. (Fitzsimmons & Sullivan, 1982; Levitt, 1972, 1976). Bowen, Siehl and Schneider (1989, p. 78) concluded, "In sum, the extension of manufacturing concepts to service organizations has received considerable attention." A rare exception to the prevailing idea that manufacturing management concepts and practices are directly applicable to services was offered by Thomas (1978, p. 165) in an early strategy article, "Because manufacturing has been the dominant economic force of the last century, most managers have been educated through experience and/or formal training to think about strategic management in product oriented firms. Unfortunately, a large part of this experience is irrelevant to the management of many service businesses."

The purpose of this paper is to review the literature in management, marketing, health care, and hospitality to detail what scholars know about the effect on managerial strategies, practices, and systems that producing an intangible service has in comparison to producing a tangible product. Identification of differences that exist between services management and product management should serve as a spur for further research and as a foundation for future academic efforts to better understand the challenges of managing organizations in the increasingly important services sector. With the exception of an earlier work by Bowen and Schneider (1988), the authors found no comprehensive review of literature discussing the differences between managing service organizations and managing goods producing organizations.

Definitions

To organize a review of this large and growing body of literature, some definitional clarification is necessary. A problem with defining services as intangible products is that intangible products can range from electric service to education to financial services and from health care to hospitality to sports. One of the more commonly used definitions is; "An act or performance offered by one party to another. Although the process may be tied to a physical product, the performance is essentially intangible and does not result in ownership of any of the factors of production" (Lovelock, 2000, p. 3). Pine and Gilmore (1999, p. 8) also offer a definition: "Services are intangible activities customized to the individual request of known clients." Since these authors were advancing the notion of "experiences", Pine and Gilmore (1999) suggested "experiences occur whenever a company intentionally uses services as the stage and goods as props to engage an individual. While commodities are fungible, goods tangible, and services intangible, experiences are memorable" (1999: 11–12). In other words, their definition of experiences expands the distinction between goods and services to the very intangible memory of an experience created by an interaction between an organization and the customer. Because the service experience is intangible, it is held in the mind and not in the hands.

The authors of this review, following Pine and Gilmore (1999), suggest that an intangible service includes all the elements that come together to create a memorable experience for a customer at a point in time. These elements include an intangible or tangible service product (e.g., hamburger, rock concert), a service setting (e.g., Olive Garden Restaurant, Woodstock) and a service delivery system (i.e., people, equipment, organization, and other systems that permit the delivery of the service experience to the customer).

Distinctions between service organizations and product organizations are getting more difficult to make as most companies produce both intangible and tangible products. A commodity product like coal will likely have some intangible elements to it (e.g., "I believe that West Virginia coal burns cleaner than Ohio coal.") Likewise, an intangible service may have some tangible elements associated with it (e.g., "The comfortable psychiatric couch made it easier to tell the doctor about my problems.") Nonetheless, differences exist between the experiences of buying wheat or corn and the experiences of getting psychiatric care, listening to a rock concert, or learning. As traditional manufacturing companies derive greater shares of their revenue from services, they increasingly recognize the need to understand the differences between management of the production of a good and the production of a service (Gronroos, 2000). However, when Jack Welsh, former CEO of GE, publicly suggests that General Electric is now in the service business, it is clear that the theoretical and practical distinctions between tangible producing organizations and intangible producing organizations are increasingly hard to make.

An additional complicating factor in developing distinctions between organizations producing tangible goods and those producing intangible services is that managerial and organizational distinctions can be found even between services. Some writers (Bowen, 1990; Lovelock, 1983), for example, argued that there are more similarities between McDonald's and a movie theater than between McDonald's and a full service restaurant. The increasing use of technology, including the Internet, now allow some services to be delivered without any contact between employees and customers during normal transactions. This eliminates the need to focus as much on one of the traditional consideration of services research—customer interaction with a customer contact employee. Despite differences amongst services, the authors believe the differences identified in this paper will hold across most services. Further it is not within the scope of this review to look at managerial differences between different types of service firms. This review looks at the managerial and organizational differences between managing systems that primarily produce an intangible service experience and those organizations that produce primarily a tangible product.

Organization of Review

Intangibility and its outcomes, simultaneous production and consumption, perishability and heterogeneity are characteristics that make managing services different from managing goods (Zeithaml & Bitner, 2000). Services cannot be stored, because there is nothing to store; thus, they are perishable. Since services cannot be stored, production typically cannot

Table 1
Differences resulting from intangibility

1. Differences in service organization assessment
a. Managing organizational effectiveness subjectively
b. Managing organizational efficiency subjectively
2. Differences in service production strategy
a. Managing service product quality
b. Managing capacity and demand
3. Differences in service production process
a. Managing production process to accommodate customer co-production
b. Managing the production setting to accommodate customer co-production
c. Managing production employees to accommodate customers as co-producers
d. Managing customers as co-producers

start until the customer demands them. Thus, production is often simultaneous with consumption. Heterogeneity of the service is a result of the service typically being co-produced by employees and customers, many of whom have never before worked together. Each customer subjectively evaluates the outcome of the service system. Thus, even when the outcome is consistent, as evaluated by objective measures, it will receive different evaluations from different customers. The authors of this paper propose that intangibility and the outcomes of intangibility create major differences between the way an organization producing services is managed and the way one producing tangible products is managed. These differences identified in the literature are shown in Table 1 and more fully explored in the literature review that follows.

Differences in Service Organization Assessment

Assessing organizational effectiveness and efficiency for an intangible product relies on subjective assessment by the customer. The inputs and outputs of the service production system often vary with the typically co-producing customer, making objective measurement difficult. Assessment of the quality and value of the organization's output lies entirely in the mind of the customer. It does not matter if organizational efficiency measures, the cost accountants, or the production engineers all affirm the excellence of the organization's service experience, if the customer does not perceive it that way. "Ultimately, only one thing matters in a service encounter—the customer's perception of what occurred" (Chase & Dasu, 2001, p. 84). Product organizations can refer to industry engineering standards, quality product standards and competing products to determine the relative quality and value of their product. The organization's management can count its work in process, finished inventory and compare raw material inputs with product outputs to calculate efficiency. An intangible service is dependent on what the customer thinks. Traditional objective measurements of effectiveness and efficiency need to be supplemented with subjective measures for assessing service experiences.

Managing organizational effectiveness subjectively. Effectiveness is the degree to which an organization realizes its goals (Etzioni, 1964). It is doing the right thing. A tangible product has search qualities; customers can test the product or at least see and feel the product before they buy it (Zeithaml, 1981). One car can be parked next to another and one tire can be compared to another on objective quality standards. If one compares the fit, finish, and features of a Jaguar with a Hyundai, it is easy to see why the Jaguar costs more. The search qualities of tangible products enable them to be measured objectively. As products become more intangible, it becomes more difficult to use objective measures of organizational effectiveness. Managers of service operations must use a subjective assessment of customer satisfaction and loyalty to determine effectiveness (Bowen & Shoemaker, 1998; Heskett, Jones, Loveman, Sasser & Schlesinger, 1994; Paulin, Ferguson & Payaud, 2000).

When the product is intangible, there is typically nothing to show, or compare, or objectively test; it has no search qualities. Successful psychiatric treatment is difficult to measure. How does one know when one is mentally healthy? It is not unusual for critics to pan a movie that does well at the box office. In fact, two people can come out of the same movie with two completely different opinions on the quality or value of the movie. Moreover, the same person can have different opinions of the service experience at different times. The determination of quality and values rests entirely in the mind of the customer at that particular moment in time. Service quality is given meaning by customers—it is perceived (Lundberg, 1991).

More than three decades ago, Levitt (1960) stated that customer satisfaction is the ultimate goal of any business. Drucker (1974) claimed that the purpose of a business is to create a customer. If what these scholars say is true, then the real measure of any business is customer satisfaction and customer loyalty. The intangibility of the service product means that the organization must seek to identify the driving force behind customers' purchase of the service and compete on the degree to which its particular service meets or exceeds those expectations, creating customer loyalty. In Gronroos (2000) terms, the organization must discover the way to build a lasting relationship with customers. This puts tremendous emphasis on identifying the key drivers of its targeted customers.

