The Role of Employee Effort in Satisfaction with Service Transactions

Lois A. Mohr
GEORGIA STATE UNIVERSITY
Mary Jo Bitner
ARIZONA STATE UNIVERSITY

We examine how one aspect of the service encounter, perceived employee effort, affects customer satisfaction with service transactions. Results from two empirical studies indicate that perceived effort has a strong positive impact on transaction satisfaction, and this effect is not eliminated when the perceived success of the service outcome is statistically controlled. This shows that employee effort is appreciated by customers in its own right, regardless of its impact on the outcome. Additional analyses show that outcome can bias effort judgments. That is, when customers do not get the service outcome they want, they are less likely to recognize employee effort and hard work. The study results suggest implications for motivation, attribution, and customer satisfaction theories, as well as for managing the service encounter. J BUSN RES 1995. 32.239–252

Improving customer satisfaction is a primary goal for businesses today. Research shows that customer satisfaction is significantly related to repurchase intentions (e.g., Cronin and Taylor, 1992; Oliver, 1980), and customer retention, in turn, has a strong impact on profitability (Reichheld and Sasser, 1990). Learning what it takes to satisfy customers is not an easy task, however, particularly for service products, where human interactions often assume considerable importance. As both the size of the service sector and the importance of customer service for manufacturing firms grow, it becomes increasingly crucial to understand the complexities of customer responses to services. This article explores one factors that is likely to have a powerful impact on satisfaction with service transactions: perceived employee effort.

Theories of motivation, attribution, and equity suggest the importance of effort in social cognition, but none of these theories examine in depth the concept of effort itself. Using three types of data (critical incident descriptions, survey responses, and experimental data), we begin an examination of this complex variable that often plays a part in how people perceive each other. Across a set of two studies (one preliminary, exploratory study and one experiment) we investigate effort to determine: (1) the likelihood that customers actually form impressions of employee effort during service encounters, (2) the behavioral cues customers use for judging employee effort, (3) the effects of perceived effort on customer satisfaction with service transactions, and (4) the relationship between perceived effort and transaction satisfaction when the service outcome is held constant.

The results of the studies will contribute to our understanding of customer satisfaction by exploring the role of social influence or process factors in the evaluation of service transactions. Through the development and exploration of the effort construct, the research will also enhance knowledge relevant to attribution, motivation, and equity theories. Using multiple methodologies, the studies allow for greater depth of interpretation and confidence in the findings.

Perceived Effort and the Service Encounter

Conceptual Foundation

When there is person-to-person interaction between an employee who provides a service and a customer, termed a "service encounter," the quality of the interaction itself can be an important part of the service (Czepiel et al., 1985). Several writers (e.g., Czepiel, 1990; Gronroos, 1990; Parasuraman, Zeithaml, and Berry, 1985) see service quality as composed of two major dimensions: the service *outcome* (what the customer receives during the exchange) and the *process* of service delivery (the manner in which the outcome is transferred to the customer). Hence, it may be not only the functional outcome, but also the meanings the consumer gives to the social interactions taking place during the transaction that influence satisfaction with the transaction and with the product itself. In other words, we expect that satisfaction with the process (e.g., social interactions) and with the service outcome combine to influence satisfaction with the transaction. Furthermore, when a customer has multiple transactions with a firm, satisfaction with these transactions is combined to influence perceived service quality and overall satisfaction with the firm, as shown in Figure 1 (Bitner and Hubbert, 1993; Bolton and Drew, 1992; Oliver, 1993; Parasuraman, Zeithaml, and Berry, 1994). The boxed portion of Figure 1 represents the empirical focus of the two studies reported here.

Address correspondence to Lois A. Mohr, Assistant Professor of Marketing, Georgia State University, Atlanta, GA 30303.

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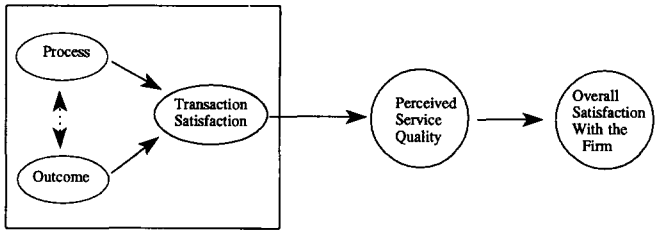

Figure 1. Conceptual foundation. *Note:* The large box represents the empirical focus of the two studies.

Using this conceptualization, employee effort (the amount of energy put into a behavior) is a process factor, for the employee exerts effort in the process of serving the customer, and the display of effort is part of what the customer may observe during the service encounter. Many process factors, such as facial expressions or small talk, are not likely to influence the actual, objective service outcome. Employee effort, in contrast, may affect the outcome, making this a complex and interesting factor to investigate.

Research on Customer Perceptions of Effort

Although no one has focused research on the effects of perceived employee effort on satisfaction, a review of the marketing literature provides some evidence that effort is a variable that matters to customers. The critical incident research of Bitner, Booms, and Tetreault (1990) and Bitner, Booms, and Mohr (1994) examines accounts of service encounters that are particularly satisfying or dissatisfying to the customer. The findings show that, in many cases, customers describe situations where the amount of employee effort had a strong impact on their satisfaction. For example, a basic service failure was sometimes turned into a highly satisfying incident when the employee put time and effort into trying to correct a problem, explaining the reason for the problem, or compensating the customer in some way.

In a study of restaurant tipping, Lynn and Grassman (1990) found both the number of courses ordered and bill size positively related to the amount given as a tip. Ex post facto they concluded that bill size and the number of courses both measure the server's effort, so customers were rewarding servers for, among other things, the amount of effort they believed the server put into waiting on them.

Indirect evidence suggesting the importance of perceived employee effort is provided by research finding customer satisfaction related to behaviors that may be considered cues of effort. These include frequent personal contacts made by life insurance agents (Crosby and Stephens, 1987), the amount of time physicians spend giving their patients explanations (Stiles, 1985), and customized personalization in banks (Surprenant and Solomon, 1987).

Research on perceived effort has been conducted in the advertising context by Kirmani (1990) and Kirmani and Wright (1989). They demonstrated that the perceived expense of an ad influences consumers' expectations of product quality. Probing into the cognitive processes leading to this result, they found that consumers infer marketing effort from advertising expense, which in turn leads to an inference about the firm's confidence in product success and quality. Finally, consumers' perceptions of the firm's confidence in the product lead to inferences about true product quality.

Taken together, these studies offer reasonable evidence for the expectation that perceived employee effort, a process factor, has a significant impact on customer satisfaction with service transactions. The investigation of effort has been atheoretical, however, and frequently effort was not the primary focus of the research. For this project, we draw on motivation, attribution, and equity theories to deepen our understanding and strengthen predictions regarding the role of effort in social cognition.

Theoretical Foundation

Perceived Effort and the Motivation Literature

Effort is one of the most prominent constructs in motivation theories, which examine factors that energize and direct behavior. A primary purpose of research in this area is to explain variations in energy or effort level. The results have a wide range of applications. For example, managers often use motivation theories in an attempt to induce their employees to work harder (e.g., Katz and Kahn, 1978; Kreitner, 1986) or smarter (e.g., Sujan, 1986).

