THE PSYCHOLOGY OF WAITING LINES*

Introduction

In one of a series of memorable advertisements for which it has become justly famous, Federal Express (the overnight package delivery service) noted that: "Waiting is frustrating, demoralizing, agonizing, aggravating, annoying, time consuming and incredibly expensive".[1] The truth of this assertion cannot be denied: there can be few consumers of services in a modern society who have not felt, at one time or another, each of the emotions identified by Federal Express's copywriters. What is more, each of us who can recall such incidents can also attest to the fact that the waiting-line experience in a service facility significantly affected our overall perceptions of the quality of service provided. Once we are being served, our transaction with the service organization might be efficient, courteous and complete: but the bitter taste of how long it took to get attention pollutes the overall judgments that we make about the quality of service.

The mathematical theory of waiting-lines (or queues) has received a great deal of attention from academic researchers, and their results and insights have been successfully applied in a variety of settings.[2] However, most of this work is concerned with the objective reality of various "queue management" techniques: for example, the effects upon waiting times of adding servers, altering "queue discipline" (the order in which customers are served), speeding up serving times, and so on. What has been relatively neglected is much substantive discussion (at least in

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management literature) of the _experience_ of waiting.[3] Depending on the context, a wait of ten minutes can feel like nothing at all, or it can feel like "forever." Accordingly, if managers are to concern themselves with how long their customers or clients wait in line for service, then they must pay attention not only to the _actual_ wait times, but also to how these are perceived. They must learn how to influence how the customer _feels_ while waiting.

In this paper, I shall discuss the psychology of waiting lines, examining how waits are experienced, and shall attempt to offer specific managerial advice to service organizations about how to improve this aspect of their service encounters.

The First and Second Laws of Service

Before we discuss the laws of waiting, it is necessary to consider two general propositions about service encounters and how these are experienced. The first of these is what I have come to call "The First Law of Service," expressed as a formula: _Satisfaction Equals Perception Minus Expectation_. If you _expect_ a certain level of service, and _perceive_ the service received to be higher, you will be a satisfied customer. If you perceive the same level as before, but expected a higher level, you will be disappointed and hence a dissatisfied customer. The point, of course, is that both what is perceived and what is expected are psychological phenomena: they are _not_ reality. Hence, there are two main directions in which customer satisfaction with waits (and all other aspects of service) can be influenced: by working on what the customer expects and what the customer perceives.

Sasser, Olsen and Wyckoff provide good examples of managing both the perception and the expectation of waiting times. For the former, they offer the example of "the well-known hotel group that received complaints from guests about excessive waiting times for elevators. After an analysis of how elevator service might be improved, it was suggested that mirrors be installed near where guests waited for elevators. The natural tendency of people to check their personal appearance substantially reduced complaints, although the actual wait for the elevators was unchanged".[4] As an illustration of how expectations can be explicitly managed, they note that "some restaurants follow the practice of promising guests a waiting time in excess of the 'expected time.' If people are willing to agree to wait this

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[3]A notable exception, referred to in the body of the text, is the brief discussion given in Sasser, W. E., Olsen, J. and Wyckoff, D. D., _Management of Service Operations: Text, Cases and Readings_, New York: Allyn and Bacon, 1979, pp. 88-89. A good summary of the work of psychologists in this area is provided by L. W. Doob, _Patterning of Time_, New Haven: Yale University Press, 1960.

[4]Ibid., p. 88.

length of time, they are quite pleased to be seated earlier, thus starting the meal with a more positive feeling."[5]

    This last example deserves further exploration. When I have discussed this anecdote with a variety of serving personnel, they always reaffirm its wisdom. As one waiter pointed out to me: "If they sit down in a good mood, it's easy to keep them happy. If they sit down disgruntled, it's almost impossible to turn them around. They're looking to find fault, to criticize." As a result of these conversations, I offer my Second Law of Service: It's hard to play catch-up ball. There is a halo effect created by the early stages of any service encounter. Consequently, if money, time and attention are to be spent on improving the experience of service, then the largest payback may well occur in the early stages of the service encounter. In most cases, this will include a waiting experience.

