Studying Customer Service: Using New and Creative Methods to Address Core Research Questions

This symposium will report on four different studies that together examine the full course of customer service interactions. Also, it covers service interactions conducted through various new internet channels. Available research on customer service interactions has primarily examined face-to-face or telephone service interactions. The studies are unique in the type of analytic tools and data they use. More specifically, the four papers in the session show the merit of automated sentiment analysis as an innovative research tool, and of turning to online platforms for obtaining large-scale, real-life data (Ordenes, Ludwig, De Ruyter, Grewal, & Wetzels, 2017). While using new, methodological developments in our studies, we continue to maintain the experimental rigor of organizational research. The studies all report on *actual* behaviors of customers and employees, thus adding substantial insight to currently available research, which frequently relies on customer or employee self-report data. Lastly, the studies bring an interdisciplinary perspective, integrating theories and perspectives of Organizational Behavior, with methods and conceptual frameworks of Operations Management and Computer Science. Together, the four studies suggest opportunities for studying new and old questions about service delivery in creative and new ways, and for improving the management of modern service operations.

Specifically, the session will describe findings relating to online waiting (Study 1), customer service through Twitter (Study 2), and customer service through live chat (Studies 3 and 4). The analyses shed light on the effects of system design issues on customer behavior (Study 1), the effects of employee behavior on customers (Study 2), and the effects of customer emotions on employee behaviors (Study 3 and 4). The studies also look at service interactions through multiple time perspectives: before the interaction (Study 1), during the interaction (Studies 3 and 4), and after the interaction (Study 2). Our findings entail effects that might be expected (e.g., employee positivity in emotion expressions improves perceived service quality), and some intriguing surprises (e.g., employee expressing support <u>decreases</u> customer satisfaction; customer <u>positive emotion</u> prevails in service interactions and acts as a motivator to service employees).

Background

There is a substantial and growing body of research on customer service, from multiple disciplines and perspectives, including marketing, organizational behavior, and operations research (Ostrom, Parasuraman, Bowen, Patrício, & Voss, 2015; Subramony & Pugh, 2015). The meetings and interactions of customers and employees are described as the "Moments of Truth,"(Normann, 2000), because what happens in these interactions is critical to the success of service organizations. Yet, there are still large theoretical and methodological gaps in the understanding of the behavior of both customers and employees in service interactions. A key constraint is the researchers' ability to capture the essence of what happens in these "Moments of Truth." Research has traditionally been constrained by limitations of both available data and available research tools:

First, researchers relied on self-report measures (Donaldson & Grant-Vallone, 2002; Paulhus & Vazire, 2007) or on observations (Pugh, 2001; Rafaeli & Sutton, 1988, 1990) of the focal variables (e.g., customer emotion, customer satisfaction, employee performance). Consequently, available research reports provide a picture of limited accuracy, and are subject to multiple biases. The call for more objective and unobtrusive measurements is inevitable (Kaplan, 2016).

Second, the need to rely on self-report or observations constrained available studies and findings to small samples in a limited service context (Joireman, Grégoire, Devezer, & Tripp, 2013; Wirtz & Mattila, 2003). The generalizability of the findings of this research is limited. Modern-day customer service, and specifically *online customer service*, brings access to a vast amount of data. Service interactions conducted online are very likely to be recorded and archived, availing easier access for researchers to a large amount of real-life data (George, Osinga, Lavie, & Scott, 2016). And new developments in voice, text and picture analyses promote research by providing creative and innovative new ways for analyzing the data (Gandomi & Haider, 2015).

Our goal in the sessions is to introduce the audience both to our empirical findings and to the advantages of capitalizing on new tools and platforms for data collection, data coding and data analyses. In addition, the session highlights the merit of a multidisciplinary research

approach, which substantially expands the theoretical background of the studies, and the research and managerial insights afforded by the findings.

Overview of Session Studies

The symposium will start as customer interactions usually start - with a study of people waiting in order to receive service (Study 1). This study examines the questions of how (1) wait information, and (2) allowing customers to leave the service context while waiting, affect customer patience and abandonment. The next study (Study 2) will enter actual service interactions, examining customer and employee emotions and their effects as signals for onlookers about service quality. Study 2 examines a relatively new, social media platform of customer service: Twitter. The next two studies (Study 3 and Study 4) then look at the behavior of customer service employees during customer service interactions, and examine another, new service platform: online chat. These two studies also introduce the use of objective and unobtrusive analyses of customer emotion and employee behavior. Specifically, Study 3 shows the fascinating picture of actual emotions that customers express during service interactions; Study 4 looks into the effects of customer emotion on two employee behaviors: efficiency and withdrawal. Together, the four studies report a variety of new research insights, and suggest useful implications for the management of modern service operations.

