Article

Emotion Cycles in Services: Emotional Contagion and Emotional Labor Effects

Xiao-Yu Liu[1] , Nai-Wen Chi[2], and Dwayne D. Gremler[3]

Abstract

Service organizations encourage employees to express positive emotions in service encounters, in the hope that customers "catch" these emotions and react positively. Yet customer and employee emotions could be mutually influential. To understand emotional exchanges in service encounters and their influences on customer outcomes, the current study models the interplay of emotional contagion and emotional labor, as well as their influence on customer satisfaction. Employees might catch customers' emotions and transmit those emotions back to customers through emotional contagion, and employee emotional labor likely influences this cycle by modifying the extent to which emotional contagion occurs. Data from 268 customer-employee dyads, gathered from a large chain of foot massage parlors, confirm the existence of an emotion cycle. Deep acting, as one type of emotional labor used by employees, hinders the transmission of negative emotions to customers, whereas surface acting facilitates it. Both customer emotions and employee emotional labor thus have critical influences on service encounters. The findings highlight the importance of understanding the potential influence of customer preservice emotions and the presence of an emotion cycle during service delivery.

Keywords

emotional contagion, emotional labor, emotion cycle, service encounter, customer satisfaction

Emotional contagion between customers and service employees can influence customer satisfaction during employee-customer interactions (Barger and Grandey 2006; Pugh 2001; Tsai and Huang 2002). Research pertaining to both service marketing (e.g., Delcourt et al. 2016; Hennig-Thurau et al. 2006; Söderlund and Rosengren 2008) and emotions at work (e.g., Barger and Grandey 2006; Tsai 2001) attests to this influential role of emotions in service encounters. A central theoretical explanation relies on "emotional contagion" (Hatfield, Cacioppo, and Rapson 1993, 1994), which suggests that customers can "catch" service employees' emotions, which in turn influence customers' service evaluations. Previous studies indicate that employees' positive emotions increase customer satisfaction, willingness to return, and positive word of mouth through a (positive) emotional contagion process (e.g., Barger and Grandey 2006; Hennig-Thurau et al. 2006; Tsai and Huang 2002; Wang et al. 2017), whereas employee negative emotions are associated with negative customer outcomes through negative emotional contagion (Du, Fan, and Feng 2011).

Despite these insightful contributions to service marketing and emotions literature, several research questions remain unaddressed. First, the aforementioned studies have mainly examined the transfer of emotions from employees to customers, but these studies do not explicitly investigate how customers' emotions might influence employees' emotions. Thus, it remains unclear how customers' and employees' emotions influence each other reciprocally during service interactions.

As Groth and Grandey (2012) note, customers may serve as emotion transmitters in service interactions. Rafaeli and Sutton (1989) also theorize that employees' emotions during service interactions are determined by "transaction-defining cues," such as customers' emotions (Tan, Foo, and Kwek 2004). Because emotional contagion involves mutual influences between two parties (e.g., employees and customers) and is reciprocal in nature (Hatfield, Cacioppo, and Rapson 1994), it is necessary to integrate the effects of customers' and employees' emotions into one study and test their bidirectional contagion processes.

Second, scholars acknowledge the importance of positive and negative emotional contagion but usually examine these

[1] Department of Human Resource Management and Organizational Behavior, Business School, University of International Business and Economics, Beijing, China
[2] College of Management, Graduate Institute of Human Resource Management, National Sun Yat-Sen University, Kaohsiung, Taiwan
[3] Department of Marketing, College of Business, Bowling Green State University, Bowling Green, OH, USA

Corresponding Author:
Xiao-Yu Liu, Department of Human Resource Management and Organizational Behavior, Business School, University of International Business and Economics, Post Box 123, No. 10 Huixing East Street, Chaoyang District, Beijing 100029, China.
Email: liuxy@uibe.edu.cn

two processes separately. Customers and employees can experience both positive and negative emotions during a service encounter (Du, Fan, and Feng 2011; Grandey and Gabriel 2015), but we know of no studies that include positive and negative emotional contagion processes simultaneously or that explore how they simultaneously influence customer reactions.

Third, service employees use emotional labor to express positive emotions and suppress negative emotions (Ashforth, Tomiuk, and Kulik 2008; Grandey 2000), so their emotional labor strategies may facilitate positive emotional contagion, and inhibit negative emotional contagion, in service encounters. Recent emotional labor literature suggests that negative customer events (e.g., unreasonable customer demands) prompt employees to engage in surface acting, but positive customer events (e.g., verbalized appreciation for the service provided) motivate them to engage in deep acting (Grandey and Melloy 2017). Thus, customers' behaviors or emotions may evoke employees' emotional labor. However, the interplay of employees' emotional labor and the emotional contagion process is not well understood, nor have the two processes been combined within an integrated model.

