

Proximity to or Progress toward Receiving a Telephone Service? An Experimental Investigation of Customer Reactions to Features of Telephone Auditory Messages

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EXTENDED ABSTRACT

Telephone waiting is an undesirable experience for most customers and can negatively impact service evaluations Katz, Larson, & Larson, 1991, but is often unavoidable because of staffing costs (Hall, 1991) and the inability to predict service demand (Zeithaml, Parasuraman and Berry, 1990). Customer reactions to waiting can have significant business implications, calling for attention to factors that may mitigate negative reactions to queues and waiting. In telephone waiting, auditory messages through the telephone system are the primary means by which firms can facilitate waiting. Auditory messages are a sole source of information during telephone waiting which means these messages are a key to shaping customer reactions. Yet research on the effects of auditory messages on caller behavior is very limited.

Aiming to fill this gap we investigated customer reactions to auditory messages, concentrating on messages that provide information about location in the queue. We assume that firms can manage queue perception and thus reactions to waiting through manipulating the information provided to customers about the queue. Specifically, information provided can help create two types of psychological frames for people waiting in a telephone queues: a progress oriented frame, and a frame of proximity to the service. Our prediction is that these frames can differently affect customer reactions. We compare and contrast predictions, drawn from these two frames, and argue that a sense of progress approach affords more accurate predictions of caller attitudes, whereas a sense of proximity frame offers a better approximation of caller behavior.

Our analysis introduces the idea of goal proximity as a critical variable for understanding people's reactions to queue length. The logic of proximity to a goal suggests—assuming that the duration of waiting is identical—that shorter queues will make people feel greater goal proximity than longer queues. Thus, queue length—or the number of people ahead of a customer in a queue—is predicted to influence the level of proximity a waiting customer senses.

At the same time previous research has demonstrated that actual long distance from the goal—or low goal proximity—creates frustration and dissatisfaction, whereas low goal proximity causes people to invest higher effort in pursuing their goals (Kivetz, Urminsky, & Zheng, 2006). This implies that telephone queues that induce a higher (vs. lower) sense of goal proximity will produce greater satisfaction and lead to more queue persistence in callers.

An alternative perspective for analyzing effects of telephone queues is people's sense of progress, as introduced by Munichor & Rafaeli, 2007). This perspective can lead to predictions that contradict those of goal proximity since—assuming equal duration of a wait—longer queues must also be faster to reach the service within the same time frame. Thus, a sense of progress perspective suggests that in longer queues with equal duration as shorter queue, people in a longer queue will feel a greater sense of progress (i.e. a greater perceived movement towards a desirable end state) than people in the shorter queue. Sense of progress is known from previous research to motivate people, so we can suggest that queues that induce a higher sense of progress will lead to better customer reactions in terms of satisfaction and queue persistence.

Message update frequency—or the number of times a customer hears a message while waiting—is also a salient attribute of

a telephone system that has not been previously examined. We suggest that rapid updates emphasize to people whether a queue progresses quickly or slowly, and are therefore likely to moderate the relationship between progress rate in a queue and callers' sense of progress, and thus affect caller satisfaction.

We examined our predictions using an experimental simulation of telephone waiting, in which we measure customers' reactions to auditory messages. The simulation provides information about the customer's position in the queue while holding the duration of the queue constant and allows accurate measurement of customer satisfaction and queue persistence (as opposed to abandonment) rate. Our between subject experimental design created two queue lengths (long and short) and two update frequencies (high and low). This design enabled an examination of the two psychological orientations of people in queues: A progress orientation is created in a condition in which the queue has a lot of people and progresses fast, while a proximity orientation is created in a condition in which the queue has few people and progress is slow.

For example, assuming wait time is equal, a customer progressing from being tenth to fifth is likely to have a sense of being distant from the end of the line but is afforded a progress orientation on the queue; in contrast, for another customer to progress from being second to being first in line would take relatively longer, so the latter customer is afforded a proximity orientation rather than a progress orientation on the queue. The differences between these two queue conditions are in the sense of progress and sense of proximity that customers likely report.

The findings support our predictions regarding the previously unexamined idea that customer reactions to a telephone wait are influenced by the way customers perceive their progress or proximity in the queue. Non-intuitively, the findings show that the same message may affect callers' satisfaction and behaviors in contradictory ways. Our analysis suggests an explanation for this contradiction, since the two dimensions of customer reactions—behavior and satisfaction—are influenced by separate mechanisms—sense of progress influenced satisfaction while sense of proximity influenced behavior.

Specifically, our findings show that—in queues with equal duration—a progress (proximity) oriented queue leads customers to report high (low) satisfaction through affecting their sense of progress, while simultaneously led them to be less (more) persistent in the queue, through affecting their sense of goal proximity. Furthermore, the queue orientation, which influenced sense of progress and satisfaction in a condition of high frequency updates, does not have this influence in a condition of low frequency updates. This finding suggests the moderating effect of update frequency on the relationship between queue orientation and caller sense of progress.

Integration of our findings with current literature concerning physical waiting environment allows us to propose the concept of *auditory waiting environment* as a key feature of the waiting situation. This concept broadens the previous focus on time fillers (Munichor and Rafaeli, 2007). The concept also suggests that analyses of telephone queues and waiting can embed multiple psychological dimensions that can be created through telephone messages, which expands the role of recorded messages.

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In a follow-up experiment, in which participants in the simulation experiment were contacted two days after the original experiment, reports of retrospective satisfaction supported the original findings. This support helps affirm the auditory waiting environment design as a key influence over customer satisfaction.

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