Because motivation is an internal, unobservable concept, motivation is inferred from certain aspects of behavior. Bandura and Cervone (1986) state that the "major defining property of motivation is the level of effort mobilized and sustained in a pursuit." This means that another person can definitely infer someone's motivation *only* by observing behavioral or physiological indicators of effort. Locke et al. (1981) discuss three dimensions of behavior that are impacted by motivation: direction (based on goals), amplitude (effort), and duration (persistence) of the action. They define effort as energy expenditure. Persistence is directed effort extended over time.

Based on these conceptualizations, effort is defined here as the amount of energy put into a behavior or series of behaviors. Perceived effort, then, is defined as the amount of energy an observer believes an actor has invested in a behavior. It is effort that is noticed and, perhaps, assigned a meaning. Persistence is an observable feature of behavior that may be a cue for effort. That is, when someone persists in a behavior for a long time, that behavior is likely to be perceived as effortful.

Perceived Effort and Attribution Theory

Following the discussion of motivation theory, it is easy to understand why effort is an important concept for attribution theory, which looks at how people ascribe causes to events and behaviors. The process of making causal attributions for be-

havior often involves trying to determine one's own or another's motivations, and perceived effort is usually considered during this process.

Weiner (1986) found that ability (e.g., intelligence, skill) and effort are the reasons people give most frequently to explain success and failure. These two common attributions have quite different results, however. This is because, at least within a short timeframe, ability is seen as an uncontrollable factor, whereas effort is perceived as controllable, and volitional control is associated with responsibility and blame. Attributing outcomes to controllable causes, then, often leads to emotional reactions (e.g., anger, shame, pride) and the desire to reward or punish (Weiner, 1990).

Illustrating the powerful impact of effort attributions on behavior toward others, Weiner (1974) reports a series of studies demonstrating that research participants who were instructed to behave like teachers rewarded high-effort students and punished (i.e., gave negative feedback to) those who put out little effort for an exam. Failure accompanied by low effort and high ability was particularly punished, indicating that when the student was held personally responsible for the failure, punishment was maximal.

Research conducted by Folkes (1984) demonstrates the impact of effort attributions on customer satisfaction. She found that, when restaurant customers had a bad meal that they perceived to be caused by lack of employee effort, these customers became angry and believed they deserved an apology. She cites two examples ("the restaurant employees do not make an effort to serve the food hot or the restaurant does not bother to obtain fresh ingredients") demonstrating that customers may perceive lack of effort to be a factor causing service failures.

Perceived Effort and Equity Theory

Effort is also a prominent construct in equity theory. Equity in an exchange exists to the degree that one person's input-to-outcome ratio is perceived as equaling the other person's input-to-outcome ratio (Walster, Walster, and Berscheid, 1978). Inputs are a participant's contributions to an exchange. They include any factors perceived to be relevant for getting some return on one's personal investment. Effort is often found to be a relevant, and positive, input to the exchange (e.g., Farkas and Anderson, 1979; Lamm, Kayser, and Schanz, 1983). The implication is that, in an equitable exchange, the more effort one party exerts, the more outcome s/he expects in return.

Extending this reasoning to the buyer-seller exchange, the more effort the seller puts into the situation, the more s/he should expect to be rewarded by such things as customer satisfaction, repeat purchases, and positive word of mouth. This was tested by Oliver and Swan (1989a, 1989b), who measured the effects of equity perceptions on satisfaction for new car buyers. "Time and effort" was one of four items measured to determine salesperson input. They found salesperson input influenced how fair the customer perceived the exchange to be, and fairness had a significant impact on satisfaction. Applying these results to the service encounter, the customer may view employee effort as a valuable contribution to the exchange. If this is true, satisfaction should increase as employee efforts increase. That is, the customer may express satisfaction in exchange for the employee's extra efforts.

Research Questions

Although motivation theory provides a good conceptual definition of effort, it does not deal with perceived effort. Attribution and equity theories rely on perceived effort as a major explanatory variable, but they do not explore the construct in depth. Furthermore, of the research reviewed on customer response to perceived effort, only Kirmani (1990) and Kirmani and Wright (1989) specifically include perceived effort as a factor, and they do not develop the concept beyond a one-item measure. As a result, we only have a partial understanding of the dynamics of this seemingly powerful variable.

The research reported here was designed to expand understanding of perceived effort and test its impact in the context of the service encounter. Four questions guided the empirical research. The first two questions focus on exploring the perceived effort construct, whereas the final two ask about the relationship between perceived effort and transaction satisfaction.

1. *Do customers form an impression of the level of employee effort that is exerted in service encounters?* Although the literature review leads us to expect that customers do notice effort, no research has been conducted to examine this. It is possible that the service outcome is typically so important that it overwhelms process factors in the customer's mind. To the extent that this is true, customers would rarely notice how much effort the employee exerts. On the other hand, customers may consider employee effort a major feature of the service experience. When the service outcome is unknown or ambiguous, effort may take on even greater importance.
2. *What are the cues used by customers to determine how much effort the employee exerts?* If customers do, indeed, notice effort, research is needed to learn the specific employee behaviors that customers use to make judgments of effort. Because every behavior has both direction and amplitude (effort), we are asking how customers use directed behavior to infer effort. Although effort and behavioral direction are conceptually independent, it is possible that customers judge effort to some extent based on the direction of behavior. For example, although effort is sometimes exerted in directions customers perceive as negative, such as high-effort rude behavior, positive behavior, such as empathic listening, may be more likely to be judged as effortful. Knowledge of effort cues is important for communicating effort to customers.
3. *Does the amount of effort the customer perceives the employee to put into the encounter influence satisfaction with the transaction?* Based on the motivation literature, we expect peo-

ple to use effort to infer motivation, and motivation is usually viewed positively. Furthermore, the marketing literature (e.g., Bitner et al., 1994; Kirmani and Wright, 1989), leads us to expect a powerful positive relationship between perceived effort and satisfaction. It is possible, however, that effort is not always interpreted positively. For example, when the employee spends an unusual amount of time accomplishing a routine transaction, the customer may judge the employee as incompetent or the firm as disorganized. It may also be possible for the employee to try "too hard" in some situations, as when a sales clerk is seen as pushing too strongly to make the sale. To resolve these questions, this study examines whether, overall, perceived effort contributes to or detracts from transaction satisfaction.

4. *Does perceived effort influence satisfaction when service outcome is held constant?* As stated previously, employee effort is a process factor that is expected to influence the service outcome. It would not be surprising to find perceived effort positively related to outcome and outcome positively related to satisfaction. If perceived effort were found to affect satisfaction regardless of the outcome, however, this would be a stronger statement about the importance of perceived effort. The process factor of perceived effort would then be shown to have an impact in its own right, independent of the service outcome.

   We are not suggesting here that perceived effort is more important for customer satisfaction than the service outcome. What we are proposing is that, when an outcome is favorable, a high level of employee effort may enhance satisfaction. On the other hand, when the customer does not get the desired outcome, a low level of employee effort may cause additional aggravation to an already unsatisfactory encounter. If the employee does not have the power to produce the customer's desired outcome, the customer may appreciate it if the employee at least puts forth a concerted effort.