Fourth, prior studies on emotional contagion have been conducted primarily in standardized service contexts, where interactions are fairly consistent from customer to customer, such as food services (Barger and Grandey 2006), banking (Pugh 2001), or retail shoe stores (Tsai 2001; Tsai and Huang 2002). In such contexts, customers tend to focus on the speed, efficiency, and reliability of the service rather than employees' emotional performance (Wang and Groth 2014). In contrast, personalized services involve higher levels of customization and personal treatment (Grandey and Diamond 2010), so customers tend to express high expectations that employees will display positive emotions and withhold negative emotions (Wang and Groth 2014). Furthermore, compared with standardized services, personalized services create conditions for emotional contagion to occur, due to the greater personal contact and intimacy between employees and customers (Barger and Grandey 2006). However, we know of no studies that examine the role of emotional contagion in a personalized service setting.

Therefore, we build on Hareli and Rafaeli's (2008) emotion cycle model to investigate how customer and employee emotions reciprocally influence each other in service encounters. By addressing the aforementioned research gaps, our study contributes to extant literature in several ways. In particular, we include customer preservice emotions as antecedents of employee during-service emotions and examine how emotions may be transmitted from the customer to the employee, and then back to the customer, in service encounters. We thus extend prior service research that has focused mainly on how employees' emotions influence customer reactions in service encounters. Furthermore, we examine both positive and negative emotion cycles between customers and service employees in the context of personalized services (i.e., foot massage parlors) and investigate their influences on customer outcomes. To the best of our knowledge, this study is the first to examine the

simultaneous transmission of both positive and negative emotions between customers and employees. The results confirm that both emotion cycles occur in personalized services and thus deserve more empirical attention. In addition, we integrate employees' emotional labor strategies into Hareli and Rafaeli's (2008) emotion cycle model to examine whether employees' emotional labor strategies moderate emotion cycles between customers and employees. Finally, to test the dynamic emotion cycle between customers and employees, we conduct a field study with a large chain of foot massage parlors, collecting customer and employee data at multiple time points (i.e., pre- and postservice). Thus, we examine positive and negative emotion cycles in a real service setting, which helps establish the internal validity of our findings (i.e., temporal order of the variables).

Theory and Hypotheses

Model Overview

Hareli and Rafaeli (2008) suggest that organizational dyads and groups engage in emotion cycles, during which the emotions of an individual member influence the emotions, thoughts, and behaviors of others and others' reactions then influence future interactions with the person expressing the original emotions, as well as her or his future emotions and behaviors. An emotion cycle is possible in service encounters; customers' and employees' emotions may mutually influence each other and, ultimately, customer satisfaction. In this emotion cycle, customers' preservice emotions (i.e., emotions customers have prior to the service encounter) may predict employee during-service emotions (i.e., emotional experiences while interacting with customers), which then induce customer postservice emotions (i.e., customers' emotional experiences after the service has been completed). Employee emotional labor also may have moderating effects at various points of the emotion cycle, though the nature of these effects likely varies, depending on the valence of the emotions being transmitted through the emotional contagion process.

We examine the presence of such dyadic emotion cycles in service encounters by investigating how customer and employee emotions reciprocally influence each other, as well as the potential moderating role of emotional labor. Because we examine both positive and negative emotions, when necessary we provide separate theoretical rationales. Figure 1 contains our conceptual model; we elaborate each hypothesis according to the emotion cycle model (Hareli and Rafaeli 2008) next.