This need to understand and respond to the key drivers of its customers also means that the organization must spend considerable time and effort discovering and then monitoring their past, present and future expectations. It is not enough for an organization to know what the future expectations of its current customers are; it must also know what the future expectations of its non-customers are and why past customers are not present customers. This is especially difficult for producers of intangible products who have little ability to show prospective customers what the product could look like. Walt Disney built his first theme park on his vision of what a theme park should be. No one had ever before seen anything quite like Disneyland. Internet banking was not sought after by investment customers, but Schwab and Fidelity have certainly shown the viability of this strategy. Disney managers spend considerable time and money identifying their key drivers because they believe that, "It all starts with the guest" (Ford & Heaton, 2000).

Managing organizational efficiency subjectively. Efficiency is the ratio of inputs to outputs (Etzioni, 1964). As Megginson (1983) stated, it is a mathematical concept. In manufacturing processes involving tangible products, inputs and outputs are relatively easy to measure. In services, measurement of both inputs and outputs is more problematic. Some of the input is provided by customer co-production (Kingman-Brundage, 1995). Customers' knowledge, skills and abilities (KSAs) and their motivation to perform their production duties will vary (Lovelock, 1996).

Another problem with measuring service inputs is that customers place different demands on the service production system (Sill & Decker, 1999). A person purchasing a theater ticket may ask about the seating options, why one area costs US$ 20 more per ticket than another and take 10 minutes to purchase two tickets. Another person may call and ask for ticket prices and then state she would like the best four US$ 50 seats available. In this case, the heterogeneity of the demands of the customers result in one employee selling two tickets in 10 minutes and the other selling four tickets in 3 minutes. Northcraft and Chase (1985) suggested matching demands of the consumer with the minimally qualified method of delivery to increase efficiency. For example, persons seeking to make a routine bank deposit should be moved to the ATM machine, while bank personnel are reserved for nonroutine transactions. These authors comment that some customers will want to see a live teller, and options must be left open for these customers. Northcraft and Chase (1985) point out that customers must be satisfied with the service experience; an efficient service with no customers is not effective. Thus, the delivery system must be efficient, but flexible, to meet the heterogeneous demands of customers. The heterogeneity of customers' abilities and demands makes it difficult to measure the inputs in services objectively as most measurement techniques of inputs do not capture customer inputs (Stauss & Weinlich, 1997).

Outputs are not easy to measure in services either. Sill and Decker (1999) discussed how some restaurant patrons may be on their way to a play, and get in and out of the restaurant in an hour. Other guests have come to dine and spend several hours in the restaurant. If we measure output as the number of customers served, in one case the output is a service experience lasting 1 hour and in the other case it is a service experience lasting 2 hours. Lengnick-Hall, Claycomb and Inks (2000) found that customers can influence the outcomes they receive, providing support for the notion that outputs vary by customer.

Perhaps Johnston (1994) provided the most explicit comment on the use of quantitative measures of efficiency in services. He calls them meaningless algebraic solutions as they may misdirect managerial attention to improve the efficiency of only what may be insignificant and inwardly focused operational sub-systems. As Roach (1991) suggested, " . . . service companies will have to develop a new accounting metric." Metrics for outputs need to be subjective to take into account the heterogeneity of each customer's expectation of the output. Transaction based metrics measuring employee inputs need to be coupled with a measure of customer inputs. Shaw (1990) claimed that measuring service productivity based on objective output measures is another manufacturing tool misapplied to service companies. Measuring inputs and outputs in services requires a more subjective approach than measuring outputs and inputs in manufacturing firms. For the research implications of the differences discussed in this section see Table 2.

Differences in Service Production Strategy

Producing intangible products creates some unique challenges for managers. The simultaneous production and consumption of service products means recovery from or fixing product failures is different for service firms than it is for those producing tangible products. Tangible goods can go through a rigorous inspection process that quantitatively assesses

Table 2
Differences in service organization assessment

Differences	References	Research implications for services
Measurements used to assess effectiveness in services also include subjective measures of customer perceptions of quality and value.	Bowen & Shoemaker, 1998; Chase & Dsau, 2001; Ford & Heaton, 2000; Gronroos, 2000; Heskett et al., 1994; Paulin et al., 2000	What subjective measures of quality and value can appropriately and adequately be included in the overall assessment of organizational effectiveness?
Measurements used to assess efficiency in services also include measures of the heterogeneity of customers' knowledge, skills, abilities, and motivation as inputs. The measurement of outputs must capture the heterogeneity of the customers' expectations of the outputs.	Johnston, 1994; Lengnick-Hall et al., 2000; Lovelock, 1996; Roach, 1991; Shaw, 1990; Sill & Decker, 1999; Stauss & Weinlich, 1997	What measures of the customers' inputs and outputs can appropriately and adequately be included in the overall assessment of organizational efficiency?

quality against a measurable standard before the customer ever sees the product. Intangible products cannot. Second, tangible product failures, once discovered, are typically fixed by a designated repair specialist. Failure of intangible products is typically identified and fixed by the customer contact employee while the product is being consumed. Another challenge for service production strategy is that intangible products cannot be stored. Since there is no physical inventory, demand cannot be smoothed through inventories. A plane with 50 empty seats on Sunday cannot store the excess capacity and use it next Friday when the demand for seats is 40 more than the capacity of the plane. Production management strategies must be different in service firms than they are for firms producing tangible products.

Managing service product quality. A production organization can install a quality control function that inspects the finished product in some systematic way to make sure that the product meets design specifications. Those products that fail can be thrown on a rework pile, before a customer ever sees the failure. The quality inspectors know what a quality product is supposed to look like. When services fail, they fail in real time during simultaneous production and consumption. Schleinger and Heskett (1991, p. 22) affirm the difficulty of measuring service quality by stating, "the most important costs of all, those deriving from poor service rarely get measured." One measure that has been developed as a way to assess the subjective quality of a service is that developed by Parasuraman and his colleagues called SERVQUAL (Parasuraman, Zeithaml & Berry, 1988) which is based on customers' perceptions of service.

Further complicating the quality assurance process, when services fail, it is only the customer who knows that it failed to meet expectations. Since customers define quality based on their perceptions of what a good quality product should be, the service industry spends considerable effort trying to find suitable measures for quality and value because they cannot rely only on objective measures.

Consequently, the service organization relies on its customer contact employees to not only produce the service experience according to design, but also to find the inevitable failures and fix them in real time to a customer's immediate satisfaction (Hart, Heskett & Sasser, 1990). The customer contact employee is the quality control inspector, the primary complaint handler for poorly produced products, and the rework expert. Ritz Carlton Hotel employees, for example, are trained to record failures and the actions they have taken to remedy the situation (Zeithaml & Bitner, 2000). Restaurant servers can check the meal before taking it out of the kitchen, the desk clerk at the hotel can ask if everything was all right, and the attending physician can ask how you feel. The emphasis is on the customer contact employee to determine if the product met the customer's expectations and if not, to fix it (Su & Bowen, 2001). Service employees must be good negotiators and have the creative problem solving skills to find a solution acceptable to the customer.

Service organizations have several strategies available to help their customers make a positive assessment of the quality and value of the service experience. These are largely strategies based on making an intangible service somehow tangible so the customer can "see" and "feel" it and include pricing strategies (Bharadwaj, Varadarajan & Fahy, 1993) and branding strategies (Berry, 1999). As Levitt (1981, p. 100) said, "the most important thing to know about intangible products is that the customers usually don't know what they didn't get until they didn't get it. The point is that services seek to provide informational surrogates for a product's physical characteristics in order to assist their customers in making determinations of service quality.