This project seeks answers to these four research questions through two complementary studies using first critical incidents accompanied by a survey, then an experiment.

Study 1: The Exploratory Study

Because little is known about perceived effort, the first stage of the research is an exploratory study. It addresses all four of the research questions, with the purpose of gathering more information about effort before conducting a formal experiment.

Research Procedures

A survey instrument was constructed requesting participants to write a one-page description of a memorable service encounter (i.e., a critical incident). Half were requested to describe a particularly satisfying experience they had with an employee of a service firm within the past six months. The other half were asked to write about a particularly dissatisfying experience. After writing this account, they were given a questionnaire to complete. The questionnaire contained a combination of scales and open-ended questions that probed more deeply into the respondents' perceptions of the experience. It was pretested and revised before its final administration.

Critical incident descriptions were solicited for several reasons. First, writing accounts of these encounters required spending 15 or 20 minutes remembering details and, to some extent, reliving the encounter. This should have refreshed the memory of the respondents, enabling them to give more valid answers to the items in the questionnaire. Second, these accounts provide rich and detailed data on service encounters. The accounts can be analyzed in their own right, and they also can be examined, encounter by encounter, in relation to responses to the other questionnaire items. Used in this way, they provide a description of the encounters that are the basis for the quantitative responses. This allows the qualitative and quantitative data to be directly linked, providing greater insight into the respondents' perceptions.

The Sample

The survey was administered to four classes of business students at a large urban university. Eighty people participated in the study: 63 were students enrolled in advanced undergraduate marketing courses and 17 were MBA students. A sample size of 80 was considered sufficient for this exploratory study, because it was designed as a preliminary test of our ideas.

Students were used for this stage of the study for several reasons. First, respondents needed to have sufficient writing skills to be able to describe service encounters, in writing, with some detail. Because the students sampled had completed at least two years of college, they were considered appropriate for this task. Second, research investigating the effects of employee effort in the service encounter requires a sample experienced with purchasing and consuming services. Although students are younger, on the average, than the consumer market for many service firms, students do have considerable experience with services. This sample, therefore, was expected to have enough service encounter experience to provide useful insights on the research questions. Specific demographics of the sample are reported in the results section.

Measures

CRITICAL INCIDENTS. Based on instruments used in the critical incident research conducted by Bitner et al. (1990) and Bitner et al. (1994), a form was developed asking respondents to report the details of a recent experience with an employee of a service firm that was particularly satisfying or dissatisfying. They were asked to describe: (1) the specific circumstances that led up to the situation, (2) what the employee said or did, and (3) what resulted that made them feel dis/satisfied. In addition, those describing the dissatisfying encounter were asked

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what the employee or firm could have done to make them happier with the situation.

PERCEIVED EFFORT. Based on the literature review, effort is defined as the amount of energy put into a behavior or series of behaviors, and perceived effort is defined as the amount of energy an observer believes an actor has invested in a behavior. Effort determines a behavior's vigor (Bandura and Cervone, 1986; Cofer and Appley, 1964), amplitude (Locke et al., 1981), and persistence (Jacobs, Prentice-Dunn, and Rogers, 1984; Locke et al., 1981), and customers may perceive any of these behavioral qualities.

In common sense terms, effort is equated with "really trying," with "putting a lot into" the situation. One way customers might decide how much effort an employee is putting into an encounter is by noting how attentive the employee is. Because no multi-item scales of perceived effort already existed, original items were constructed. Based on the above definitions and conceptualizations of effort, five items measuring perceived effort were written. Each focused on one of the following terms: energy, persistence, attentiveness, trying, and effort itself. Respondents rated their agreement with each statement (e.g., "The employee put a lot of effort into taking care of me") on a five-point Likert scale.

CUES OF PERCEIVED EFFORT. Following the measure of perceived effort, an open-ended question asked respondents to describe what the employee had done that made them decide he or she was trying hard or not trying hard.

SATISFACTION WITH THE TRANSACTION. Respondents were asked to evaluate their satisfaction with two primary aspects of the transaction (the service received and the employee) and with the overall transaction (called the "service experience" on the questionnaire). The wording was adapted from scales used by Bitner (1990), Churchill and Surprenant (1982), Crosby and Stephens (1987), and Tse and Wilton (1988). Respondents rated their satisfaction on seven-point scales anchored by "completely satisfied" and "completely dissatisfied."

SERVICE OUTCOME. One item was included in the questionnaire to measure whether the customer's desired service outcome had been obtained during the encounter. They were asked if, by the end of the incident, they had received the basic service they wanted when they approached the firm for service. Categorical response options of "yes," "no," and "other" were supplied.

DEMOGRAPHIC VARIABLES. At the end of the questionnaire, respondents were asked for information about themselves on three demographic variables: sex, age, and educational level.

Results

THE SAMPLE. Of the 80 research participants, 79 completed the demographic questions. Of those 79, 52% were female, whereas 48% were male. Seventy-six percent had completed some college, and 24% had obtained a college degree. The age of the sample ranged from 20 to 41, with a mean of 24. Although this sample is not representative of the general population, it is sufficiently varied to provide useful data for this exploratory stage of the research.

Respondents were free to write about any service firm they chose. Those described most frequently were restaurants (discussed by 19 participants), airlines (9), banks (9), car repair shops (8), and health care (5). All other services were described by four or fewer respondents. Overall, the 80 respondents wrote about 24 different services, providing data on a varied sample of service industries.

THE SCALES. Responses on the perceived effort scale (formed by averaging the responses on five items) ranged from 1 to 5 and had a mean of 3.05 and a standard deviation of 1.60. For the satisfaction scale (three items), responses ranged from 1 to 7, with a mean of 3.85 and a standard deviation of 2.55. For reliability checks, Cronbach's coefficient alpha was computed for each scale as a measure of internal consistency reliability. The resulting reliability estimates (0.96 for perceived effort and 0.99 for satisfaction) are quite high.

QUESTION 1: DO CUSTOMERS FORM AN IMPRESSION OF EMPLOYEE EFFORT DURING SERVICE ENCOUNTERS? The critical incident descriptions were examined to see whether these customers made spontaneous references to employee effort. The incident accounts should be relatively uncontaminated by experimenter expectations because they were elicited first in the study, and the questions prompting the responses did not refer to employee effort in any way.

The starting point for analyzing the responses was the conceptual definition of perceived effort – the amount of energy believed to be invested in a behavior. A thesaurus was consulted to develop a list of words and phrases synonymous with effort, energy, and persistence. This list included terms such as enthusiasm, active helping, and motivation. Two researchers (one of the authors and a doctoral student who was provided with the list of effort synonyms) then coded each incident on whether the respondent did or did not use such terms while describing the encounter.

This turned out to be a difficult judgment task because most of the incident descriptions referred, either directly or indirectly, to employee effort levels. As a result, drawing the line between when the respondent was actually describing effort versus describing behaviors from which effort could be inferred was not easy. The interjudge agreement was 66%. A second interjudge reliability measure, I_r (Perreault and Leigh, 1989), was found to be 0.57. To arrive at a conservative final estimate of how often respondents mentioned effort, an incident was judged to have mentioned effort only when *both* researchers categorized it that way. The final estimate, then, is that 39 (49%) of the sample of customers spontaneously discussed employee effort when describing the encounter.