Emotion Cycles in Service Encounters

According to emotional contagion theory (Hatfield, Cacioppo, and Rapson 1993, 1994), people "catch" others' emotions, often unconsciously. Such primitive emotional contagion is a process whereby one party (i.e., emotion receiver) synchronizes her or his expressions, vocalizations, postures, and movements with another party (i.e., emotion sender), such that the interaction partners converge emotionally (Zablah et al. 2017).
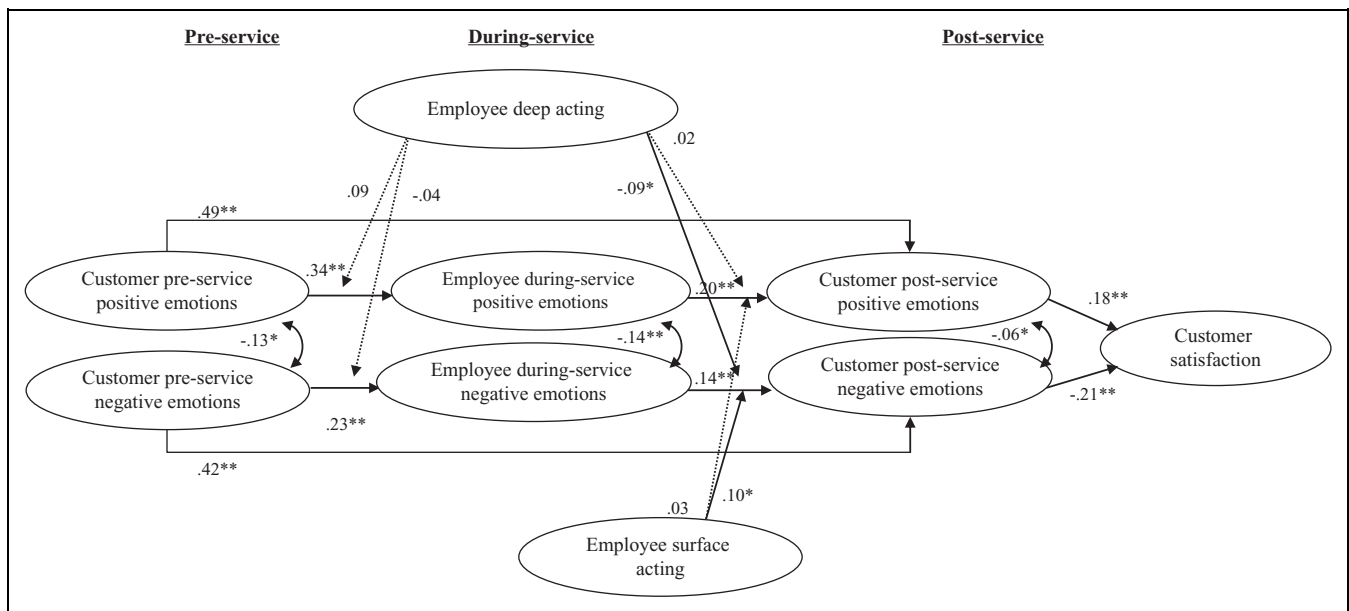
Figure 1. Conceptual model of emotion cycles in services. The paths from the control variables to the focal variables are not included, for visual clarity (the coefficients are available in Table 2).
*p < .05. **p < .01.

Prior service research offers evidence of emotional contagion in transmissions, both from employees to customers (Barger and Grandey 2006; Dallimore, Sparks, and Butcher 2007) and from customers to employees (Pugh 2001). If, as this evidence indicates, customers' and employees' emotions mutually influence each other during service interactions, it is insufficient to take a one-directional focus. Rather, we need to consider cycles of emotional contagion in service encounters.

Transmission of emotions from employees to customers. Considerable research has examined the flow of emotions from service employees to customers. Barger and Grandey (2006) find that employee smiling during service provision relates positively to customers' during-service smiling, which predicts customers' positive postservice moods. Positive links also emerge between employees' positive emotional expressions and customers' positive emotions (e.g., Pugh 2001; Söderlund and Rosengren 2008; Tsai and Huang 2002). Evidence of contagion of negative emotions is more limited, but Du, Fan, and Feng (2011) find that service employees' negative emotional expressions lead to negative customer emotions.

Transmission of emotions from customers to employees. Relatively less research has examined the flow of emotions from customers to employees, though a few studies offer some evidence. For example, customer preserve smile strength predicts service employees' during-service smile strength (Barger and Grandey 2006). Dallimore, Sparks, and Butcher (2007) further observe that when service employees are exposed to angry customers, employees display angry facial expressions that mimic the customers', and they report greater negative emotions after the service encounter.

Mediating role of employees' during-service emotions. Although prior service research provides considerable evidence of emotional contagion in service encounters, the existence of an emotion cycle, in which customers and employees mutually influence each other's emotions (Hareli and Rafaeli 2008), has yet to be examined empirically. Hatfield, Cacioppo, and Rapson (1994) predict an interaction process during emotional contagion, in which sender emotions get modified as the sequence of communication between the two parties unfolds. The initially sent emotions stimulate the receiver to respond with implicit or explicit feedback about continuing the expression of these emotions. The sender then reacts by adjusting her or his own initial expression of emotions. In this process, the reactions of the emotion receiver serve as feedback that influences and constrains subsequent sender emotions. Thus, mimicked emotions of receivers (e.g., service employees) can be the consequences of senders' (e.g., customers) prior emotions and the cause of senders' subsequent emotions (Hareli and Rafaeli 2008), suggesting that receivers' (e.g., service employees') emotions during the encounters might mediate the link between the pre- and postencounter emotions of the senders (customers).

Social psychology research also suggests that people pay attention to others' emotional cues and use them as social information and bases for their emotional reactions during emotional exchange processes (Parkinson 1996). Similar arguments appear in theoretical models of the social nature of emotions (e.g., Côté 2005; Hareli and Rafaeli 2008). For example, in a social interaction model of emotion regulation, Côté (2005) contends that senders and receivers of emotions engage in emotional feedback loops, in which a receiver's reactions to the sender provide input for the sender's subsequent behaviors.