A related quality control problem unique to service is how product failures are identified and fixed. It is a different quality control problem to have a product failure while the customer is actually consuming the service experience than it is to discover a defect during a routine quality control check of an assembly line production process. If a customer discovers a defect in a television after receiving it, for example, the television is fixed by a person specialized in repairing televisions. In services, the customer contact employee must not only co-produce the service but also must be prepared to fix problems. To further complicate the process, the co-producing service customers may blame themselves for service failure (Zeithaml, 1981). If a haircut is not done properly, customers may blame themselves for not communicating what they wanted to the hairdresser. Hoffman and Bateson (1997) provide a number of other reasons why service customers do not complain: Evaluation of services is subjective; the customer does not feel qualified to evaluate technical or professional services; and as co-producers of the service, they feel it would be confrontational. Managers of service operations must encourage and even incent employees to actively seek evidence of failure; this becomes an even more difficult managerial task, when not only does the customer not want to complain, but also the employee who caused the failure may be the customer contact employee charged with finding and fixing it (Barlow & Moller, 1996).

Fixing the problem is also different for services. Fixing a television means bringing it back to proper working order. How does one fix a roll of film that was ruined during processing? For some customers no equitable solution will satisfy, while for other customers a US$ 25 gift certificate will be an equitable solution. Services need to provide solutions the customer will perceive are fair, if they wish to retain their customers (Goodwin & Ross, 1989). The intangibility of service products means the variability of solutions to the same service failure is greater than the variability of solutions to a tangible product failure. It is relatively simple to show a customer a repaired television set and prove that it is fixed. It is far more difficult to show a customer a service recovery that actually fixed a bad service experience.

Managing capacity and demand. Because services typically involve simultaneous production and consumption, they are unable to use inventoried products to match capacity with demand or to smooth capacity utilization by producing for inventory (Sasser, 1976). Once the plane leaves the gate, the unused seat inventory is gone forever. The same is true for telephone lines, power generation capacity, hospital rooms, classroom seats, or teller availability to process bank customer transactions. Once the available capacity is unused, it has no value.

If General Motors wants to sell 6,000 units of a particular automobile model in a month, it does not make much difference, if it sells 75 units one day and 400 units another day as long as it meets its target of 6,000 units. Since services cannot be inventoried, management of demand is more sensitive to time. A dentist that has no appointments for 3 hours has forever lost the ability to use the capacity that once existed. Because of this, services often use promotions and lower prices to increase demand during slack periods (Kotler, Bowen & Makens, 1999; Sasser, 1976). For example, rapid transit systems will offer discounts during non-rush hour periods and theaters will offer reduced prices before 6 p.m. Another strategy for managing demand in services is focusing on different market segments that use the product differently. For example, a seaside resort hotel may focus on corporate meetings and training during the low season or a business hotel can offer special events for filling empty weekend rooms.

On the other hand, if there is too much capacity, then the idle capacity costs will likely make the firm uncompetitive with organizations that have been more successful in matching their capacity and demand. If there is not enough capacity to meet demand, the firm runs the risk of losing customers. Klassen and Rohlender (2001) pointed out the uncertainty of demand, which can fluctuate on an hour-by-hour basis, makes managing capacity and demand in services difficult. Service organizations must find ways to balance capacity with demand without the benefit of the manufacturers' physical inventory buffer or risk losing customers who refuse to wait for service.

Lovelock and Wright (1999) suggested a number of ways service managers can manage capacity: maintenance can be scheduled during periods of low demand; part-time employees can be used to expand labor-constrained capacity; and facilities and equipment can be rented. Sasser (1976) mentioned that increasing customer participation also can increase capacity. When telephone reservation systems get backed up, the customer is often referred to self-service over the Internet. These tactics can be used to create a flexible capacity that expands and contracts with demand. Without a buffering inventory to absorb the unevenness between supply and demand, the service production process has to predict the rate of both the customer arrivals and the customer participation in the service experience. Customer participation can create uncertainty in a number of ways. They may not understand the service offering or their role in obtaining the service experience. When this occurs the employee has to spend more time with the customer, often causing delays for other customers. This variance in customer ability to participate coupled with the high degree of interaction that can occur between the customer and employees complicates the predictability of time required in the service experience and the service organization's ability to match capacity and demand. (Booms & Bitner, 1981).

Collier (1987) identified several reasons why demand analysis is both quite different and more complicated for services than it is for manufacturing organizations. These differences are: (1) capacity is a surrogate for inventory in a service organization; (2) length of the "cycle of production" is shorter for services; (3) customer may be present in the production process; (4) service organizations focus on customer processing times rather than product processing times; (5) certainty of customer purchase is greater for product orders than it is for customer appointments for an experience; and (6) fewer service firms know the cost structure of producing a satisfied guest than manufacturing firms know about costs of made to quality specification product.

Some strategies for managing demand include: inventorying demand, requiring customers to make reservations and shifting demand. The service organization can also inventory demand by making customers wait in line and finding ways to divert them so they do not leave, abandon the line, or feel dissatisfied because they had to wait as part of the service experience. (Maister, 1985; Taylor, 1994, 1995). Busy doctors, popular restaurants, financial counselors, and other service organizations inventory demand through reservations or appointments. Service organizations cannot be sure that their perishable capacity reserved by a customer will in fact be used (Danet, 1981). As a result, they seek to guarantee revenues from customers who may not show up at the appointed time (e.g., a music center will charge students for a lesson cancelled on the same day as the lesson is scheduled). Finally, demand can sometimes be shifted (Lovelock & Young, 1979). For example, a patient may request an eye exam for September 21, but will accept an appointment on July 28. A meeting planner often has some flexibility in dates and the meeting can be moved to a date when the hotel has more unused capacity. Without a tangible product to inventory, managing capacity and demand is different in services than it is in manufacturing firms. The research implications of the differences in this section are listed in Table 3.

Differences in Service Production Process

Producers of intangible products often have both the customer and the employee involved in the production of the product. Although the degree of co-production can vary across services, most services involve a co-producing customer. The manufacturing plant producing tangible goods is usually buffered from the customer by design and distance. The requirement of co-production changes the production process in substantial ways and intrusion of the customer into the service delivery system creates unique challenges for a service firm, not common to manufacturing organizations. Both the service production processes and the production setting must be designed to accommodate customer co-production. Employees have to learn how to manage and work with customers who are co-producing the product with them. Management must develop human resource policies for managing customers. Some of the most interesting challenges and opportunities relate to the implications of the customer as an employee in service firms.

Managing production process to accommodate customer co-production. In service organizations, the customer is typically involved in the service delivery process (Kelley,

Table 3
Differences in service production strategy

Differences	References	Research implications for services
Quality control processes have to also include subjective measures of quality to accommodate customer co-production of the service experience and determination of quality.	Barlow & Moller, 1996; Goodwin & Ross, 1989; Hart et al., 1990; Su & Bowen, 2001; Zeithaml & Bitner, 2000	What measures of subjective quality need to be included to appropriately and adequately assess quality, costs of failure, benefits of service recovery, lifetime value of a customer, and related benefits of quality? What supervisory strategies and HR policies can incent employees to find and successfully fix service failures?
Production capacity strategy needs to also include the simultaneity of production with consumption and the consequent lack of inventory to buffer supply from demand.	Collier, 1987; Ford & Heaton, 2000; Klassen & Rohlender, 2001; Lovelock, 2000; Lovelock & Wright, 1999; Lovelock & Young, 1979; Maister, 1985; Northcraft & Chase, 1985; Sasser, 1976; Taylor, 1994, 1995	How should organizational and production strategies be expanded to also include adequate and appropriate consideration of costs and benefits of matching supply with demand variability (e.g., demand shifting, queuing strategies, employee cross-training, expanding customer co-production)?