The point of this analysis is not to arrive at a precise estimate of the proportion of service encounters where effort is

noticed but rather to determine whether it is reasonable to expect that customers commonly do, in fact, pay attention to employee effort. The critical incident accounts do show that customers often notice effort, and several examples can be used to illustrate this. High effort levels can clearly be seen in respondents' phrases such as, "she went one step further," "he tried to be helpful," "she had done everything in her power," and "he was willing to go on his lunch hour to mail my wallet to me." On the other hand, the following phrases indicate service encounters where respondents judged employee effort as inadequate: "the employee did absolutely nothing," "she never took the time," "she refused to walk to the front of the plane to get my requested dinner," and "she could have apologized and/or tried to explain." Informal observations made while reading the incident accounts show that high or low levels of perceived effort sometimes led to emotional responses, for employee effort was often described in either glowing or derogatory tones. These results lead us to expect that perceived effort does impact customer satisfaction, and we will discuss this in relation to question 3.

QUESTION 2: WHAT ARE THE CUES USED BY CUSTOMERS TO DETERMINE HOW MUCH EFFORT THE EMPLOYEE EXERTS? An open-ended question asked the respondents which employee behaviors they used to judge the amount of effort the employee exerted. All but one of the respondents answered this question, and many described several behaviors. For the analysis, we listed all the behaviors mentioned by respondents, then simplified the list by combining those with similar meanings. We then grouped the behaviors into three basic categories that seemed to capture the meaning of the responses. At this exploratory stage of the research, we were simply looking for the variety of behaviors that respondents used as cues for effort rather than attempting to determine the frequency of use of behavioral categories or the robustness of the categories.

The resulting list of effort cues is presented in Exhibit 1. The first category contains cues closely related to the conceptual definition of effort. This includes active helping, often with persistence (or being unwilling to do the requested work), time spent with the customer, and energy or enthusiasm. A second group of cues indicates that effort is often inferred from the quality of the interaction. A cue in this category that was mentioned frequently was the friendliness or rudeness of an employee. For example, when employees made small talk or personalized the encounter, it was judged as a sign of effort. On the other hand, when they showed impatience or argued with respondents, it was perceived as either lack of effort or negative effort. Other employee behaviors related to the quality of the interaction include attentiveness, caring, sensitivity, timing, information-giving, adaptiveness, and honesty. This category shows that many respondents saw positive interactions during the service encounter as indicating high levels of employee effort. The third set of cues shows that some respondents inferred effort from the outcome of the transaction. For example, if an employee did the requested work correctly, it was seen as an indication of effort. According to this group of responses, if the outcome was good, effort was considered high.

Exhibit 1. Study 1: Cues of Perceived Effort

Cues supportive of the conceptual definition of effort:

- Active helping (with persistence) or unwilling to do work/pushing work onto customer or shuffling customer off to someone else, blaming others for problems
- Time (spending extra time with customer)
- Energy/enthusiasm

Cues related to the quality of the interaction:

- Friendliness/rudeness (e.g., masking small talk, personalizing the encounter, treating customers as guests vs. not being friendly, being impatient, condescending, blaming, arguing with the customer, stereotyping the customer negatively, acting suspicious of the customer, judging, badgering, using offensive body language)
- Attentiveness/inattentiveness (e.g., ignoring customer)
- Caring or not, disinterested
- Sensitivity vs. insensitivity (e.g., noticing customer's needs, listening, asking the right questions, asking for feedback)
- Timing (helped at the right time or at the right pace or not)
- Providing information (extra information or the right amount vs. too little or no information)
- Rigidity vs. adaptiveness (e.g., willing or unwilling to bend the rules or to consult the supervisor)
- Honesty/dishonesty

Cues related to the outcome of the transaction:

- Outcome (did or did not do the requested work (correctly or not))
- Providing good service though busy, fitting customer into busy schedule

Others:

- Preparation for the encounter (e.g., set up the right environment)
- Doing work free

Overall, these data point to the broadness of the effort construct. Effort is inferred from many different behaviors and from judgments of these behaviors that vary in their level of abstraction. These customers inferred employee effort from the quality of their interaction with the employee, the amount of active helping, the energy and persistence shown by the employee, and the outcome of the transaction. Informal observations of these cues leads us to conclude that behavior that was directed positively (from the customer's perspective) was generally judged as effortful.

QUESTION 3: DOES THE AMOUNT OF EFFORT THE CUSTOMER PERCEIVES THE EMPLOYEE TO PUT INTO THE ENCOUNTER INFLUENCE SATISFACTION WITH THE TRANSACTION? Based on the literature review, a positive relationship was expected between perceived effort and transaction satisfaction. To test this, satisfaction was

regressed on perceived effort. The resulting β (standardized regression coefficient) is 0.94, which has a t-score that is significant at the 0.0000 level. The adjusted R^2 is 0.88, indicating that about 88% of the variance of satisfaction is explained by perceived effort. These results clearly support the expected positive relationship between perceived effort and satisfaction for the service encounters sampled in this study.

This relationship is quite strong, and it is possible that using critical incidents to prompt the recollection of service encounters inflated the correlation. That is, asking respondents to think of particularly satisfying or dissatisfying service encounters is likely to have induced a frame of mind generally positive or negative toward the employee. All questions about the employee then may have been answered with a positive or negative predisposition (i.e., a halo or forked-tail effect), regardless of how respondents may have judged various aspects of the incident at the time. For this reason these results should be interpreted cautiously.

We gain additional understanding of how perceived effort impacts satisfaction by looking at those encounters where the respondent did *not* indicate a positive relationship between these two factors. After examining each respondent's scores on the perceived effort and satisfaction scales, 14 cases were found that were clear examples of the customer rating effort high and satisfaction low ($n = 11$) or effort low and satisfaction high ($n = 3$). The critical incident descriptions were then read for clues of factors that may have diminished this otherwise strong relationship. Although the results are based on a small number of respondents, they do demonstrate what can happen during a service encounter to mitigate the positive impact of perceived employee effort.

When employee effort was high but satisfaction was rated low, most often respondents described situations where the employee was trying hard but seemed incompetent or inefficient. In these situations it appears that the employee had to work hard because of low ability. For example, one employee at a fast food restaurant could not understand the customer's order and kept asking the customer to repeat the order, leading to frustration on both sides.

In several high-effort, low-satisfaction accounts, inconsistent effort was an apparent problem for the customer. These were situations where the employee's first efforts were minimal but then improved, or, alternatively, where the efforts were first satisfactory but then declined. Another type of incident involved employees who exerted some effort, but it was judged to be insufficient to really help the customer. In a type of incident mentioned only once, the respondent described an encounter where the employee tried too hard, appearing overbearing and insensitive. The final case in this category is one where the employee was described as exerting effort in a negative, rude manner.