Following this argument, we propose an emotional exchange process in service encounters, such that:

Hypothesis 1a: Employee during-service positive emotions mediate the relationship between customer pre- and post-service positive emotions.

Hypothesis 1b: Employee during-service negative emotions mediate the relationship between customer pre- and postservice negative emotions.

The Emotion Cycle and Customer Satisfaction

Consumer behavior literature has long recognized that customer satisfaction is both cognitive and affective (e.g., Martin et al. 2008). The affect-as-information hypothesis (Clore 1992; Schwarz and Clore 1988) suggests that people rely on their emotional state to make evaluative judgments of a situation. Thus, we expect a positive relationship between customer postservice emotions and customer satisfaction. Prior service research indicates that customers' positive emotional experiences relate positively to customers' satisfaction with services (e.g., Hennig-Thurau et al. 2006; Söderlund and Rosengren 2008). Because customer postservice emotions are directly influenced by employees' during-service emotions, we contend that the influence of customer emotions on customer satisfaction can be traced back to employees' during-service emotions, and this impact occurs through the mediating role of customer postservice emotions. Thus,

Hypothesis 2a: Customer postservice positive emotions mediate the positive relationship between employee during-service positive emotions and customer satisfaction.

Hypothesis 2b: Customer postservice negative emotions mediate the negative relationship between employee during-service negative emotions and customer satisfaction.

The Role of Employee Emotional Labor in Service Encounter Emotion Cycles

Emotional labor is a self-regulatory process in which employees manage their emotions, in compliance with job role expectations (Grandey 2000; Hochschild 1983). In a service setting, emotional labor involves both an intrapersonal process, in which employees manage their internal emotional experiences and external expressions to respond to organizational requirements, and an interpersonal process, in which their emotional displays influence how their customers feel (Ashforth, Tomiuk, and Kulik 2008; Hochschild 1983). Hochschild (1983, p. 147) contends that emotional labor jobs "require the worker to produce an emotional state in another person." Therefore, we integrate emotional labor into our service encounter emotion cycle model to predict how it might influence emotional contagion processes between employees and customers in service encounters.

Employees use emotional labor to manage how they feel and express emotions at work. Service organizations often have explicit or implicit emotional display rules to indicate which emotions are appropriate and may be expressed publicly to customers, as well as which ones should be suppressed (Hochschild 1983; Rafaeli and Sutton 1987). Researchers identify surface acting and deep acting as the two most commonly used emotional labor strategies for coping with emotional display rule requirements[1] (Grandey 2000; Hochschild 1983). Surface acting involves engaging in a superficial display of the normative emotion without making any effort to change what the person is feeling; deep acting involves trying to modify felt emotions to bring the internal experience and outward emotional expression into alignment with expected emotional displays (Grandey 2000; Hochschild 1983).

According to Grandey (2000) and Gross (1998), deep acting is an antecedent-focused emotion regulation strategy; it occurs in an early stage of emotion regulation. Through deep acting, employees attempt to modify how they perceive the situation (i.e., customer interactions) and adjust their emotional responses to it. Surface acting instead is a response-focused emotion regulation strategy that occurs later in the emotion regulation process, when people change their outward expressions of emotions. In the process of surface acting, employees change their emotional expressions in reaction to the situation rather than modifying their actual perceptions of the situation (Grandey 2000).

Because deep acting is an antecedent-focused regulatory strategy, deep actors tend to be more attentive to external stimuli and their influences on their emotional states, then react to those stimuli according to their self-regulatory goals. When employees engage in deep acting in service encounters, they attempt to facilitate positive emotions and reduce negative emotions, in accordance with organizational display rules (Hochschild 1983). When service employees encounter customers exhibiting positive emotions, those who deep act likely anticipate the benefits of synchronizing with customers' emotions, which also help them display more positive emotions. So intentionally or unintentionally, employees allow themselves to "catch" customers' positive emotions. However, catching negative emotions would lead employees to experience emotions that are inconsistent with organizational display rules. Deep actors who foresee the potential negative impact of catching customers' negativity may consciously adjust their cognitive appraisal of the situation to avoid receiving those negative emotions. That is, we predict that deep acting facilitates the transmission of customer preservice positive emotions but hinders the transmission of customer preservice negative emotions to employees.

Hypothesis 3a: Employee deep acting moderates the relationship between customer preservice positive emotions and employee during-service positive emotions, such that the relationship is stronger when employees deep act.

Hypothesis 3b: Employee deep acting moderates the relationship between customer preservice negative emotions and employee during-service negative emotions, such that the relationship is weaker when employees deep act.