Donnelly & Skinner, 1990; Lovelock, 2000; Zeithaml & Bitner, 2000). Customer co-production means processes employed to convert raw materials into outputs in services differ markedly from manufacturing (Kingman-Brundage, 1995; Mills & Moberg, 1982). Mills and Moberg (1982) believed the production process for services is similar to what Thompson (1962) termed as a transaction in which the client/customer and service worker exchange information and commitment. The more intense, lengthy, and complex the involvement of the co-producing customers, the more consideration must be given to accommodate them. Managing these knowledge exchange technologies has three implications for production processes. First, in producing a service workers cannot rely on past procedures and ways of doing things. Since they are continually faced with novel situations, they must be capable of developing novel solutions to react appropriately to the customer. Second, service technologies require a high information processing capacity within the technical core. Each customer interaction or encounter contains much uncertainty that requires a great deal of information processing. Third, service technologies require the client/customer to provide a great deal of information that may be required as raw material to the service or even as part of the service experience itself.

Service organizations must develop organizational designs and methods to help the customer contact employee cope with the uncertainty that customer involvement in the intangible service experience creates or they can design the process to buffer the customer from the technical core. Manufacturing firms typically seek to prevent customer intrusion into the technical core. Services firms often require customer intrusion and design their production processes accordingly.

Shostack (1987) developed service blueprints to help managers of service organizations design the process that produces an intangible experience instead of a tangible product.

The blueprints enable managers to visualize the interaction of the customer with the service production system. Shostack's blueprint can illustrate the amount of complexity and divergence in the service delivery system. Complexity is the number of sequences and steps in the service production process and divergence is the executional latitude and variability of the steps. Shostack illustrated this concept by blueprinting the service production process of two different florists. One florist provides pictures of the entire product offerings consisting of only eight floral choices. Customers have few choices, but know exactly what to expect from each. The other florist is a customized one where customers interact with the service employee to develop a unique arrangement. Customers have to be able to verbalize what they want and the service provider has to able to understand and deliver what the customers want. A standardized delivery process limits customers' interaction with the service employee as there is little need for extensive information processing to reduce uncertainty over the product. A customized service, on the other hand, increases the customers' interaction and the uncertainty and each process is designed differently even though the product, a floral arrangement, is the same.

A service delivery process low on divergence is easily adaptable to computerization (Lovelock & Wright, 1999). Technology can be used to buffer the production process from the customer. For example, an ATM buffers the customer from the employee, but not from other customers, as a queue may build at the machine. Internet banking buffers the customer from both other customers and the bank employee. Firms producing service experiences must find ways to manage the interaction of the customer with the technical core employees. Manufacturing firms do not typically have intrusions of customers into the technical core and thus, are not concerned with buffering customers from the technical core.

Langeard and Eiglier (1983) stated that one of the strategic considerations for a service firm is the amount of interaction with the customer in the design of the service delivery process. If a firm wants to replicate a service experience at multiple locations, which requires the customer coming to the service, the service product, setting and delivery system need to be standardized, so that management can ensure that each unit offers the same experience to each guest. For example, fast food companies are able to have thousands of outlets through standardization. On the other hand, a skilled entrepreneur can provide customized services that will be hard for chains to replicate (Langeard & Eiglier, 1983). When designing a service production system, the intrusion of the customer into the technical core is a major consideration for service managers. Service managers can limit the effect of the intrusion by limiting the divergence or can use technology to buffer the technical core.

Managing the production setting to accommodate customer co-production. The setting in which the service experience is simultaneously produced and consumed is an important part of the intangible service product. For services, the co-production requirement means that not only the location is important but also the appearance and design of the location are important to successfully produce the service experience. The successful service organization spends considerable time and money making sure that the environment adds to the service experience. What the customer sees, smells, senses, and touches will influence the perception of the service experience and determination of its quality and value (Baron, 1997; Werner, 1985). Wakefield and Blodgett (1996) found that the servicescape had a positive effect on customers' repatronage intentions. The producer of a tangible product, who can produce and then ship the product from a distant location, does not have to worry about its market being within driving distance or developing a setting that will enhance and facilitate customer co-production as service organizations must.

The work on environmental setting is surprisingly limited; perhaps no one has done more than Bitner (Bitner, 1990, 1992; Booms & Bitner, 1981, 1982). Bitner (1992) offered the term "Servicescape" to represent the impact the setting can have on the customer and suggests a model that details its component elements and moderating variables. The point of Bitner's work was to expand the consideration of the product to include the physical setting in which the service is experienced. The service setting cues desired and discourages undesired behavior and attitudes for both customers and employees; it also can be considered part of the service experience itself. Thus, a rope barrier not only tells guests where to stand in line, it sends a message that the organization will make the wait conflict free and lets the customer know the organization recognizes its role in managing this part of the guest experience.

Marketers also view the employee as part of the product from an atmospheric standpoint (Nelson & Bowen, 2000; Rafaeli, 1993). Neatness and dress of the employees are parts of the product being offered by the service firm. For example, employee uniforms are often designed to fit the theme of the organization and to make it easy for the customer to identify employees. The dramaturgical approach of Grove and Fisk (1983) stressed the importance of keeping the customer out of the backstage area in order to keep the customer from seeing anything that might detract from the theme or atmosphere of the service setting. Pine and Gilmore (1999) also saw service as a performance. A company that extensively manages the service environment is Walt Disney (Ford & Heaton, 2000). Many hospitality organizations and other services have taken their cue from the success of Disney's extensive use of theming to enhance the value of their customers' service experience by careful management of the service setting.

Managing the environment and the appearance of the people who populate it so that they contribute along with the "scenery" to the service experience becomes far more critical than would be true for a manufacturing plant of a tangible product. The setting provides tangible evidence about the service to the customer and helps to navigate the co-producing customer through the service experience. A well-managed and designed service setting means that the eating, or health care, or banking experience is not destroyed by a dirty restroom, depressing hospital room, or a flimsy looking structure. Customers often never see the physical setting of a manufacturing plant or even know or care where it is. In service operations where customers come to the firm, the service setting has an important effect on customers that must be managed.

Managing production employees to accommodate customers as co-producers. Supervising employees is different in services than it is for manufacturing employees, primarily because the guest contact service employee plays an important role interacting with the customer in the service encounter (Bitner, Booms & Mohr, 1994; Brown & Sulzer-Azaroff, 1994; Brown & Swartz, 1989; Czepiel, Solomon & Surprenant, 1985; Schneider & Bowen, 1985; Shostack, 1977). Managing the service employee is different from managing the manufacturing employee in several important ways.

The first and most important difference is that the service employee's tasks include customer interaction. In services, the customer contact employee is in the service factory, co-producing the service experience with the guest. This co-production role means that the employee must be not only task capable but interactively skilled. In this role, the employee must supervise the customer co-producing the experience. Thus, the employee must be capable of assessing the customers' KSAs to co-produce the service, to motivate the customers to properly perform their co-production roles, to train and correct any skill deficiencies, to supervise the performances of the customers' production activity, and to help customers evaluate the success of their co-production. In effect, the employee must not only help produce the service experience but also must successfully engage in an encounter with the customer (Lewis & Entwistle, 1990). This interaction frequently includes co-production, soliciting information about whether or not the experience meets the customer's expectations and taking corrective action if it does not (Schleinger & Heskett, 1991). In effect, the customer contact employee must have the ability to build a relationship with the customer (Gutek, 1995). Customer service is an interpersonal experience (Bell & Anderson, 1992).