For those three encounters where the respondent was satisfied but rated effort low, two accounts were of service encounters where the employee's efforts were seen as sufficient, but the situation simply did not require a tremendous amount of effort. The third case was a situation where the customer got the desired results due primarily to his own assertive efforts.

Overall, these accounts show that employee effort and customer satisfaction, although highly correlated, are not inextricably linked. For example, employee effort may not be able to compensate for basic incompetence, and spurts of effort may not make up for otherwise indifferent behavior. In addition, when customers believe they can be adequately served without the employees exerting a great deal of effort, they do not necessarily require a show of effort to be satisfied. Although only one case, we did find evidence that an employee can try too hard and be perceived as overbearing as a result.

QUESTION 4: DOES PERCEIVED EFFORT INFLUENCE SATISFACTION WHEN SERVICE OUTCOME IS HELD CONSTANT? If the perceived effort–satisfaction relationship were to disappear with outcome statistically controlled, this would indicate that effort only impacts satisfaction through its effect on the outcome. If, on the other hand, there were still a significant perceived effort–satisfaction relationship with outcome controlled, this would be evidence that customers like to see the employee exerting effort, and this evaluation augments the effect that outcome has on satisfaction.

To answer this question, satisfaction was regressed on perceived effort separately for those who did and did not report receiving their desired service outcome. The results show that the relationship between perceived effort and satisfaction is positive and significant in both cases, but it is stronger for those customers who received the service they wanted ($\beta = 0.92$, $p < .0000$) than for those who did not ($\beta = 0.52$, $p < .0003$). Furthermore, when satisfaction is regressed on perceived effort, outcome, and the perceived effort–outcome interaction, the interaction effect is significant ($\beta = -0.34$, $p < .0003$). This indicates that outcome significantly moderated the relationship between perceived effort and outcome. Although these results demonstrate a tendency for effort to influence satisfaction more powerfully in situations where customers get what they want, they also show that effort may be important even when customers do not get the desired service. That is, employee effort may have enhanced satisfaction for those respondents who received their desired outcome and, to a lesser degree, it may have reduced dissatisfaction for those who did not receive their desired outcome.

Conclusions from Study 1

Based on the critical incidents and questionnaires, we conclude that our respondents often noticed and thought about the employee effort that was exerted during the service encounters they described. To determine the level of employee effort, these respondents sometimes used behaviors that were likely to be closely related to the employee's actual effort level (i.e., cues related to the conceptual definition of effort). Often, however, they made a greater inferential leap by judging effort from the quality of the interaction or from the service outcome. Overall,

almost all of the cases studied demonstrated that effort was evaluated positively.

The data lead to the conclusion that, for our respondents, the relationship between perceived effort and customer satisfaction is likely to be a powerful one. Furthermore, the relationship persists even when service outcome is held constant, suggesting that there is something about effort that is important beyond its effect on the outcome. Customers may like to see employees working hard as a sign that they care about them.

It is not clear, however, that customers always discriminate between employee effort and outcome. In this survey, for example, service outcome was sometimes given as a cue for determining effort. Because effort and outcome are likely to be strongly correlated in many naturally occurring situations, including service encounters, we expect that customers often confuse these factors.

To get a better understanding of how customers view effort vis-à-vis outcome, effort and outcome need to be clearly separated and their impact on each other and satisfaction studied. Study 2 was designed to do this by experimentally manipulating effort and outcome independently of each other.

Study 2: The Experiment

This stage of the project looks again at effort cues, but the primary focus is on research questions 3 (Does perceived effort influence customer satisfaction?) and 4 (Does perceived effort influence satisfaction when service outcome is held constant?). Because we experimentally controlled the employee's effort level and the service outcome, we were also able to examine the accuracy of the respondents' effort and outcome judgments as they played the role of the customer.

Hypotheses

Based on theory combined with what we learned about perceived effort in Study 1, we developed four hypotheses.

H1: The level of effort the customer perceives the employee to exert is positively related to customer satisfaction with the service transaction.

This hypothesis is based on the literature (e.g., Bitner et al., 1990; Kirmani and Wright, 1989; Oliver and Swan, 1989a, 1989b) and the results of Study 1.

H2: The success of the service outcome as perceived by the customer is positively related to customer satisfaction.

Parasuraman et al. (1985) discuss how crucial the service outcome is for the customer. In fact, many of those writing in the services marketing field (e.g., Czepiel et al., 1985) assume that service outcome is the most important factor for customer satisfaction.

H3: The strength of the relationship between perceived effort and satisfaction is positively related to the perceived service outcome.

Perceived service outcome is included as a moderator of the perceived effort–satisfaction relationship based on the results of Study 1. The relationship between perceived effort and satisfaction was found to be stronger for those customers who felt they received the outcome they wanted than for those who said they did not get their desired outcome.

H4: Perceived effort is positively related to customer satisfaction when the perceived service outcome is statistically controlled.

This hypothesis suggests that employee effort (and customer awareness of it) enhances the encounter beyond its effect on the service outcome. We propose this hypothesis based on the literature emphasizing the importance of process factors (e.g., Gronroos, 1990; Parasuraman et al., 1985) and the findings of Study 1.

Research Procedures

The experiment used audiotaped hypothetical telephone service encounters to manipulate effort (high/low) and service outcome (successful/unsuccessful) across two industries (airline/mail order). It is a completely randomized factorial design with eight treatment cells (2 × 2 × 2).

THE STIMULI. Hypothetical service encounters were created for two industries: airline and catalogue mail order. In this way the hypothesis tests were replicated across two situations, leading to greater generalizability of the findings across service industries.

Participants were asked to listen to a taped scenario, imagining themselves in the role of the customer in the encounter. The scenarios were created as telephone conversations between a customer and employee to increase the realism of hearing the encounter on tape. To further enhance realism, actors were hired for the roles, and the tapes were professionally produced. To create voice differentiation so the participants would not confuse the two roles, a woman played the customer and a man the employee. Instructions read by the experimenter were included on the tapes as well.

To develop scenarios where employee effort could be varied in a plausible way, service encounters requiring the employee to deal with company-caused problems were created. The employee then responded to the problem with either a low or high amount of effort. Effort was manipulated by varying the employee's persistence, or time spent, in trying to resolve the problem. For the airline scenarios, the customer calls the airline during the busy holiday season to reconfirm a reservation for a flight that afternoon only to be told her flight has been cancelled. In the low-effort response, the reservation clerk checks only his company's own flights for an alternative, whereas in the high-effort response the clerk checks his company's own flights, then checks other airlines, and runs through the check twice, in an attempt to find an alternative flight that day. This results in the employee coming back onto the line to tell the customer what he is doing three times, in contrast

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to one time for the low-effort condition. In the mail order scenarios, the customer calls the company to report that she has been sent the wrong size shirt. In the low-effort response, the employee simply checks the computer to see if the correct size is in stock. In the high-effort condition, the employee is unable to find the shirt in stock but goes on to try to find a similar, substitute shirt in other catalogues, which involves a longer conversation with the customer. In this condition, the employee returns to the line to tell the customer what he is doing three times, in contrast to one time for the low-effort condition.