The Principles of Waiting

    Having established the importance of perceptions and expectations in the experience of waiting, we now turn to a series of propositions about the psychology of queues, each of which can be used by service organizations to influence their customers' satisfaction with waiting times. These propositions are:

    1.   Unoccupied Time Feels Longer than Occupied Time
    2.   Pre-Process Waits Feel Longer than In-Process Waits
    3.   Anxiety Makes Waits Seem Longer
    4.   Uncertain Waits are Longer than Known, Finite Waits
    5.   Unexplained Waits are Longer than Explained Waits
    6.   Unfair Waits are Longer than Equitable Waits
    7.   The More Valuable the Service, The Longer I will Wait
    8.   Solo Waiting Feels Longer Than Group Waiting

    We shall examine each proposition in turn.

Proposition 1: Unoccupied Time Feels Longer than Occupied Time

    As William James, the noted philosopher, observed: "Boredom results from being attentive to the passage of time itself." A more colloquial version might be "A watched pot never boils." The truth of this proposition has been discovered by many service organizations. In various restaurants, it is common practice to hand out menus for customers to peruse while waiting in line. Apart from shortening the perception of time, this practice has the added benefit of shortening the service time, since customers will be ready to order once they are seated, and will not tie up table space making up their minds. A similar tactic is to turn the waiting area into a bar, which also adds to revenue as well as occupying time. Use can be made of posters, reading material, even shifting lights, rolling balls and other "adult toys" to distract the customer's attention

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[5]Ibid., p. 89.

away from the passage of time. "Theme" restaurants (such as Victoria Station) which provide interesting memorabilia to examine also are applying the lesson of occupying waits as a means of enhancing the service.

In some situations, such as telephone waits, it is difficult to "fill up" time in a constructive way. The familiar "muzak" played by some organizations when their telephone-answering agents are busy is, to many people, an added annoyance rather than a benefit. In large part, this is because the activity (listening to music) is totally unrelated to the service activity to come, whereas the use of menus and bars cited above successfully integrated the waiting experience into the total service experience. This suggests that the activity provided to "fill time" should (a) offer benefit in and of itself, and (b) be related, in some way, to the ensuing service encounter. The best example of this I ever encountered in relation to telephone waits was the story of the sports team that, when lines were occupied, played highlights of the previous week's game. In one memorable incident, a caller was transferred from the queue to the receptionist, whereupon he screamed, "Put me back, (so-and-so) is just about to score!"

It should also be noted, however, that there can be circumstances where a service may choose to fill time with an underlined activity. In certain medical or dental waiting rooms, there appears to be a conscious attempt to distract the patient's attention from the forthcoming activity, perhaps on the grounds that to remind the patient of what is about to occur might heighten fears and hence make the wait more uncomfortable. The wisdom of this I cannot attest to (I have read too many National Geographic magazines). Even in this context, it is possible to provide service-related distractions. Many medical clinics provide instructional videotapes, weighing machines and eye charts in the waiting room: I have even seen patients merrily occupied with self-testing thermometers, breath-strength equipment and the like. Time can be occupied not only with distractions, but also with movement. In this regard, it is interesting to recall the difference between the multiple line system at McDonald's (where each server has a separate line of people waiting) and that at Wendy's which is a multistage system whereby the first server takes the order, the second prepares the burger, the third the drink, etc. In the former system, where one server handles the total request of each customer, the physical line is shorter, but it moves only sporadically. In the latter system, where each customer is passed through a number of stages, the physical line is longer, but it moves (in smaller steps) more continuously. The customer in the latter situation can see signs of "progress".

A similar attention to the sense of movement can be seen at Disneyland, where the length of the line for a given ride is often "disguised" by bending it around corners so that the customer cannot judge the total length of the line. Because of the rate at which Disney can load people onto the rides, the actual wait is not that long. However, the sight of a large number of people waiting might make it seem long. By focusing the customers' attention on the rate of progress rather than the length of the line, the waiting experience is enhanced.

Proposition 2: Pre-Process Waits Feel Longer Than In-Process Waits

One of the other virtues of handing out menus, providing a drinks bar and other methods of service-related time-fillers is that they convey the sense the "service has started: we know that you are here." People waiting to make their first human contact with the service organization are much more impatient than those who have "begun": pre-process waits are perceived as longer than in-process waits. One's "anxiety" level is much higher while waiting to be served than it is while being served, even though the latter wait may be longer. There is a fear of "being forgotten." (How many times has the reader gone back to a maitre d' to check that his or her name is still on the list?) Many restaurant owners instruct their service staff to pass by the table as soon as the customers are seated to say "I'll be with you as soon as I can, after I've looked after that table over there." In essence, the signal is being sent: "We have acknowledged your presence." This lesson is applied by those mail-order houses that send a quick acknowledgement of an order with the message that "Your order is being processed: expect delivery in 4 to 6 weeks." Even if the "4 to 6 weeks" message was in the initial advertisement or catalogue (another example of managing expectations), the customer who has sent in a check may well be concerned that the order did not arrive. The acknowledgment of receipt assures the customer that service has begun.