Deep acting and the transmission of emotions from employees to customers. When employees modify their felt emotions with deep acting, their emotional expressive cues are more authentic (Côté 2005; Rafaeli and Sutton 1987). Authentic positive emotional displays can be caught more easily by customers through emotional contagion because of the clarity of the emotional expressive cues (Ashforth and Humphrey 1995). Employees who engage in high levels of deep acting express more authentic emotions, which helps stimulate customers' positive emotional reactions (e.g., Côté 2005; Ekman, Davidson, and Friesen 1990; Hennig-Thurau et al. 2006). Therefore, deep acting may facilitate the transmission of employee during-service positive emotions to customers.

When service employees initially experience negative emotions, they also might use deep acting to change their inner feelings, through cognitive reappraisals of the situation and positive refocusing (Beal et al. 2006; Grandey 2000). That is, when service employees regulate their negative emotions with deep acting, their negative emotions are less likely to be transmitted to customers, and fewer or weaker negative emotional cues get expressed to those customers. Weak emotional cues also are less contagious than strong ones (Wild, Erb, and Bartels 2001). Therefore, when service employees engage in high levels of deep acting, their negative emotions during service interactions are less likely to influence customers' postservice negative emotions, compared with when they perform low levels of deep acting.

Hypothesis 4a: Employee deep acting moderates the relationship between employee during-service positive emotions and customer postservice positive emotions, such that the relationship is stronger when employees deep act.

Hypothesis 4b: Employee deep acting moderates the relationship between employee during-service negative emotions and customer postservice negative emotions, such that the relationship is weaker when employees deep act.

Surface acting and the transmission of emotions from employees to customers. When service employees surface act to facilitate positive emotional expressions, the emotional cues they send to customers are likely mixed. More controllable emotional expressive channels (e.g., facial expressions) tend to reveal the intended emotions, whereas less controllable expressive channels (e.g., voice, body gesture) may leak true emotional cues that are not as pleasant (Ekman, Davidson, and Friesen 1990). Because emotional contagion is more likely when emotions are clearly expressed (Ashforth and Humphrey 1995), we contend that inconsistent emotional cues in surface acting hinder the emotional contagion process and decrease the likelihood that employees' positive emotions get transmitted to customers.

Regarding the suppression of negative emotions, Gross and John (2003) find that people who attempt to suppress their negative emotions eventually suffer intensified negative feelings. When service employees suppress their negative emotions through surface acting, they still experience, and unintentionally convey, negative emotions. Thus, surface acting likely increases the transmission of negative emotions from employees to customers. This proposition is supported by findings that show customers react unfavorably to employee surface acting (Chi and Grandey 2019; Groth, Hennig-Thurau, and Walsh 2009) and associate surface acting with a lack of interest or motivation to serve (Hennig-Thurau et al. 2006). Expression suppression through surface acting also demands both cognitive and self-regulatory resources (Beal et al. 2006), creating a state of depletion that may leave actors with few remaining resources to restrain themselves from venting negative emotions and prompting customers' corresponding negative emotions after the service. Therefore, employee surface acting may strengthen the relationship between employee during-service negative emotions and customer postservice negative emotions.

Hypothesis 5a: Employee surface acting moderates the relationship between employee during-service positive emotions and customer postservice positive emotions, such that the relationship is weaker when employees surface act.

Hypothesis 5b: Employee surface acting moderates the relationship between employee during-service negative emotions and customer postservice negative emotions, such that the relationship is stronger when employees surface act.

Method

Sample and Procedure

The data for this study came from service customers of a large chain of foot massage parlors located in Beijing, China. Foot massage services are very popular in China as a way to relax and improve people's health. Foot massage therapists provide professional treatments (e.g., using touch to manipulate the soft tissue of customers' feet to relieve pain/stress and increase relaxation), in accordance with customers' individual preferences. They must talk to customers about their symptoms and desired results, actively listen to customer needs, and display service-oriented attitudes to provide customized and personalized treatments. Thus, in addition to their professional ability, therapists need to display friendly and warm emotions to deliver the service. Furthermore, foot massages are highly personalized, one-on-one services, and therapists engage in extensive face-to-face interactions with their customers (average service time of 47 minutes in the present study), so our research setting is appropriate for examining reciprocal emotional contagion between customers and employees.

Initially, we asked 300 randomly selected frontline employees if they would be willing to participate in the study, described as an investigation of human resource management

and service satisfaction. The 280 employees who agreed to participate and completed our survey represent a 93% response rate. Next, members of the research team randomly approached customers to solicit their participation and distributed the questionnaires onsite at various parlors. Over a 2-week period, we asked 336 customers of multiple foot massage parlors across Beijing to complete the survey; 283 customers (84%) agreed to participate, and of them, 268 (95%) returned both the pre- and postservice questionnaires. That is, once a customer agreed to participate, she or he was asked to complete the preservice survey. At the same time, the research team identified the employee assigned to serve that customer and asked him or her to complete the preservice survey before beginning to deliver the service. This employee was the only one that the customer would have contact with during the service delivery. We then matched the customer and employee data, using specific identification codes for each customer-employee dyad. To ensure independence across responses, we collected data from only one customer per employee.