Service outcome was varied at two levels, successful and unsuccessful. Although service encounter outcomes are sometimes ambiguous, in this experiment they were manipulated strongly and clearly. This factor was varied by having the employee resolve or not resolve the problem. In the airline scenarios, the employee either does or does not find a replacement flight the same day for the customer. In the catalogue scenarios, the employee either does or does not find the correct size of the shirt that was ordered (or a close substitute) in stock. When the correct size is found, he tells the customer he'll put it into the mail that day. Pretests of the effort and outcome manipulations in written form suggested that they had the intended effects on perceived effort and perceived outcome.

THE SAMPLE. In selecting the sample, we desired participants with varied backgrounds who also had some level of customer experience with airlines or mail order firms. To meet these criteria, employees from a large urban university were recruited as volunteers. Advertisements were run in the weekly university faculty-staff newspaper, posted on bulletin boards in central staff offices, and electronically mailed to classified staff. Volunteers were offered $10, and the experiment was run on campus over the lunch hour to encourage participation.

When volunteers phoned the experimenter, she told them what would be involved in the experiment and scheduled them for a specific time if they were interested. At that time she also checked and noted if they had experience with airline and mail order companies. In all cases the volunteers said they had experience with at least one of these industries, so no one was eliminated from the study due to lack of experience. A total sample size of 179 was obtained.

THE PROCEDURE. The experiment was run for 10 days across a two-week period. It was conducted in a language laboratory, with listening booths where participants could listen to the tapes individually and complete the questionnaires at their own speed. As each participant arrived, he or she was given a questionnaire and randomly assigned to a booth with a taped scenario set up on the recorder. The participant was instructed to go to the assigned booth, put on the headphones, and push the "play" button. All additional instructions were included on the tape and questionnaire.

Each participant was assigned to listen to a tape randomly selected from the pool of eight scenarios. The only exceptions to this were three cases where the participants had no experience with mail order companies. For these participants, the random selection was restricted to the four airline scenarios.

THE MEASURES. After listening to one of the eight tapes, each research participant completed a questionnaire. The primary dependent variable, *transaction satisfaction*, was measured first so that other measures would not influence responses to this crucial factor. The three items measuring satisfaction in Study 1 were adapted for the phone encounter. Respondents were asked how they, as the customer, felt about: (1) the performance of the employee, (2) the phone conversation, and (3) the service they received during the conversation. The response scale was changed from a seven-point bipolar adjective scale anchored by "completely satisfied" and "completely dissatisfied" to the seven-point Delighted–Terrible Scale developed by Andrews and Withey (1976). This scale was selected because its endpoints are more extreme, thereby discouraging the skewed distributions typical of scales anchored by less extreme adjectives.

The *perceived effort* scale developed for Study 1 was adapted and used here. Respondents answered the following items on a five-point Likert scale anchored by "strongly agree" and "strongly disagree."

1. The employee exerted a lot of energy.
2. The employee was very persistent.
3. The employee did *not* spend much time in this situation.
4. The employee did *not* try very hard.
5. The employee put a lot of effort into this situation.

For this study, two items were developed to form a scale measuring *perceived service outcome*, and respondents expressed their degree of agreement on the same five-point Likert scale:

1. I got the result I wanted when I called this airline (mail order company).
2. The outcome of this phone conversation was *not* good for me.

To help determine whether respondents perceived effort to be high or low based on the *effort cues* that were manipulated (the amount of time invested and persistence demonstrated by the employee in actively solving the service problem), an open-ended question asked the respondents what the employee said or did that made them decide he was trying hard or not trying hard in this situation.

Several additional measures were included to ascertain whether the experimental procedures worked as intended. These included measures of respondent perceptions of the employee's politeness, how upset the customer sounded, how realistic the phone conversation was, how easy it was for respondents to imagine themselves in the role of the customer, and what they thought the purpose of the research was.

Results

THE SAMPLE. One hundred seventy-nine people took part in the experiment. Of these, two were eliminated from the analy-

sis, one each due to incomplete data and guessing the purpose of the experiment. The 177 remaining participants divided evenly into the eight treatment groups, with 22 in seven groups and 23 in one group.

Demographically, 74% of the sample were female and 26% were male. The entire sample has completed high school. Ninety-six percent have taken college classes, 59% have a college degree, and 19% have obtained a graduate degree. Ages varied from 19 to 72 with a mean of 38. Occupations spanned a range of clerical, administrative, technical, and professional positions.

THE SCALES. A reliability analysis was conducted for each multiple-item scale. This involved computing Cronbach's coefficient alpha for scales with three or more items and interitem correlations for scales with two items. One item on the perceived effort scale ("The employee was very persistent.") was not strongly correlated with the other four items. This item was removed, resulting in a coefficient alpha of 0.86 for the four-item perceived effort scale. The reliabilities and interitem correlations of the remaining scales exceed 0.74, which is satisfactory.

VALIDITY OF THE EXPERIMENTAL PROCEDURES. Analyses showed that participants found the scenarios realistic and the role-playing easy. On a seven-point scale (with 7 designating the taped conversation as "extremely realistic"), the mean rating was 5.15 for the mail order group and 5.33 for the airline group). When asked to rate how easy it was to imagine themselves as the customer on a seven-point scale (with 7 indicating "extremely easy"), the mean rating was 6.13 for the mail order group and 6.25 for the airline group.

Respondents were asked to evaluate the voice tones of the actors to check whether perceptions of voice differences across treatment groups might confound the results. Analyses of variance for each industry group were then conducted with effort and outcome as the independent variables and employee politeness and customer upset as dependent variables. The results indicate that neither effort nor outcome significantly influenced respondents' perceptions of the actors' voice tones. Within the scenarios for each industry, the customer was perceived as equally upset and the employee as equally polite across levels of effort and outcome.

MANIPULATION CHECKS. To test whether the effort manipulations influenced perceived effort as intended, a one-way analysis of variance (ANOVA) was run for each industry grouping. The results show that effort (as manipulated in the scenarios) did affect perceived effort: for the mail order scenarios, $F(1,86) = 8.45$ ($p < .005$), with means of 3.91 vs. 3.41 for high- and low-effort treatment groups; and for the airline scenarios, $F(1,87) = 5.79$ ($p < .018$), with means of 2.73 and 2.23 for these two groups.

The outcome manipulation was tested using the same technique: a one-way ANOVA measuring the effect of outcome success (as manipulated) on perceived outcome success was conducted for each industry. The findings indicate that the manipulation was successful: $F(1,86) = 189.02$ ($p < .000$) for the mail order group; and $F(1,87) = 67.24$ ($p < .000$) for the airline group. These results are strong (means of 4.26 vs. 1.98 for the mail order sample, 2.76 vs. 1.31 for the airline group), in the expected direction, and statistically significant.

Although these analyses show that respondents did base their perceptions of employee effort and service outcome on the actual levels of these factors that were created in the scenarios, the effect is considerably stronger for outcome (where the F score ranges from approximately 67 to 189 and the difference in group means ranges from 1.45 to 2.28) than for effort (where the F score varies from approximately 6 to 8 and the difference in means = 0.50 for both analyses). In other words, perceived outcome appears to be based much more strongly on actual outcome than perceived effort is based on actual effort. This is consistent with Gronroos' (1990) assertion that customers are subjective in their evaluations of process factors, while they can evaluate outcome more objectively.