One walk-in medical clinic that I studied decided to introduce a triage system, whereby all patients were first met by a nurse who recorded the patient's name and symptoms and decided whether or not the patient could be treated by a registered nurse practitioner or should be seen by a doctor. Even though the addition of this step in the process had no impact on the time it ultimately took to see a medical service provider, (it filled up otherwise unoccupied waiting time) surveys showed that patients were pleased with "reduced waiting times." The point, of course, was that they felt they had been "entered into" the system.

Proposition 3: Anxiety Makes Waits Seem Longer

A large part of the concern that we feel to "get started" is due, as noted above, to anxiety. In the cases cited, the anxiety was about whether or not one had been forgotten. Anxiety can, however, come from other sources. Is there anyone who has not had the experience of choosing a line at the supermarket or airport, and stood there worrying that we had, indeed, chosen the wrong line? As we stand there, trying to make up our mind whether to move, our anxiety level increases, and the wait becomes intolerable. This situation is covered by what is known as Erma Bombeck's Law: "The other line always moves faster." On a recent (open-seating) Eastern Shuttle flight my fellow passengers formed an agitated queue at the boarding gate long before the flight was due to depart, leading the attendant to announce, "Don't worry, folks, the plane's a big one: you'll all get on." The change in atmosphere in the waiting lounge was remarkable. Similar efforts to deal with customer anxiety can be seen when airlines make on-board announcements that connecting flights are being held for a delayed flight, when movie theater managers walk down the line reassuring patrons they will get in, when customer service agents in

airport lobbies reassure waiting patrons that they are indeed waiting in the correct line, and have sufficient time to catch the plane.

One of the poorest examples I know of managing anxiety is when I am on stand-by for a flight, and the agent takes my ticket. Now I am anxious not only about whether I will get on, but also about whether I will get my ticket back. After all, it is transferable and paid for: I have been asked to give up control of the situation. At least if I had my ticket I could change my mind and go to another airline. I have never failed to get my standby ticket back, but it makes me anxious to hand it over. Why can't I just leave my name? The prescription for managers resulting from this discussion is: ask yourself what customers might be worrying about (rationally or irrationally), and find ways to remove the worry.

Proposition 4: Uncertain Waits are Longer than Known, Finite Waits

The most profound source of anxiety in waiting is how long the wait will be. If I am told that the doctor will be delayed 30 minutes, I experience an initial annoyance but then relax into an acceptance of the inevitability of the wait. However, if I am told he or she will be free soon, I spend the whole time in a state of nervous anticipation, unable to settle in to the book I brought with me, afraid to depart, run some errands and come back. Instead, I sit there wondering "how long is this going to go on?" My expectations are being managed poorly. The pilot who repeatedly announces "only a few more minutes" adds insult to injury when the wait goes on and on. Not only am I being forced to wait, but I am not being dealt with honestly.

A good example of the role of uncertainty in the waiting experience is provided by the "appointment syndrome." Clients who arrive early for an appointment will sit contentedly until the scheduled time, even if this is a significant amount of time in an absolute sense (say, 30 minutes). However, once the appointment time is passed, even a short wait (of, say, 10 minutes) grows increasingly annoying. The wait until the appointed time is finite: waiting beyond that point has no knowable limit. It is notable that appointment systems are, in practice, troublesome queue management tools. They suffer from the problem that some customers may make appointments without showing up, a problem endemic to airlines, hotels, dentists and hair cutters, and also from the fact that it is often difficult to decide how far apart to schedule appointments. If they are too far apart, the server is left idle waiting for the next appointment. If they are too close together, then appointments begin to run behind and, since they cumulate, tend to make the server further and further behind. This is a particularly acute problem since a customer with an appointment has been given a specific expectation about waiting times, and a failure to deliver on this promise makes the wait seem longer than if no appointment had been made. This does not mean that appointment systems should never be used: they are, after all, a way of giving the customer a finite expectation. It should be recognized, however, that an appointment defines an expectation that must be met.