The second difference is that employee selection and other human resource management concerns must focus on these customer relationship skills. The service product is, at least in part, the attitude the employee displays as he or she delivers the service experience. While manufacturing organizations tend to hire for skills only, service organizations need to hire for attitude and train for skills as it is unlikely that the service provider can teach the service attitude that their employees need. "Service characteristics like intangibility and customer contact require service employees to display more initiative, to cope more effectively with stress, to be more interpersonally flexible and sensitive, and to be more cooperative than their colleagues who work in manufacturing" (Schneider & Bowen, 1995, p. 4). This means that service firms place more emphasis on personality, energy, and attitude than on education, training, and experience in their recruitment, selection, and training strategies. While significant numbers of service positions require extensive training and education (e.g., medical, technical support, consulting, education, etc.), the vast majority of customer contact jobs are at the traditional entry level, where the task complexity is minimal (e.g., hospitality, financial services, customer service representatives, retail) and the importance of attitude is paramount. In other words, "Employee attitudes and behavior are more critical to service than manufacturing organizations" (Shetty & Ross, 1985, p. 11). A number of studies have provided empirical support for this proposition (Albrecht & Zemke, 1985; Bowen et al., 1989; George & Jones, 1991; Mohr & Bitner, 1995).

Finding employees who are good at creating a service experience is a vital goal and major hiring criterion of service organizations. "Selecting people for customer service roles is similar to casting people for roles in a movie. First, both require artful performances aligned with the audience expectations. Creating an interpersonal experience that customers remember as satisfactory, pleasant, or dazzling is like an actor's mission of having audiences so caught up in the play or movie that they start believing the performer is the person portrayed. Second, both requirements need a casting choice based on personality" (Bell & Anderson, 1992, p. 52).

A third difference is how the organization controls the employee. Bowen and Schneider (1988), made the point that the unpredictable range of customer demands, the intangibility of service output, the difficulty of *a priori* specification of all behaviors required of customer contact personnel can make it difficult to control employee behavior in service encounters *via* formal obtrusive mechanisms. "Instead, norms and values may need to be relied upon, both at the interface and throughout the organization, to guide and control customer service orientation" (Bowen, 1990, pp. 73–74). There are several strategies available to do this. One is to build a strong service climate (Schneider, 1980) in the belief that an organization can develop a "passion for service" by what it values, teaches, rewards and does. Other authors suggest building a strong service culture (Berry, 1995, 1999; Davidow & Uttal, 1989; Freiberg & Freiberg, 1996; Ford & Heaton, 2000; Van Maanen, 1989).

Culture is important to service organizations, where the guest contact employee may be responsible for producing the service experience. Since every customer and each experience is different, the employee must have some degree of discretion over the creation and delivery of the experience to ensure that the customer's differing needs and expectations are met. Parasuraman (1987) suggested that organizational culture provides direction for the employee. Culture fills the gaps between what the organization can train its employees to do and what the guest expects. The careful definition of organizational structure and supervisory controls so valued in the manufacturing world can significantly impede the service employee's ability to respond to the differing expectations of different customers.

A fourth difference in the service organization is faced with a need to manage emotional labor that is not usually found in product organizations (Hochschild, 1979). Wharton and Erickson (1993) described emotional labor as the management of emotion to create publicly observable facial and body displays to produce the intended impressions in the mind of others. Recognizing that the display of emotions by the service provider can either have positive or negative effects on the customer, the requirement of showing appropriate emotions becomes a part of the customer contact employee's job role (Pugh, 2001; Tsai, 2001; Van Maanen & Kunda, 1989). Winsted (2000) found that across services, customers desire customer contact employees to be competent, congenial and civil. She states that service providers who possess these characteristics are skilled in managing their emotions. The accepted emotions for different service positions can vary: a casino dealer at a high-limit table may be expected to display little emotion; a funeral director may be expected to show sympathy and sorrow, a school teacher may be expected to show concern for the students, while a server in a casual restaurant may be expected to display friendliness, happiness, and enthusiasm. The point is that displaying the expected emotion consistently across the job can be emotionally draining and stressful for the service employee and this stress must be managed.

One of the ways of managing emotional labor is to select employees who have the ability to control their emotions. Tansik (1990) suggests that tests such as the Service Orientation Scale and Profile of Nonverbal Sensitivities can be useful in selecting high contact employees. Winsted (2000) found that service providers who possess the characteristics desired by customers are better skilled in managing their emotions. Domagalski (1999) suggests congruence of the individual value and the organization's value, plus the willingness to do emotional labor are characteristics firms should look for in customer contact employees. Ashforth and Humphery (1993) consider emotional labor a form of impression management and noted that a premium is placed on the expected behavior of the employee in services.

A fifth difference is service employees who co-produce an intangible product with the customer have greater potential for role conflict. While conflict also may occur in product organizations, the addition of a customer in the co-production of the service experience expands the potential for conflict. Role conflict can occur when customer expectations exceed the abilities of the employee to meet them because the organization's expectations of the customer contact role are different (Shamir, 1980). For example, employees of a tax return provider may be expected by the organization to prepare returns quickly to maximize revenues during the short tax preparation season. However, a customer may expect personalized attention and demand too much of the tax preparer's time (Zeithaml, Berry & Parasuraman, 1988). Role conflict also can be caused by company polices that conflict with customer expectations (Broderick, 1998; Schneider, 1980). For example, a bank teller may have to explain to a customer that the funds of a check will not be available for a week, when the customer was planning on using them that day. Another source of role conflict is when an employee believes that the proper performance of a role is one way and the customer sends clear signals that the expectations are different. Role conflict can be reduced by better communication between managers and employees (Reardon & Enis, 1990) and good socialization and training programs (Hartline & Ferrell, 1993).

The sixth difference is customer contact employees are expected to be part-time marketers in service organizations. When co-producing the service experience with customers, they are often required to explain the attributes of the service they are producing as well as other products produced by their organization. If customer contact employees are to get customers enthused about the company and its products, they must be enthused about it as well. The concept of internal marketing has been proposed as a way to integrate marketing with human resource management to get service contact employees enthused. Internal marketing is a philosophy for managing the organization's human resources based on a marketing philosophy (George & Gronroos, 1991).

Gronroos (2000) claims training should be a basic component of an internal marketing program. Employees must not only be taught the company's products and promotions but also be taught the service culture of the organization. Managers of service organizations need to provide employees with adequate information so they can properly respond to customer inquiries. In addition, however, employees must be taught about the service offerings through involvement. If employees are not involved in planning and execution of the marketing effort, promotions designed to generate excitement and sales can have the opposite affect (Kotler et al., 1999). Gronroos (1990, p. 64) explains, "the internal market of employees is best motivated for service-mindedness and customer oriented performance by an active, marketing-like approach, where a variety of activities are used internally in an active, marketing-like and coordinated way." The first customers to whom an organization promotes should be its internal customers (Berry, 1981). As George (1990, p. 64) stated, "If management wants its employees to do a great job with customers, then it must be prepared to do a great job with its employees."

Managing customers as co-producers. Successful service firms must look beyond traditional boundaries of the firm and include customers as potential partners (Bettencourt, 1997; Lengnick-Hall, 1996). In other words, if customers contribute time, effort, or other resources to the production process, they should be considered a part of the organization (Zeithaml & Bitner, 2000). Having the customer inside the boundary of the organization creates unique managerial problems for services not found in manufacturing organizations (Lengnick-Hall, 1996; Lovelock & Young, 1979).

Mills and Morris (1986) developed a model of how customers can participate in the service experience production as "partial" employees. These writers proposed that the nature and extent of customer inclusion into the service production process is dependent upon not only the type of service, but also the task requirements, the client's skills and motivation level. The problem these authors noted in distinguishing between managerial strategies for employees and those needed for client/customers is the comparatively brief involvement of clients as partial employees, which limits the firm's ability either to conduct training and socialization or recover the costs associated with them. Even if customer co-production is limited, it can affect customer satisfaction. For this reason, if customers are part of the organization's production process, they must be managed the same as other parts of the service delivery system (Ford & Heaton, 2001).

Bowers, Martin and Luker (1990) suggested that the customer must be trained, the same as a company would train employees. As employees go through a socialization process, customers must also go through this process to help them perform their roles in the service experience (Kelley et al., 1990). These authors offer a number of methods to socialize the customer as a "partial employee." "These methods include: formal socialization programs, organizational literature, environmental cues, reinforcement, and observation of other customers" (1990: 318). Bowen (1986) suggested using the same motivation strategy for customers that you would for any employee who is physically present and involved in the service delivery system.