Next, we present the abstracts of the four studies in the scheduled order of presentation.

Avoiding customer abandonment during wait for online service: Give them information, and let them meander, but be careful – they anchor!

People hate to wait, and will often lose patience and abandon a queue, refusing to wait beyond a certain amount of time (Mandelbaum & Zeltyn, 2013). Service companies cannot eliminate all waiting, because this would imply large (and inefficient) technology and labor costs (e.g., employees and/or routers must wait unused until a customer arrives) (Allon, Federgruen, & Pierson, 2011). Thus, a key challenge in service delivery is how to induce the customers' will to wait, and how to prevent customers' abandonment of a wait queue. These issues are particularly challenging with online service, where customers are highly impatient, and quick to abandon

(Lee, Chen, & Ilie, 2012; Ryan, del Mar Pamies, & Valverde, 2015). Two ideas that can be helpful toward handling these challenges are providing information about the amount of time the customers will have to wait, and providing distractors that can make the wait less annoying. This paper will describe effective ways for displaying waiting information, and a novel approach to the idea of distraction for customers who are waiting for online service.

The research builds on findings that information increases people's sense of control (Averill, 1973; Osuna, 1985), and the prediction that providing information about estimated wait will decrease abandonment. We also predict that customers will anchor on information about the estimated wait (Tversky & Kahneman, 1974), and thus increasingly abandon when the announced wait time has passed. Lastly, building on Resource Allocation Theory (Zakay & Hornik, 1991), we propose that customers *meandering* – namely shifting focus to another website while waiting – will be less likely to abandon a wait for online service.

The paper reports on four experimental online studies that tested these predictions with a total sample of 3653 participants. Surprisingly, our findings show that a large proportion (20%!) of people abandon within 15 seconds of wait, suggesting an "immediate abandonment effect," which is stronger than in telephone service (8%, Mandelbaum & Zeltyn, 2013). We also find that, in line with our predictions, customers anchor on provided information about the announced wait time: 1) Customers are more likely to abandon the more their initial wait expectations (e.g., "about 3 min") are violated; and 2) if the announced wait entails a range (e.g., "between 2-4 min"), customers adjust their initial, low wait expectation as soon as the time of the lower limit of the range (here: 2 min) has passed, and are thus less likely to abandon.

Lastly, customer meandering <u>decreases</u> the likelihood that a customer will abandon. In other words, allowing customers to shift their attention to another web location while they are waiting does not lead to a lost customer, but rather to a more patient customer. Our methods and findings shed light on new ways for studying, and for the management of customer online waiting.

Customer Service through Twitter: Customer Emotions and Problems and Employee Emotion Tactics as Signals of Service Quality

Both customer emotions and employee emotional expressions are presumed to be critical to customer satisfaction and service quality (Oliver, 1997). Emotions are argued to continue to prevail in computer-mediated interactions (For a review, see Derks, Fischer, & Bos, 2008). Yet, understanding of the nature of emotions that customers and employees express in service interactions is still lacking. The development of social media platforms opens new and powerful channels for consumer service (Ebiquity, 2014), and organizations are providing service interactions through Twitter. Since Twitter is a public and social medium, as researchers we can easily accessed and analyze these service interactions. A unique aspect that Twitter service opens up is effects of the service delivery beyond the initiating customer, to other "onlookers", i.e., other people who observe (and did not initiate) the Twitter interaction. We propose and show how such onlookers discern cues and signals of service quality from the Twitter service scene of a firm.

The study examines the dynamics of customer emotions and service interactions conducted in the online Twitter platform. We extracted 427 Twitter service interactions of distinct customers of two large companies, and analyzed multiple aspects of these interactions. Our first study provides insights about the emotions expressed by customers and by employees in the interactions. We asked Mturk participants to tag the emotions expressed by customers and by employees in their respective Tweets (5 raters tagging each tweet), and analyzed these tags. Our findings show that customers express two categories of emotions: Positive emotions (happiness, gratitude) and negative emotions (frustration, anger, and disappointment). Employees expressed two types of emotional tactics: Positivity (cheerfulness and gratitude) and Support (empathy and apology). The traditional assumption is that the objective of emotional labor in customer service is to display positive emotions, which are presumed to impact the feelings of customers and bottom-line outcomes (Grandey, Rupp, & Brice, 2015; Tsai, 2001); our exploratory study suggests that there is a finer grained distinction between emotions expressed by employees that convey positivity and emotions that convey support.