Proposition 5:   Unexplained Waits are Longer than Explained Waits

On a cold and snowy morning, when I telephone for a taxi, I begin with the expectation that my wait will be longer than on a clear, summer day. Accordingly, I wait with a great deal more patience: I _understand_ the causes for the delay.   Similarly, if a doctor's receptionist informs me that an emergency has taken place, I can wait with greater equanimity than if I do not know what is going on.   Airline pilots understand this principle well: on-board announcements are filled with references to tardy baggage handlers, fog over Podunk, safety checks and air-traffic controllers' clearance instructions.   The explanation I am given may or may not exculpate the service provider; but it is better than no explanation at all.   Most serving personnel will recognize the question, "What's going on?"   It is repeatedly asked in waiting situations.   The lack of an explanation is one of the prime factors adding to my uncertainty about the length of the wait.   If I know we are delayed due to the need to clear the aircraft, I have a better sense of how long the wait will be then if I am left to fantasize about all the possible causes.   However, the length of the wait is not the only reason I wish for an explanation.   As the Federal Express advertisement pointed out, waiting, among its other aspects, is demoralizing.   Waiting in ignorance creates a feeling of powerlessness, which frequently results in visible irritation and rudeness on the part of customers as they "harass" serving personnel in an attempt to reclaim their status as paying clients.   In turn, this behavior makes it difficult for the serving personnel to maintain their equanimity.   (On a significantly delayed flight, one cabin attendant was forced to announce to the passengers: "Please pay us the courtesy of being polite to us so that we can reciprocate in kind").

Naturally, "justifiable" explanations will tend to soothe the waiting customer more than unjustifiable explanations.   A subtle illustration of this is provided by the practice of many fast-food chains who instruct serving personnel to take their rest breaks out of sight of waiting customers.   The sight of what seem to be "available" serving personnel sitting idle while customers wait is a source of irritation. Even if such personnel are, in fact, occupied (for example a bank teller who is not serving customers but catching up on paperwork), the sight of serving personnel not actually serving customers is "unexplained":   in the customer's eyes he or she is waiting longer than necessary.   The explanation that the "idle" personnel are "on break" or performing other tasks is frequently less than acceptable.

Proposition 6:   Unfair Waits are Longer than Equitable Waits

As Sasser, et al, note, one of the most frequent irritants mentioned by guests at restaurants is the prior seating of customers who arrived after the guest.   They observe: "The feeling that somebody has successfully 'cut in front' of you causes even the most patient customer to become furious.   Great care to be equitable is vital"[6]

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[6] Ibid., p. 89.

In many waiting situations, there is no visible order to the waiting line. In such situations, such as waiting for a subway train, the level of anxiety demonstrated is high, and the group waiting is less a queue than a "mob." Instead of being able to relax, each individual remains in a state of nervousness about whether their priority in the line is being preserved. As noted above, agitated waits seem longer than relaxed waits. It is for this reason that many service facilities have a system of "taking a number", whereby each customer is issued a number and served in strict numerical order. In some facilities, the number currently being served is prominently displayed so that customers can estimate the expected waiting times.

Such systems can work well in queuing situations where "first in first out" (FIFO) is the appropriate rule for queue discipline. However, such is not always the case. In many situations, customers may be ranked in order of importance, and priorities allocated that way. A good example is a walk-in medical facility which will frequently break the FIFO rule to handle emergency cases. Also familiar is the example of the restaurant that has a finite supply of 2-person, 4-person and large tables, and seats customers by matching the size of the party to the size of the table. A final example is the use of "express checkout" lanes in supermarkets, whereby customers with only a few items are dealt with by a special server. All of these cases represent departures from the FIFO system. In some, the priority rules are accepted by the customers as equitable and observed: for example, the supermarket express checkout. (The wide acceptance of this norm is illustrated by the famous story of the student in Cambridge, Mass. who, with 20 or 30 items, was standing in the "8 items or less" line. A customer standing behind the student observed "You must either be from Harvard and can't count, or from MIT and can't read.") In other illustrations, such as the restaurant with varying sizes of tables, the priority rule that seats customers by size of party is less accepted by the customers, and frequently resented. The rule may serve the restaurant, but the customer has a harder time seeing the equity benefit. Similarly, special service facilities for "important" customers may or may not be "accepted" as equitable. For this reason, many service facilities physically separate "premium" servers (e.g. First-Class check-in) from the sight of "regular" customers, so they will not resent the special service rendered.