Schneider and Bowen (1995) identify several ways co-production can create value for the customer. First, they may get lower prices by helping to produce their own service experience such as bussing tables at a fast food restaurant. Second, they may feel higher levels of self-esteem by producing their own experience. Third, they may save waiting time. Fourth, they may have greater choice and fifth, they may be able to achieve greater customization of the service experience to allow higher satisfaction of the service's quality and value. The organization must carefully choose when, how, and where it wants the customer to participate and then select, train, and supervise carefully to make sure that the guest gets the experience expected.

Mills and Morris (1986) cited some of the problems that can occur if customer co-production is not managed, including substandard service delivery and disruptive service delivery. These writers claimed that management is sometimes faced with service recovery to cover for inadequate customer co-production. In service organizations human resource management techniques must be applied to both customers and employees. Obviously, the service organization must consider how to best balance the value added and quality enhancements that can be gained by customer co-production with the losses that co-production failures can create. Lengnick-Hall (1996) offers an additional concern with co-production: the customer may be a poor resource supplier. For example, customers may not be able to articulate their problem to a doctor. Thus, managers of service operations must develop communication strategies that enable their customers to take part in the co-production of the service. Supervising customers is a different managerial problem than supervising the auto employees on the assembly line. The research implications of the differences in this section are listed in Table 4.

Table 4
Differences in service production process

Differences	References	Areas for future research
Service delivery systems typically require exposing the technical core to environmental intrusions (in the form of customer involvement in co-producing the service experience) and increase the need for information processing due to the uncertainty such exposure creates.	Kelley et al., 1990; Kingman-Brundage, 1995; Langeard & Eiglier, 1983; Lovelock, 2000; Lovelock & Wright, 1999; Mills & Moberg, 1982; Shostack, 1987; Zeithaml & Bitner, 2000	What organizational and production processes and design strategies must be made to accommodate the intrusion of the customer into the technical core? What modifications in the design of information processing systems must be made to cope with the associated uncertainty of customer involvement?
The setting in which the service is simultaneously produced and consumed is an important part of the total experience.	Baron, 1997; Bitner, 1992; Ford & Heaton, 2000; Grove & Fisk, 1983; Pine & Gilmore, 1999; Wakefield & Blodgett, 1996	How, when and why does setting influence the customer determination of quality and value of the experience? What factors in the setting are key drivers of these determinations? What impact does setting have on the employee in co-producing the experience?
Services require employees to also act as managers of customers to successfully co-produce the service experience.	Bell & Anderson, 1992; Lewis & Entwistle, 1990; Schleinger & Heskett, 1991	What managerial and training strategies can be used to effectively teach employees to be managers of customers? How can employees be evaluated and rewarded as managers?
Selection strategies and methods need to expand to also include identification and assessment of employees who have a propensity to serve customers effectively.	Bowen et al., 1989; Heskett, 1987; George & Jones, 1991; Mohr & Bitner, 1995; Schneider & Bowen, 1985; Shetty & Ross, 1985	What knowledge, skills and abilities selection strategies yield customer oriented new hires? How and under what circumstances can employees master appropriate customer orientation?
Service employees cannot be trained to adequately respond to every customer expectation in every encounter.	Berry, 1999; Bowen, 1990; Davidow & Uttal, 1989; Ford & Heaton, 2000; Freiberg & Freiberg, 1996; Parasuraman, 1987; Schneider, 1980; Van Maanen, 1989	What organizational values, norms, and beliefs lead to a successful service culture? How important is a strong culture in successfully responding to customer expectations? Under what circumstances or for what types of service experiences must the organization rely on culture to substitute for training?
Service encounters with customers leads to an “emotional labor” aspect of job performance.	Ashforth & Humphery, 1993; Hochschild, 1979; Van Maanen & Kunda, 1989; Wharton & Erickson, 1993; Winsted, 2000	What jobs require emotional labor, when and how are these requirements detrimental to job performance, and how do both organizational and individual employees successfully manage these requirements?
Customer contact requirements in service roles expand the potential for role conflict.	Bowen & Schneider, 1988; Broderick, 1998; Domagalski, 1999; Hartline & Ferrell, 1993; Pugh, 2001; Reardon & Enis, 1990; Schneider, 1980; Shamir, 1980; Tansik, 1990; Winsted, 2000; Zeithaml et al., 1988	What managerial strategies can help minimize role conflict between the employee and the customer, the organization, and the employee? How important is employee role conflict in determining customer satisfaction, employee satisfaction, and organizational effectiveness?

Table 4 (*Continued*)

Differences	References	Areas for future research
In services, customer contact employees also perform a significant marketing role.	Berry, 1981; George, 1990; George & Gronroos, 1991; Gronroos, 1990	What managerial and HR strategies can successfully train, incent, and reward successful performance of additional marketing role for customer contact employees?
Service organizations need to expand their policies and procedures to also manage customers as "quasi-employees."	Bettencourt, 1997; Bowen, 1986; Bowers et al., 1990; Gutek, 1995; Kelley et al., 1990; Lengnick-Hall, 1996; Lovelock & Young, 1979; Mills & Morris, 1986	How do organizations attract, engage, supervise, reward, and retain customers that have the knowledge, skills, abilities, and how can they motivate them to successfully co-produce the service experience?

Summary

The issues identified in this literature appear to be defensible differences between the management of organizations producing tangible goods and those producing intangible services. These differences relate to measurements used to assess effectiveness and efficiency, the differences in production strategies and the differences in production processes between organizations producing tangible goods and those producing intangible services. The research suggests that there truly are important differences between managing a service organization and a tangible goods producing organization. The evidence also suggests that there are a great number of opportunities for empirical investigations of these differences and we hope that this review has provoked interest in pursing these.

References

Albrecht, K., & Zemke, R. 1985. *Service America*. Homewood, Ill: Dow Jones-Irwin.

Ashforth, B. E., & Humphery, R. H. 1993. Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18: 88–115.

Barlow, J., & Moller, C. A. 1996. *A complaint is a gift*. San Francisco: Berrett-Koehler.

Baron, R. A. 1997. The sweet smell ... helping effects of pleasant ambient fragrance on prosocial behavior in shopping malls. *Personality and Social Psychology Bulletin*, 23(5): 498–503.

Bell, C. R., & Anderson, K. 1992. Selecting super service people. *HR Magazine*, 37(2): 52–54.

Berry, L. L. 1981. The employee as customer. *Journal of Retail Banking*, 11(1): 33–40.

Berry, L. L. 1995. Relationship marketing of services: Growing interest, emerging perspectives. *Journal of the Academy of Marketing Science*, 23(4): 236–245.

Berry, L. L. 1999. *Discovering the soul of service*. New York: The Free Press.

Berry, L. L., & Parasuraman, A. 1993. Building a new academic field: The case of services marketing. *Journal of Retailing*, 69(1): 13–60.

Bettencourt, L. A. 1997. Customer voluntary performance: Customers as partners in service delivery. *Journal of Retailing*, 73: 383–406.

Bharadwaj, S. G., Varadarajan, R., & Fahy, J. 1993. Sustainable competitive advantage in service industries: A conceptual model and rese4rach propositions. *Journal of Marketing*, 57(4): 83–99.

Bitner, M. J. 1990. Evaluating service encounters: The effect of physical surrounding and employee responses. *Journal of Marketing*, 54(2): 69–82.

Bitner, M. J. 1992. Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2): 57–71.

Bitner, M. J., Booms, B. H., & Mohr, L. A. 1994. Critical service encounters: The employee's viewpoint. *Journal of Marketing*, 58: 95–106.

Booms, B. M., & Bitner, M. J. 1981. Marketing strategies and organization structures for service firms in marketing of services. In J. H. Donnelly & W. R. George (Eds.), *Marketing of services*: 47–51. Chicago: American Marketing Association.