In addition to collecting customers' preservice data as they entered the foot massage parlor and prior to any interaction with the service employees, we asked the customers to complete another questionnaire immediately after the service was provided (i.e., postservice). In the preservice questionnaire, customers indicated their current emotional states, susceptibility to emotional contagion, and demographics. In the postservice questionnaire, they again reported their current emotional states, rated their satisfaction, and estimated the time they spent interacting with the employee. Similarly, the employee data were collected before the employee had been assigned to the customer, prior to any interaction (i.e., preservice), and then again immediately after the customer left the parlor. In the preservice questionnaire, employees indicated their current emotional states, susceptibility to emotional contagion, and demographics. In the postservice questionnaire, they reported their emotional states while interacting with the customer and the emotional labor strategies they used during the service encounter. Service employees did not receive any incentive for their participation, but they were provided a summary report upon completion of the study.

Of the final sample of 268 customers, approximately 46% were women and 68% were younger than 30 years. Among the 268 employees, approximately 67% were men and 80% were younger than 30 years. Their average job tenure was 7.4 years.

Measures

All materials were presented to the respondents in Chinese. If any scale was not already available in Chinese, we conducted translation and back-translation of the items (Brislin 1980). These items, all of which were evaluated on 7-point scales, are included in the Appendix.

Customer emotions (pre- and postservice) and employee emotions (pre- and during-service) are measured with the Positive and Negative Affect Schedule (Watson, Clark, and Tellegen 1988). One positive item ("attentive") and one negative item ("upset") were removed to improve the reliability of the positive and negative emotions scales, respectively. Employee *deep acting* and *surface acting* were measured with two 3-item measures from Groth, Hennig-Thurau, and Walsh (2009), conceptualized as individual-level tendencies rather than within-person variations (Chi et al. 2011). To measure *customer satisfaction*, we used Susskind, Borchgrevink, and Kacmar's (2003) 6-item scale, adapted to the foot massage service context.

Control Variables

We included several control variables to rule out alternative explanations.[2] First, we included customer reports of *service employees' time spent with the customer (minutes)*, which might influence the emotional contagion between service employees and customers (Du, Fan, and Feng 2011) and customer satisfaction (Noone et al. 2009). Second, with Doherty's (1997) 9-item scale, we measured individual susceptibility to positive (happiness) and negative (anger and sad) emotions and thus control for *customer and employee susceptibility to emotional contagion*—tendencies that influence the degree to which customers and employees are affected by the emotions of others (Doherty 1997; Hatfield, Cacioppo, and Rapson 1994). Third, to assess *employee professional ability* in terms of foot massage therapists' capacity to provide professional treatments to relieve customers' pain/stress and increase relaxation, we used 5 customer-rated items constructed for this study, such as "This employee has good massage skills" and "The massage provided by this employee made me feel very comfortable and relaxed." Fourth, *employee perceived service climate*, measured using Ray, Barney, and Muhanna's (2004) 4-item scale, provides a control to test for whether perceived service climate might influence customer satisfaction directly (Solnet and Paulsen 2006).

Confirmatory Factor Analysis

To evaluate the convergent and discriminant validity of our proposed 13-factor model (i.e., customer preservice positive and negative emotions, employee during-service positive and negative emotions, customer postservice positive and negative emotions, surface and deep acting, customer satisfaction, employee and customer susceptibility to emotional contagion, professional ability, and perceives service climate), we conduct a series of confirmatory factor analysis using Mplus 6.21. The results indicate acceptable fit for the proposed model, $\chi^2(4,107) = 8,644.12$; $\chi^2/df = 2.10$, confirmatory fit index [CFI] = .91, Tucker-Lewis index [TLI] = .90, root mean square error of approximation [RMSEA] = .06, standardized root mean residual [SRMR] = .06, better than that of an 11-factor model (with customer pre- and postservice positive emotions combined into one factor and customer pre- and postservice negative emotions combined into one factor), $\chi^2(4,130) = 9,587.74$; $\chi^2/df = 2.32$, CFI = .85, TLI = .84, RMSEA = .07, SRMR = .09. According to the χ^2 difference tests, the decrement between our 13-factor and the alternative

11-factor model is significant, $\triangle \chi^2 = 943.62$, $\triangle df = 23$, $p < .01$. In addition, the factor loadings of all items in the 13-factor model are statistically significant ($p < .01$), and composite reliabilities (ranging from .76 to .91, see Table 1) as well as average variance extracted (AVE; ranging from .51 to .68) of all study measures are higher than Fornell and Larcker's (1981) recommended cutoff values, suggesting the convergent validity of the measures. With Anderson and Gerbing's (1988) method, we also examine the discriminant validity of the measures by calculating the 95% confidence intervals (CIs) of the correlations of all study variables. None of these intervals include 1. Finally, we followed Voorhees et al.'s (2016) suggestion to examine the discriminant validity of the study measures by employing the AVE-SV (i.e., shared variance) comparison approach. The results indicate that the AVE of each measure exceeds the SV between it and all other measures, suggesting that the study variables are distinguishable (Fornell and Larcker 1981).