The relatively weak effort-perceived effort relationship indicates that factors other than effort influenced the perceptions of effort. Because Study 1 found that outcome was sometimes an effort cue, we decided to examine the outcome-perceived effort relationship. A two-way analysis of variance was run testing the effects of both effort and outcome on perceived effort. The results are presented in Table 1.

For the mail order groups, the analyses show that perceived effort was significantly affected (in a positive direction) by both effort ($F(1,84) = 9.81$, $p < .002$) and outcome ($F(1,84) = 6.94$, $p < .010$). Furthermore, the interaction was significant ($F(1,84) = 8.94$, $p < .004$), with effort having a strong positive impact on perceived effort when the outcome was successful (means of 4.36 for high-effort vs. 3.39 for low-effort groups) but almost no impact (means of 3.47 vs. 3.44 for the high- and low-effort groups) when the outcome was unsuccessful. Within the airline groups, perceived effort was again found to be significantly influenced by both effort ($F(1,85) = 7.00$, $p < .010$) and outcome ($F(1,85) = 15.51$, $p < .000$), with no significant interaction ($F(1,85) = 1.16$, $p < .284$). In each industry sce-

TABLE 1. Study 2: Factors Influencing Perceived Effort (Two-way ANOVAs)

Independent Variable	Dependent Variable	Relationship Direction	F	Sig. F
Mail order (n = 88)	Perceived effort			
Effort		+	9.81	0.002
Outcome		+	6.94	0.010
Effort × outcome			8.94	0.004
Airline (n = 87)	Perceived effort			
Effort		+	7.00	0.010
Outcome		+	15.51	0.000
Effort × outcome			1.16	0.284

Abbreviation: Sig. = significant.

TABLE 2. Study 2: Tests of H1, H2, and H3 (regressions using perceived effort and outcome)

Independent Variables	Dependent Variable	β	T	Sig. T	Adj. R^2	H
Mail order (n = 88)	Satisfaction				0.45	
Perceived effort (PE)		0.22	2.6	0.0119		H1
Perceived outcome (PO)		0.59	7.2	0.0000		H2
PE × PO		0.02	0.2	0.8124		H3
Airline (n = 89)	Satisfaction				0.62	
Perceived effort (PE)		0.60	7.8	0.0000		H1
Perceived outcome (PO)		0.31	3.8	0.0002		H2
PE × PO		−0.04	−0.6	0.5483		H3

Abbreviations: Sig. = significant, Adj. = adjusted.

nario, therefore, the outcome of the service encounter significantly influenced respondents' perceptions of effort. For the airline groups, outcome influenced perceived effort more strongly than effort did. Furthermore, outcome appears to have interfered with the effort judgment in the unsuccessful outcome mail order scenarios. That is, for those who heard the mail order unsuccessful outcome scenarios, perceived effort was consistently rated low regardless of the employee's actual effort level.

Respondents' answers to the open-ended question on effort cues provide further support for concluding that outcome biased effort perceptions. For most of the experimental groups, the most frequently mentioned cue was the cue manipulated (how much time the employee spent helping, how actively the employee tried to help). However, the impact of outcome can be seen in the following example: in the airline high-effort conditions, when the outcome was positive, participants most often mentioned that the employee kept looking for a flight (i.e., they perceived the employee as persistent). When the outcome was negative, in contrast, participants most often stated that the employee spent only a short time looking for a flight. In these two scenarios the time spent looking for a flight was equal, but the participants judged effort differently based on whether the employee actually succeeded in finding a flight.

In summary, both outcome and effort manipulations were successful, but the relationship between effort and perceived effort is weaker than that between outcome and perceived outcome. Furthermore, outcome had a strong unintended impact on perceived effort. In these scenarios, the service outcome appears to have, to some extent, overwhelmed the respondents' perceptions, sometimes negating the effect of employee effort on effort judgments. That is, although effort and outcome were *manipulated* independently of each other, these factors were not *perceived* independently.

FACTORS AFFECTING SATISFACTION. Three hypotheses were tested simultaneously using regression analysis, and the results are presented in Table 2. These hypotheses predicted a positive, significant relationship between perceived effort and satisfaction (H1), a positive, significant relationship between perceived service outcome and satisfaction (H2), and a significant interaction between perceived effort and perceived outcome when satisfaction is the dependent variable (H3). Table 3 summarizes the results of all the hypotheses tests.

The relationship between perceived effort and satisfaction is significant for both the mail order ($\beta = 0.22$, $p < .0119$) and airline ($\beta = 0.60$, $p < .0000$) settings, supporting H1. The results also support H2, for the relationship between perceived outcome and satisfaction is significant in the mail order ($\beta = 0.59$, $p < .0000$) and airline ($\beta = 0.31$, $p < .0002$) conditions. The interaction between perceived effort and perceived outcome is not significant for either industry condition, so the results fail to support H3.

To test whether perceived effort contributes to satisfaction beyond the contribution of the perceived outcome (H4), partial correlation analyses were conducted. Correlations between perceived effort and satisfaction, with perceived outcome controlled, were run for each industry condition. Using a two-tailed significance test, the partial correlation was found to be positive and significant for both the mail order ($r = 0.27$, $p < .011$) and the airline ($r = 0.64$, $p < .000$) groups, providing support

TABLE 3. Study 2: Summary of Results of Hypothesis Tests

Hypothesis	Analysis	Result
H1: Perceived effort is positively related to satisfaction.	Regression	Supported for both industry groups
H2: Perceived outcome is positively related to satisfaction.	Regression	Supported for both industry groups
H3: The strength of the relationship between perceived effort and satisfaction is positively related to perceived outcome.	Regression	Not supported for either industry group
H4: Perceived effort is positively related to satisfaction when perceived outcome is statistically controlled.	Partial correlation	Supported for both industry groups

for H4. It appears that, although perceived effort was influenced by the service outcome, perceived effort did add to participants' satisfaction ratings even when perceived outcome was controlled.

Overall, the results support H1 and H4. Perceived effort had a positive impact on satisfaction ratings for these research participants, and this impact was not totally due to the effects of perceived outcome. In other words, when it was perceived, effort was appreciated in its own right independent of the perceived success of the outcome. Employee effort was, however, not always perceived as intended.

The results also support H2, the hypothesized relationship between perceived outcome and satisfaction. Outcome was manipulated powerfully and unambiguously, and it produced clear results. They lead to the conclusion that the perceived success of the service outcome did impact satisfaction with these transactions.

H3 suggests that the perceived success of the outcome moderates the perceived effort–satisfaction relationship. This hypothesis was not supported by these data. This finding conflicts with the results of Study 1, where the perceived effort–satisfaction relationship was found to be stronger when the outcome was perceived as positive than when it was seen as negative, although the relationship was significant in all cases. Perhaps a significant interaction was not found in the experiment because effort, as manipulated, did not vary across as wide a spectrum as in the incidents studied in the exploratory study. Also, outcome was unambiguous in the experiment, although it may not have been so clear in the incidents people remembered for the survey. When outcomes are ambiguous, people may perceive effort differently than when the service outcome is clear.

