Service With a Smile Or Screen? How Replacing Personnel With Machines Affects Customers’ Satisfaction With a Service

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This research addresses the questions 1) whether customer satisfaction with an identical service outcome differs between personal and technology-based self-service encounters and 2) why and when satisfaction differs. Building on the person-sensitivity bias, this study proposes and finds that customers evaluate personal services in more extreme manners than technology-based services.

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EXTENDED ABSTRACT

In striving for increased service productivity, businesses often substitute expensive service personnel with self-service technologies and actively push customers towards self-service channels (White, Breazeale, and Collier 2012). However, are human and non-human service channels really interchangeable and do customers respond to these service channels in the same way? Previous research does not provide an answer to this question. In two experiments the present research thus examines 1) whether customer satisfaction with an identical service outcome differs between personal and technology-based self-service channels and 2) why and when satisfaction levels may differ.

According to the person-sensitivity bias (Moon and Conlon 2002) human perceptions and evaluations of an outcome depend on whether the source is human or non-human. In particular, this bias suggests that humans are evaluated in more extreme manners, getting more credit for good outcomes on the one hand, but also taking more blame for bad outcomes than their non-human counterparts on the other. While this bias has been demonstrated in a series of studies in social psychology (e.g., the evaluation of security cameras versus security personnel; Moon and Conlon 2002), applications within the marketing field are scarce or almost non-existent. Contrary to the propositions of the person-sensitivity bias, social response theory (Reeves and Nass 1996) suggests that humans respond quite similarly to machines and humans. Findings of this line of research indicate that customers treat their interaction with a machine as a social encounter and hence also make social attributions regardless of their human or non-human counterpart.

In an attempt to reconcile these disparate findings, this research proposes that customers evaluate personal, “high-touch” services in more extreme manners than technology-based, “high-tech” services, as suggested by the person-sensitivity bias. That is, customers should be more (less) satisfied with a good (bad) service when a person instead of a machine delivers the service. However, consistent with social response theory, we also propose that customers make self-serving attributions regardless of the service channel. That is, customers should always be willing to accept more responsibility for a good outcome, while denying responsibility for poor outcomes. Nonetheless, we propose that channel differences arise as customers undergo a fundamental attribution error and thus overestimate the power of a service employee to intentionally cause an outcome (Jones and Harris 1967). Customers should hence attribute consistently more responsibility for an outcome to the provider when using a personal service instead of a self-service. Customers using a self-service, on the contrary, should be more likely to consider external, situational factors as well as their own contributions as these factors are more salient to the self than when observing the behavior of other people (egocentric bias: Ross and Sicoly 1979).

To test our assumptions, we conducted an online experiment with a 2 (self-service / personal service channel) x 2 (high / low customer participation) x 3 (poor / neutral / delightful quality service outcome) between-subjects design, in which participants were confronted with different service scenarios. A total of 1243 subjects participated in our main experiment, with our sample closely following U.S. census information. As we expected, results confirm a person-sensitivity bias in service encounters. Accordingly, when service outcomes are good, customers are more satisfied with the provider of an identical outcome when using a personal service channel (PSC: M = 6.61) instead of a self-service (SST: M = 6.46; F(1, 395) = 4.18, p < .04). When service outcomes are poor, however, customers are more satisfied (or less dissatisfied) when using a technology-based self-service (M = 1.45) instead of a traditional personal service (M = 1.33; F(1, 397) = 3.92, p < .05). Findings further suggest that these channel effects arise because customers make different causal inferences for a service outcome when using a self-service instead of a traditional personal service. Accordingly, results reveal that customers of a personal service seem to overestimate the power of the service employee to cause a specific outcome and assume that the employee causes it intentionally. As a consequence, customers attribute more responsibility to the provider when using a personal service instead of a technology-based self-service, especially when outcomes are good (good outcome: MSST = 5.57 vs. MPSC = 5.88; F(1, 395) = 7.77, p = .01; poor outcome: MSST = 5.33 vs. MPSC = 5.56; F(1, 397) = 2.87, p = .09). Customers using a technology-based self-service, on the contrary, are more egocentric and hence consistently attribute more responsibility to themselves (good outcome: MSST = 3.92 vs. MPSC = 3.38; F(1, 395) = 15.33, p < .001; poor outcome: MSST = 3.42 vs. MPSC = 3.07; F(1, 397) = 5.39, p = .02) or – when outcomes are poor – to external, situational factors (MSST = 2.30 vs. MPSC = 1.87; F(1, 397) = 12.72, p < .001).

By drawing from literature on interdependence vs. independence and extending the main experiment to an intercultural level, a follow-up experiment conducted in India demonstrates that the channel differences mostly arise in highly independent (Western) cultures and cease to exist in more interdependent (Eastern) cultures. Results reveal that one reason for this limitation is the fact that customers from highly interdependent cultures differ from their Western counterparts by assigning responsibility for an outcome differently to maintain social harmony. This study thus demonstrates an important boundary for the channel effect uncovered in our main experiment.

To date, most research has underlined the appeal of self-services for service providers or customers and has focused on determinants of the customers’ acceptance and adoption of these service channels (e.g., Meuter et al. 2005). The present research demonstrates, however, that humans and machines are not interchangeable in service delivery. From a theoretical point of view, it is important to understand whether and why customer satisfaction is harder to achieve when customers interact with a machine instead of a person. From a managerial point of view, a contrast of the impact of personal vs. technology-based service channels provides important insights into possible drawbacks of self-service technologies and offers insights on when or how their introduction may be most appropriate.

REFERENCES