Common Method Variance Analysis

Because we collected self-reported measures from employees and customers, common method variance may be a concern. To avoid common method bias, we adopted several procedural remedies (Podsakoff et al. 2003), such that we collected data from different sources at different times, guaranteed respondents' anonymity and data confidentiality, and used prevalidated research instruments. To check for potential common method bias, we apply an unmeasured latent method factor approach and specify two latent common method factors (i.e., one linked to all items collected from customers and another linked to all items collected from employees) in our measurement model. The significance of the factor loadings and relationships between constructs remains unchanged whether we include these two latent common method factors or not. When we include them though, the fit indices are worse, $\chi^2(3,987) = 8,034.29$; $\chi^2/df = 2.01$, CFI = .89, TLI = .88, RMSEA = .07, SRMR = .07, than those reported previously for our original model. Thus, common method bias does not adversely affect our study findings.

Data Analyses and Results

Table 1 presents the means, standard deviations (SDs), composite reliabilities, and zero-order correlations of all the variables. The composite reliabilities are all well above the recommended level of .60 (Fornell and Larcker 1981).

We perform path analyses to test the hypothesized direct, indirect, and moderating effects simultaneously, using Mplus 6.21. For the test of the theoretical model, we use bootstrapping to compute the 95% CIs for all estimated effects with 5,000 resamples (Preacher and Hayes 2004). The Mplus results for all estimated effects are in Table 2.

Hypothesis Testing

In Hypothesis 1, we predict that employee during-service emotions mediate the relationship between customer pre- and postservice emotions. As indicated in Table 2, customer preservice positive emotions positively predict employee during-service positive emotions (unstandardized path coefficient estimate = .34, $p < .01$; 95% CI [.25, .42]), and customer preservice negative emotions are positively associated with employee during-service negative emotions (estimate = .23, $p < .01$; 95% CI [.10, .32]). In addition, employee during-service positive emotions positively predict customer postservice positive emotions (estimate = .20, $p < .01$; 95% CI [.09, .31]), whereas employee during-service negative emotions are positively associated with customer postservice negative emotions (estimate = .14, $p < .01$; 95% CI [.07, .23]). Furthermore, the path analysis results indicate that the indirect effect of customer preservice positive emotions on their postservice positive emotions, through employee positive emotions, is significant (indirect effect = .076, $p < .01$; 95% CI [.03, .12]), in support of Hypothesis 1a. The indirect effect of customer preservice negative emotions on postservice negative emotions, through employee negative emotions, is .041 ($p < .05$; 95% CI [.01, .08]), suggesting a significant mediation effect that also supports Hypothesis 1b.

With Hypothesis 2, we predict that customer postservice emotions mediate the relationship between employee during-service emotions and customer satisfaction. As noted, employee during-service positive (negative) emotions positively predict customer postservice positive (negative) emotions. Moreover, customer postservice positive emotions relate positively to customer satisfaction (estimate = .18, $p < .01$; 95% CI [.07, .25]), whereas customer postservice negative emotions are negatively associated with customer satisfaction (estimate = $-.21$, $p < .01$; 95% CI [$-.14$, $-.30$]). The Mplus analysis also reveals a significant indirect effect of employee during-service positive emotions on satisfaction through customer postservice positive emotions (indirect effect = .037, $p < .05$; 95% CI [.01, .07]), in support of Hypothesis 2a. The indirect effect of employee during-service negative emotions on customer satisfaction through customer postservice negative emotions is significant too (indirect effect = $-.043$, $p < .05$; 95% CI [$-.02$, $-.08$]), such that we find support for Hypothesis 2b.

In Hypothesis 3, we predict that employee deep acting moderates the relationship between customer preservice emotions and employee during-service emotions. The Mplus results (Table 2) indicate that the interaction term between customer preservice positive emotions and employee deep acting on employee during-service positive emotions is not significant (estimate = .09, ns; 95% CI [$-.06$, .15]), so we do not find support for Hypothesis 3a. Similarly, the interaction term of customer preservice negative emotions and employee deep acting does not have a significant effect on employee during-service negative emotions (estimate = $-.04$, ns; 95% CI [$-.12$, .02]), so we cannot confirm Hypothesis 3b either.