Conclusions and Implications

Two studies were conducted to investigate how employee effort during the service encounter is perceived and how perceived effort is related to customer satisfaction with service transactions. In this section the results of these studies are integrated to suggest answers to the four research questions that guided the project. Limitations, contributions of the project, and implications for future research are then discussed.

Research Questions

1. *Do customers form an impression of employee effort during service encounters?* In the critical incident descriptions, many respondents spontaneously discussed how employees did or did not exert effort during their interactions. Furthermore, they sometimes discussed what they perceived as high or low levels of effort in highly evaluative terms. Based on these results, we conclude that customers frequently do notice and think about the service employee's effort level.
2. *What are the cues used by customers to determine how much effort the employee exerts?* After analyzing responses to open-ended questions in both studies, we conclude that customers use a variety of behavioral cues to judge employee effort. Some of these are closely related to the actual effort expenditure (i.e., those related to the conceptual definition of effort, the amount of energy and persistence put into a behavior). Other cues, such as the quality of the interaction or the outcome of the service encounter, may or may not be related to actual effort. These results show how bias may enter the judgment process. For example, when customers feel good about the quality of the interaction with a service employee or when they are pleased with the outcome of the encounter, they may infer that the employee worked hard on the transaction regardless of the employee's actual effort level. On the other hand, if the employee is seen as unfriendly or the desired service outcome is not achieved, customers may fail to notice how hard the employee has actually tried to provide them with good service.
3. *Does the amount of effort the customer perceives the employee to put into the encounter influence satisfaction with the transaction?* The hypothesized positive relationship between perceived effort and satisfaction was supported by both studies. These research findings show a strong positive relationship between perceived effort and satisfaction across a variety of service industries, with two distinctively different samples, and using two contrasting methodologies. Thus, although effort may occasionally be perceived as negative, these findings lead us to conclude that it is generally evaluated positively.
4. *Does perceived effort influence satisfaction when service outcome is held constant?* This question was investigated in both studies by analyzing the relationship between perceived effort and satisfaction with perceived outcome statistically controlled. In all analyses the relationship was positive and significant, indicating that perceived effort did add to respondents' reported satisfaction level independent of the perceived success of the service outcome. The experiment was a particularly conservative test of this, for outcome was manipulated strongly and unambiguously. In service encounters where the outcome is less clear, process factors such as effort may well play more prominent roles in customer satisfaction.

Limitations

Limitations with this project include the consideration that customers may not distinguish process and outcome during many service encounters. Because this project conceptualizes perceived effort and outcome as separate attributes of the service transaction, it does not capture the holistic perceptions that customers may often have of such encounters. Furthermore, the conceptualizations that serve as the foundation of this project are primarily American. They do not take account of the likelihood that effort perceptions (e.g., cues used to judge effort, the value placed on effort) differ cross-culturally.

The exploratory study samples particularly satisfying and dissatisfying encounters, eliminating more typical, middle-of-

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the-road encounters. The data were gathered retrospectively, with all measures taken at one time. These procedures may have inflated the correlations between perceived effort and satisfaction.

In the experiment, participants listened to audiotaped simulations of telephone service encounters. They were exposed only to stimuli communicated orally. To the extent that much of the communication of effort during service encounters occurs through visual cues such as gestures, the data may have underestimated the effects of perceived effort. On the other hand, because many service encounters occur face-to-face where there are a myriad of factors varying simultaneously, it is possible that the variables of effort and outcome received more attention here than in more complex situations. To the extent that this is true, the experiment may have overestimated the importance of perceived effort. Other methods, such as field experiments, could be used to conduct further tests of the perceived effort-satisfaction relationship.

Contributions and Future Research

Our results offer insights and potential contributions to customer satisfaction theory as well as to broader-based social psychology theories through the development of specific knowledge about perceived effort. Use of multiple methods to explore the same questions permits further insights.

CUSTOMER SATISFACTION THEORY. The research suggests that both the process of service delivery, as operationalized through employee effort, and the actual service outcome are important factors influencing satisfaction. Typically social interaction or process factors are not incorporated into research on satisfaction. Perceived effort is a social influence factor. Specifically it represents the effects on the employee's behavior on customer evaluations of the transaction. Such factors have been largely ignored in the consumer satisfaction literature to date. The findings of this project imply that research on concrete product attributes, which has dominated the field, needs to be supplemented by research on social influence factors to provide a more complete picture of the determinants of satisfaction. Although the importance of social interaction is particularly evident for services, such interactions can be expected to impact satisfaction in any situation where there is a social episode involved in the purchase or consumption process.

The need for further research exploring other social influence factors and defining the boundary conditions for the effects of such factors on satisfaction is clearly implied by this research. For example, the research revealed that effort and satisfaction are not inextricably linked, and the critical incident stories gave clues as to why in some cases high (low) effort leads to low (high) satisfaction.

THE PERCEIVED EFFORT CONSTRUCT. In examining effort cues, this research provides only a start toward learning about how effort is perceived. It is clear that people use a variety of behaviors and events to judge effort, but more research is needed to develop a detailed understanding of the cues people use and how their use varies across situations. It is possible that people perceive different dimensions of effort (e.g., physical, cognitive, and emotional effort), and research in this area would add to our understanding of how effort is perceived. It is also important to learn when cues that are closely related to actual energy expenditure are used to judge effort (i.e., when unbiased effort judgments are made) and when other cues, less directly related to actual effort, are utilized. The results of this project imply, for example, that effort judgments may be biased when effort and outcome are not positively related.

Effort was perceived positively by almost all participants across both studies. These results indicate that perceived effort is clearly a valued behavioral characteristic. It is probably valued because, similar to the motivation theorists, the general population assumes that effort influences behavioral outcomes, and that influence is usually assumed to be positive. Several examples in the studies were found, however, where effort was not judged positively. More research is needed to determine when perceived effort detracts from one person's judgment of another.

The specific, detailed knowledge gained about perceived effort through the studies offers insights for motivation, equity, and attribution theories. In all three theoretical domains, the effort construct is an important one; however, it is typically measured and manipulated very superficially. These studies provide greater depth of understanding of how effort is perceived. For example, our respondents felt so strongly about effort that they sometimes had difficulty seeing when effort and outcome were not consistent with each other.

MANAGERIAL IMPLICATIONS. Within the context of service interactions, the findings indicate that people do notice and care about how much effort the other person exerts. Furthermore, they care about it beyond its impact on the behaviorally caused outcome. Perceived effort is related to many customer perceptions and feelings about the encounter, including how satisfied they are with the entire transaction. These results clearly reinforce the importance of the process, or functional quality (Parasuraman, Zeithaml, and Berry, 1985) of service delivery in determining customer satisfaction. Another conclusion from the research is that effort is perceived by consumers through a variety of types of behavioral and attitudinal cues. Precise recommendations on how employees should most effectively communicate effort is left for future research. Although the research was conducted in a consumer service setting, the results suggest lessons for managers in all settings where there are social episodes, such as service retailing, business-to-business interactions, and personal selling.

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