Booms, B. H., & Bitner, M. J. 1982. Marketing services by managing the environment. *Cornell Quarterly*, 23(1): 35–39.

Bowen, D. E. 1986. Managing customers as human resources in service organizations. *Human Resources Management*, 25(3): 371–383.

Bowen, D. E. 1990. Interdisciplinary study of service: Some progress, some prospects. *Journal of Business Research*, 20: 71–79.

Bowen, D. E., & Schneider, B. A. 1988. Services marketing and management: Implications for organizational behavior. In B. A. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*: Vol. 10, 43–80. Greenwich CT: JAI Press.

Bowen, J., & Shoemaker, S. 1998. Loyalty: A strategic commitment. *Cornell Hotel and Restaurant Administration Quarterly*, 39(1): 12–25.

Bowen, D. E., Siehl, C., & Schneider, B. 1989. A framework for analyzing customer service orientations in manufacturing. *Academy of Management Review*, 14(1): 75–95.

Bowers, M. R., Martin, C. L., & Luker, A. 1990. Trading places: Employees as customers, customers as employees. *Journal of Services Marketing*, 4: 55–69.

Broderick, A. J. 1998. Role theory, role management and service performance. *The Journal of Services Marketing*, 12: 348–361.

Brown, C. S., & Sulzer-Azaroff, B. 1994. An assessment of the relationship between customer satisfaction and service friendliness. *Journal of Organizational Behavior Management*, 14(2): 55–75.

Brown, S. W., & Swartz, T. A. 1989. Gap analysis of professional service quality. *Journal of Marketing*, 53: 92–98.

Chase, R. B., & Aquilano, N. 1992. *Production & operations management: A life cycle approach*. Boston: Irwin.

Chase, R. B., & Dasu, S. 2001. Want to perfect your company's service? Use behavioral science. *Harvard Business Review*, 79(6): 79–84.

Collier, D. A. 1987. *Service management*. Englewood Cliffs, New Jersey: Prentice Hall, Inc.

Czepiel, J. A., Solomon, M. R., & Surprenant C. F. 1985. *The service encounter; managing employee/customer interaction in service businesses*. Lexington, MA D.C. Heath and Company.

Danet, B. 1981. Client: Organization interfaces. In P. C. Nystrom & W. N. Starbuck (Eds.), *Handbook of organization design*: Vol. 2, 384. New York: Oxford University Press.

Davidow, W. H., & Uttal, B. 1989. *Total customer service*. New York: Harper & Row.

Domagalski, T. A. 1999. Emotion in organizations: Main currents. *Human Relations*, 52: 833–852.

Drucker, P. F. 1974. *Management*. New York: Harper Row.

Etzioni, A. 1964. *Modern organizations*. Englewood Cliffs, NJ: Prentice Hall.

Fisk, R. P., Brown, S. W., & Bitner, M. J. 1993. Tracking the evolution of the services marketing literature. *Journal of Retailing*, 69(1): 61–103.

Fitzsimmons, J. A., & Sullivan, R. S. 1982. *Service operations management*. New York: McGraw Hill.

Ford, R. C., & Heaton, C. P. 2000. *Managing the guest experience in hospitality*. Albany, NY: Delmar.

Ford, R. C., & Heaton, C. P. 2001. Managing the guest as a quasi-employee. *Cornell Hotel and Restaurant Quarterly*, 42(2): 46–55.

Freiberg, K., & Freiberg, J. 1996. *Nuts*. Austin: Bard Press.

George, W. R. 1990. Internal marketing and organizational behavior: A partnership in developing customer-conscious employees at every level. *Journal of Business Research*, 20: 63–70.

George, W. R., & Gronroos, C. 1991. Developing customer-conscious employees at every level. In C. A. Congram (Ed.), *The AMA handbook of marketing for the service industry*. *internal marketing*: 85–100. New York: AMACOM.

George, J. M., & Jones, G. R. 1991. Toward an understanding of customer service quality. *Journal of Managerial Issues*, 2: 220–238.

Goodwin, C., & Ross, I. 1989. Salient dimensions of perceived fairness in resolution of service complaints. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 2: 87–92.

Gronroos, C. 1990. Relationship approach to marketing in service contexts: The marketing and organizational behavior interface. *Journal of Business Research*: Vol. 20, 3–11.

Gronroos, C. 2000. *Service management and marketing* (2nd ed.). Chichester, England: Wiley.

Grove, S. J., & Fisk, R. P. 1983. The dramaturgy of service exchange: An analytical framework for services marketing. In L. L. Berry, G. L. Shostack, & G. D. Upah (Eds.), *Emerging perspectives on services marketing*. Chicago: AMA.

Gutek, B. A. 1995. *The dynamics of service: Reflections on the changing nature of customer/provider interactions*. San Francisco: Jossey-Bass.

Hart, C. L., Heskett, J. L., & Sasser, W. E. 1990. The profitable art of service recovery. *Harvard Business Review*, 58(4): 148–156.

Hartline, M. D., & Ferrell, O. C. 1993. Service experience as theatre. *Advances in Consumer Research*, 19: 455–461.

Heskett, J. L. 1987. Lessons in the service sector. *Harvard Business Review*, 55(2): 118–126.

Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E., Jr., & Schlesinger, L. A. 1994. Putting the service-profit chain to work. *Harvard Business Review*, 72(2): 164–175.

Hochschild, A. R. 1979. Emotion in work, feeling rules and social structure. *American Journal of Sociology*, 85: 551–575.

Hoffman, D., & Bateson, J. 1997. *Essentials of services marketing*. New York: Dryden Press.

Iacobucci, D. 1998. Services: What do we know and where shall we go? A View from marketing. In T. C. Swartz, D. E. Bowen, & S. W. Brown (Eds.), *Advances in services management and marketing*: Vol. 7, 1–96. Greenwich, CT: JAI Press.

Johnston, R. 1994. Operations: From factory to service management. *International Journal of Service Industry Management*, 5(1): 49–63.

Judd, R. C. 1964. The case for redefining services. *Journal of Marketing*, 28(1): 58–59.

Kelley, S. W., Donnelly, J. H., & Skinner, S. J. 1990. Customer participation in service production and delivery. *Journal of Retailing*, 66(3): 315–335.

Kingman-Brundage, J. 1995. Service mapping: Back to basics. *Understanding services management*. New York: Wiley.

Klassen, K. J., & Rohlender, T. R. 2001. Combining operations and marketing to manage capacity and demand in services. *The Service Industries Journal*, 21(2): 1–30.

Kotler, P. 2000. *Marketing management*. Upper Saddle River, NJ: Prentice Hall.

Kotler, P., Bowen, J., & Makens, J. 1999. *Marketing for hospitality and tourism*. Upper Saddle River, NJ: Prentice Hall.

Langeard, E., & Eiglier, P. 1983. Strategic management of service development, emerging perspectives on services marketing. In M. Venkatesan, D. M. Schmalensee, & C. Marshall (Eds.), *Creativity in services marketing: What's new, what works, what's developing*: 62–72. Chicago: American Marketing Association.

Lengnick-Hall, C. A. 1996. Customer contributions to quality: A different view of the customer-oriented firm. *Academy of Management Review*, 21(3): 791–824.

Lengnick-Hall, C. A., Claycomb, V., & Inks, L. W. 2000. From recipient to contributor: Examining customer roles and experienced outcomes. *European Journal of Marketing*, 34: 359–383.

Levitt, T. 1960. Marketing myopia. *Harvard Business Review*, 38(6): 45–56.

Levitt, T. 1972. Production-line approach to service. *Harvard Business Review*, 50(2): 41–52.

Levitt, T. 1976. The industrialization of service. *Harvard Business Review*, 54(5): 63–74.

Levitt, T. 1981. Marketing intangible products and product intangibles. *Harvard Business Review*, 59(3): 94–102.

Lewis, B. R., & Entwistle, T. W. 1990. Managing the service encounter: A focus on the employee. *International Journal of Service Industry Management*, 1(3): 41–52.