A slightly different example of equity problems in queue management is provided by the serving person who is responsible not only for dealing with customers present in the serving facility, but also for anwering the telephone. How many of us have not had the experience of waiting while a receptionist answered the phones, and consequently felt a resentment that some "distant" customer was receiving a higher priority than we who have made the effort to come to the service facility? (The example can be extended to those irritating people who answer their office telephone while you are in their office. By answering the phone, they are giving you a lesser priority than the random caller.)

The main point to be stressed here is that the customers' sense of equity is not always obvious, and needs to be explicitly managed. Whatever priority rules apply, the service provider must make vigorous efforts to ensure that these rules match with the customers' sense of

equity, either by adjusting the rules or by actively convincing the client that the rules are indeed appropriate.

Proposition 7:   The More Valuable the Service, the Longer I will Wait

The example of the supermarket "express checkout" counter reminds us that our tolerance for waiting depends upon the perceived value of what I am waiting for.   Special checkout counters were originally provided because customers with only a few items felt resentful at having to wait a long time for what was seen as a simple transaction.   Customers with a full cart of groceries were much more inclined to tolerate lines.   Airlines, too, have discovered this principle and provided separate (fast-moving) lines for those with simple transactions (such as seat-selection), medium-difficulty transactions (baggage check-in) and complex transactions (ticket purchase or modification).   Specialization by task does not necessarily reduce the aggregate amount of waiting in the system: however, it serves well to allocate the waiting among the customer base.   That perceived value affects tolerance for waits can be demonstrated by our common experience in restaurants: we will accept a much longer waiting time at a high-cuisine facility than at a "greasy spoon."   In universities, there is an old rule of thumb that if the teacher is delayed, "You wait ten minutes for an Assistant Professor, fifteen minutes for an Associate Professor and twenty for a Full Professor" (or some such variant).   This old saw illustrates well the principle that tolerance for waits depends upon perceived value of service (perhaps with the emphasis on the perception).

It follows from this principle that waiting for something of little value can be intolerable.   This is amply illustrated by the eagerness with which airline passengers leap from their seats when the airline reaches the gate, even though they know that it will take time to unload all the passengers ahead of them, and that they may well have to wait for their baggage to arrive.   The same passenger who has sat patiently for some hours during the flight suddenly exhibits an intolerance for an extra minute or two to disembark, and a fury at an extra few minutes of delayed baggage.   The point, of course, is that the service (the flight) is over, and waiting to get out (when there is no more value to be received) is more aggravating.   A similar syndrome is exhibited at hotel checkout counters.   Just as pre-process waits are felt to be longer than in-process waits of the same time duration, so are post-process waits: these, in fact, feel longest of all.

Proposition 8:   Solo Waits Feel Longer Than Group Waits

One of the remarkable syndromes to observe in waiting lines is to see individuals sitting (or standing) next to each other without talking or otherwise interacting.   Then, an announcement of a delay is made, and the individuals suddenly turn to each other to express their exasperation, wonder collectively what is going on, and console each other.   What this illustrates is that there is some form of comfort in group waiting rather than waiting alone.

This syndrome is evidently in effect in amusement parks such as Disneyland, or in some waiting lines to buy concert tickets when a sense of group community develops and the line turns into almost a service encounter

in its own right: part of the fun and part of the service. Whatever the service organizations can do to promote the sense of group waiting rather than isolating each individual will tend to increase the tolerance for waiting time.

Conclusions

The propositions presented here are by no means meant to be an exhaustive list of all the psychological considerations involved in managing customers' acceptance of waiting time. Not discussed, for example, is the importance of explicit apologies and apologetic tones in preserving the customers' sense of "valued client" status. Similarly unanalyzed are cultural and class differences in tolerance for waiting (it is said of the English that if they see a line they'll join it). I hope, however, that the managerial reader will have gained a greater appreciation both for the psychological complexity of queues, and for the fact that the psychological experience of waiting can be managed. The propositions given here can be researched, not only by academics for their general applicability, but also by managers for application in specific service situations. The constant theme of this article has been that the waiting experience is context-specific. By learning to research and understand the psychological context of their own waiting lines, managers can have a significant impact upon their customers' satisfaction with the service encounter.