

The influence of customer emotions in chat-service operations

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Service delivery relies on interactions with customers, which can be done through various channels including face-to-face, call-centers, and internet chats. The operation of customer contact is highly complex and must balance service quality with efficient use of resources, calling for operational decisions of staffing of agents and routing of customers. A critical issue in this context, about which little is understood, is the influence of the emotional behavior of customers on service agents and on the service process. With the role of technology in service interactions, data for addressing this question becomes more available and mathematical tools allow for operational models that can capture aspects of human behavior. For example, characteristics of customer patience and employee response time can be mathematically defined and accurately and unobtrusively measured. In technologically mediated service, notably chat service, agent and customer behavior in an interaction are also fully accessible for analyses. In a series of studies, we have developed tools for analyses of large scale chat service interactions. In this presentation we will report on the tools and measures we have developed, and on our findings that document relationships between customer emotions, employee behavior and operational effectiveness of chat-based service interactions. Our measurement of emotion relies on a new model that we have developed for automatic measurement of customer emotions. We report on tests of validity (precision and recall) of this model. And we use the emotional assessments of the model to test the effects of customer emotion on employee response time, on employee unscheduled breaks, and on customer satisfaction. Our work adds to and extends available research on emotions in service delivery, which until now has relied almost only on self-report measures, and is therefore limited in multiple ways.

Our project analyses these important questions using chat and service operations data provided by LivePerson Inc (<https://www.liveperson.com>). Our results show intriguing findings: (a) employees respond more quickly to customers who express positive emotion. (b) Customer negative emotion increases agent response time, hence increases customer wait, suggesting potential routing and staffing implications. (c) Customers' expressed emotion during a service interaction is clearly related to post-interactions customer reactions of service satisfaction or First Call Resolution. (d) XXX. Our findings are support research in behavioral science on service interactions, and demonstrate the operational value of attention to customer emotion. Our findings have practical implications for the design of chat platforms and customer allocation algorithms.

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