Lovelock, C. H. 1983. Classifying services to gain strategic marketing insights. *Journal of Marketing*, 47: 9–20.

Lovelock, C. H. 1996. *Services marketing* (3rd ed.). Upper Saddler River, NJ: Prentice Hall.

Lovelock, C. H. 2000. *Services marketing* (4th ed). Upper Saddle River, NJ: Prentice Hall.

Lovelock, C. H., & Wright, L. 1999. *Principles of service marketing and management*. Upper Saddle River, NJ: Prentice Hall.

Lovelock, C. H., & Young, R. F. 1979. Look to consumers to increase productivity. *Harvard Business Review*, 57(3): 168–178.

Lundberg, C. C. 1991. Productivity enhancement through managing the service encounter. *Hospitality Research Journal*, 14(3): 63–71.

Maister, D. H. 1985. The psychology of waiting lines. In J. A. Czepiel, M. R. Solomon, & C. F. Surprenant (Eds.), *The service encounter, managing employee/customer interaction in service businesses*: 113–123. Lexington, MA: D.C. Heath and Company.

Megginson, L. 1983. *Management, concepts and applications*. New York: Harper & Row Publishers.

Miller, R. L. 2000. *Economics today: The micro view*. Boston: Addison Wesley.

Mills, P. K., & Moberg, D. J. 1982. Perspectives on the technology of service operations. *Academy of Management Review*, 7(3): 467–478.

Mills, P. K., & Morris, J. H. 1986. Clients as "partial" employees of service organizations: Role development in client participation. *Academy of Management Review*, 2(4): 726–735.

Mohr, L. A., & Bitner, M. J. 1995. Process factors in service delivery: What employee effort means to customers. *Advances in Services Marketing and Management*, 4: 91–117.

Nelson, K., & Bowen, J. 2000. The effect of employee uniforms on employee satisfaction. *Cornell Hotel and Restaurant Administration Quarterly*, 41(2): 86–95.

Northcraft, G. B., & Chase, R. B. 1985. Managing service demand at the point of delivery. *Academy of Management Review*, 10(1): 66–75.

Parasuraman, A. 1987. Customer-oriented corporate cultures are crucial to services. *Marketing Success*, 1: 39–46.

Parasuraman, A., Zeithaml, V., & Berry, L. 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1): 12–40.

Paulin, M., Ferguson, R., & Payaud, M. 2000. Business effectiveness and professional service personnel: Relational or transactional managers? *European Journal of Marketing*, 34: 453–471.

Pine, B. J., & Gilmore, J. 1999. *The experience economy*. Boston: HBS Press.

Pugh, S. D. 2001. Service with a smile: Emotional contagion in the service encounter. *Academy of Management Journal*, 44(5): 1018–1027.

Rafaeli, A. 1993. Dress and behavior of customer contact employees: A framework for analysis. *Advances in Services Marketing and Management*, 2: 151–174.

Rathmell, J. M. 1966. What is meant by services? *Journal of Marketing*, 29(1): 32–36.

Reardon, K. K., & Enis, B. 1990. Establishing a company-wide customer orientation through persuasive internal marketing. *Management Communication Quarterly*, 3: 376–387.

Roach, S. S. 1991. Services under siege: The restructuring imperative. *Harvard Business Review*, 59(5): 82–91.

Sasser, W. E. 1976. Match supply and demand in service industries. *Harvard Business Review*, 54(6): 131–140.

Schleinger, L. A., & Heskett, J. L. 1991. The service driven service company. *Harvard Business Review*, 59(5): 71–81.

Schneider, B. 1980. The service organization: Climate is crucial. *Organizational Dynamics*, 9(2): 52–65.

Schneider, B., & Bowen, D. E. 1985. Employee and customer perceptions of service in banks: Replication and extension. *Journal of Applied Psychology*, 70: 423–433.

Schneider, B., & Bowen, D. 1995. *Winning the service game*. Boston: HBS Press.

Shamir, B. 1980. Between service and servility: Role conflict in subordinate service roles. *Human Relations*, 33(10): 741–756.

Shaw, J. C. 1990. *The service focus: Developing winning game plans for service companies*: 5–23. Homewood, IL: Dow Jones-Irwin.

Shetty, W. K., & Ross, J. E. 1985. Quality and its management in service businesses. *Industrial Management*, 27(6): 7–12.

Shostack, G. L. 1977. Breaking free from product marketing. *Journal of Marketing*, 4(2): 73–80.

Shostack, G. L. 1987. Service positioning through structural change. *Journal of Marketing*, 51: 34–43.

Sill, B., & Decker, R. 1999. Applying capacity: Management science. *Cornell Hotel and Restaurant Administration Quarterly*, 40(3): 22–30.

Stauss, B., & Weinlich, B. 1997. Process-oriented measurement of service quality: Applying the sequential incident technique. *European Journal of Marketing*, 31(1): 33–55.

Su, W., & Bowen, J. 2001. Restaurant customer complaint behavior. *Journal of Restaurant* & *Foodservice Marketing*, 4(2): 35–65.

Swartz, T. A., Bowen, D. E., & Brown, S. W. 1992. Fifteen years after breaking free. In T. C. Swartz, D. E. Bowen, & S. W. Brown (Eds.), *Advances in Services Management and Marketing*: Vol. 1, 1–21. Greenwich, CT: JAI Press.

Tansik, D. A. 1990. Managing human resources issues for high-contact service personnel. In D. E. Bowen, R. B. Chase, T. G. Cummings, & Associates (1990), *Service management effectiveness*. San Francisco. Jossey-Bass Publishers.

Taylor, S. 1994. Waiting for service: The relationship between delays and evaluations of service. *Journal of Marketing*, 58(2): 56–69.

Taylor, S. 1995. The effects of filled waiting time and service provider control over the delay in evaluations of service. *Journal of the Academy of Marketing Science*, 23(1): 38–45.

Thomas, D. R. E. 1978. Strategy is different in service businesses. *Harvard Business Review*, 56(3): 158–165.

Thompson, J. D. 1962. Organizations and output transactions. *American Journal of Sociology*, 68: 309–324.

Tsai, W. C. 2001. Determinants and consequences of employee displayed positive emotions. *Journal of Management*, 27(4): 497–512.

Van Maanen, J. 1989. The smile factory: Work at Disneyland. In P. J. Frost, et al. (Eds.), *Reframing Organizational Cultures*. Newbury Park, CA: Sage Publications.

Van Maanen, J., & Kunda, G. 1989. Real feelings: Emotional expression and organizational culture. In L. L. Cummings & B. M. Staw (Eds.), *Research in Organizational Behavior*: Vol. 11, 43–103. Greenwich, CT: JAI Press.

Wakefield, K. L., & Blodgett, J. G. 1996. The effect of the sevicescape on customers' behavioral intentions in leisure service settings. *The Journal of Service Marketing*, 10(6): 45–61.

Werner, R. E. 1985. The environmental psychology of the service encounter. In J. A. Czepiel, M. R. Solomon, & C. F. Surprenant (Eds.), *The service encounter, managing employee/customer interaction in service businesses*: 101–112. Lexington, MA: Lexington Books, D.C. Heath and Company.

Wharton, A. S., & Erickson, R. J. 1993. Managing emotions on the job and at home: Understanding them. *Academy of Management Review*, 18(3): 457–486.

Winsted, K. F. 2000. Service behaviors that lead to satisfied customers. *European Journal of Marketing*, 34(3/4): 399–417.

Zeithaml, V. A. 1981. How consumer evaluation processes differ between goods and services. In J. H. Donnelly & W. R. George (Eds.), *Marketing of Services*. Chicago, IL: American Marketing Association Proceedings Series.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. 1988. Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52: 35–48.

Zeithaml, V. A., & Bitner, M. J. 2000. *Services marketing: Integrating customer focus across the firm* (2nd ed.). Boston: Irwin McGraw-Hill.

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