A second study documented the effects of the emotions expressed in the interactions on on-lookers impressions of service quality. A separate group of Mturk participants rated their impressions of service quality based on looking at the interactions. Findings show two key effects on service quality impressions: Customer problems and customer emotions, together explaining 40% of the variance of rated service quality. The effect of employee emotions was much weaker, and was due primarily to expressions of positivity, and this effect disappears when customers expressed high positive emotions. We also find that employees' support (apology and empathy) do not influence inferences of service quality. The findings counter intuitive assumptions about apologies as critical to service quality assessments, and suggest that costs may outweigh the benefits of the emotional labor requirement of requiring employees to apologize. Replacing employee-expressed support – which customers may be less appreciative of – with a focus on issue resolution may be beneficial in terms of successful management of service operations.

Customer expression of emotion in customer service: What do they really look like?

New computerized tools enable automated detection of emotion in text-based service interactions. We use one such tool, which we helped develop and validate, to analyze customer emotion in service interactions with three companies from different service industries (1.14 million full interactions, and close to 14 million individual text messages). The data was provided by LivePerson Ltd. (https://www.liveperson.com/), a commercial platform that service organizations use to provide their customers with service using online chat.

Our findings show that, in contrast to common belief, clear negative emotions are expressed by only a small proportion of customers (< 10%), and appear in less than 5% of customer sentences. Positive customer emotions are much more common than what has been recognized previously, and are expressed in higher intensity than negative emotions. We identify a pattern of negative emotion in early stages of service interactions, and observe that the beginning of interactions does not differ between satisfied and unsatisfied customers, while significant differences in emotion emerge after a "tipping point" that occurs somewhere during

the interaction, and lead to an improvement in customer emotion from the middle to the end of the interaction. Our analyses reveal differences in patterns of customer emotion between effective and less effective service interactions, showing that a higher customer satisfaction score at the end of the interaction connects to trajectories of improvement of customer emotion from negative to positive. This is evident in analyses relating customer emotions to three indices of customer service (NPS, FCR, and evaluations of employee performance).

Our methodology and analyses provide a first empirical support of the emotional roller-coaster that service employees handle throughout their shift, and suggest the merit of incorporating automated emotion analysis tools into service research and the management of modern service operations. Our analyses begin to insinuate the types of issues and questions that future research can address following the procedures that we propose. The amount of relevant data, its velocity (the pace with which it is accruing and increasing), and its variety (relevant data comes in many forms, and from many sources both within and outside of the organization) coalesce to a rich and exciting research agenda.

The added benefits of customer positive emotions: They make employees respond more quickly and take shorter breaks

Service employees handle multiple customers throughout their shift (Rafaeli et al., 2017), and encounter different emotions from different customers. This study examines how the emotions that customers express affect two aspects of service employee performance: employee efficiency in responding to a customer, and employee withdrawal (unscheduled break) behavior. The effectiveness of customer service employees is important to unravel because customer service has a substantial part of the modern economy. Emotion dynamics are known to be critical to service delivery (Grandey et al., 2015), especially in cases of service failure, which are known to be critical service junctures (Upbin, 2013).

The data for this study are 20,355 interactions of customers and employees from an airline transportation company, including records of all the customer emotion expressions and all relevant employee operational behaviors. These data include 241,428 lines of customer and

employee text, and allow two types of analyses: The analysis can be at the interaction (or customer) level, testing the effects of a customer's expressed emotions on the employee's responses. A different analysis is at an employee shift level, testing effects of cumulative nature of customer expressed emotions on a specific employee's withdrawal (unscheduled break) behavior. The study will report both analyses. Assessment of customer emotion are based on automated detection (as reported in Study 3), and employee behaviors are fully objective, based on on-line tracking.

Our findings show a positive effect of customer positive emotion, and no effect of customer negative emotion on employee responses: Employees respond faster to customers who express positive emotion, and do not respond differently when customers express negative emotion. The analyses rule out alternative explanations to the observed effects, such as task complexity and the nature of the workload in each service interaction. We also find that customer positive emotion moderates the impact of workload on employee speed: Customer positive emotion facilitates employee performance even when the workload is heavy, and the effects of positive emotions of one customer carry over to responses of the same employee to other customers.

Regarding employee withdrawal, we find that customer emotion moderates the duration of unscheduled breaks that employees take. Supporting Affective Events Theory (Weiss & Cropanzano, 1996), customer emotion adds to the influence of workload on the length of breaks that employees take. When customers express high negative emotions, the same workload leads to longer breaks. In contrast, here as well we find that customer positive emotion works as a motivator: When the workload is high, customer positive emotion leads employees to take shorter breaks.

In short, this research highlights an added benefit of striving for positive customer emotion, showing it as a motivator of service employees. With these findings we contribute both to service research, and the management of modern service systems.

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