Table 1. Means, Standard Deviations, Reliabilities, and Intercorrelations.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Employee gender	0.67	.48																		
2. Employee job tenure (in years)	7.38	5.65	−.15*																	
3. Time spent with customer (in minutes)	47.39	32.10	−.19**	−.07																
4. Customer susceptibility to emotional contagion	4.49	.87	−.09	.08	.10	(.81)														
5. Employee susceptibility to emotional contagion	4.57	.79	−.20**	−.06	.23**	.15*	(.80)													
6. Perceived service climate	5.41	.98	−.01	.02	.09	.06	.20**	(.82)												
7. Employee professional ability	5.46	.87	−.05	−.01	.26**	.12*	.25**	.23**	(.87)											
8. Customer preservice positive emotions	4.75	.94	−.05	.07	.00	.23**	.02	−.06	.11	(.83)										
9. Customer preservice negative emotions	2.19	.93	−.08	.05	.10	.14*	−.09	−.15*	−.17**	−.05	(.90)									
10. Employee preservice positive emotions	4.97	.88	−.07	.07	−.11	.00	−.05	.02	.03	.34**	−.07	(.80)								
11. Employee preservice negative emotions	2.36	1.08	.01	−.11	.06	.09	−.05	−.18**	.01	.00	.32**	−.25**	(.91)							
12. Employee during-service positive emotions	5.00	.76	−.12*	.10	−.06	.15**	−.01	.00	.05	.42**	.04	.59**	−.05	(.79)						
13. Employee during-service negative emotions	2.27	.98	.10	−.11	−.08	.04	−.13*	−.25**	−.11	.05	.26**	−.10	.60**	−.13*	(.88)					
14. Surface acting	2.85	1.40	−.06	.18**	−.19**	.09	−.02	−.29**	−.10	.09	.19**	.03	.15**	.04	.33**	(.85)				
15. Deep acting	4.68	1.26	−.05	.09	−.04	.08	.00	.11	−.07	.22**	.08	.23**	.02	.28**	.03	.13*	(.76)			
16. Customer postservice positive emotions	4.80	.92	−.03	.11	−.08	.24**	−.01	−.07	.14*	.66**	−.01	.38**	.00	.44**	.06	.13*	.27**	(.90)		
17. Customer postservice negative emotions	1.99	.84	−.06	−.04	.03	.09	−.04	−.04	−.23**	−.09	.53**	−.11	.32**	.00	.37**	.22**	.16**	−.05	(.94)	
18. Customer satisfaction	5.18	.88	.11	−.15*	.15*	.13*	.10	.25**	.47**	.21**	−.09	.04	−.01	.13*	−.09	−.29**	.12*	.33**	−.12	(.73)

Note. $N = 268$. Values on the diagonal are the composite reliabilities values. Employee gender was coded as $0 = $ *female* and $1 = $ *male*.
*$p < .05$ (two-tailed). **$p < .01$ (two-tailed).

Table 2. Unstandardized Coefficients From Mplus.

Direct Effects	Estimates	Standard Error	95% Confidence Interval
Customer preservice positive emotions → Employee during-service positive emotions	.34**	.05	[.25, .42]
Employee during-service positive emotions → Customer postservice positive emotions	.20**	.07	[.09, .31]
Customer preservice negative emotions → Employee during-service negative emotions	.23**	.07	[.10, .32]
Employee during-service negative emotions → Customer postservice negative emotions	.14**	.05	[.07, .23]
Customer postservice positive emotions → Customer satisfaction	.18**	.06	[.07, .25]
Customer postservice negative emotions → Customer satisfaction	−.21**	.06	[−.14, −.30]
Moderating effects			
Deep acting * Customer preservice positive emotions → Employee during-service positive emotions (Hypothesis 3a)	.09	.06	[−.06, .15]
Deep acting * Customer preservice negative emotions → Employee during-service negative emotions (Hypothesis 3b)	−.04	.05	[−.12, .02]
Deep acting * Employee during-service positive emotions → Customer postservice positive emotions (Hypothesis 4a)	.02	.03	[−.02, .08]
Deep acting * Employee during-service negative emotions → Customer postservice negative emotions (Hypothesis 4b)	−.09*	.04	[−.03, −.17]
Surface acting * Employee during-service positive emotions → Customer postservice positive emotions (Hypothesis 5a)	.03	.05	[−.05, .12]
Surface acting * Employee during-service negative emotions → Customer postservice negative emotions (Hypothesis 5b)	.10*	.05	[.03, .17]
Indirect effects			
Customer preservice positive emotions → Employee during-service positive emotions → Customer postservice positive emotions (Hypothesis 1a)	.076**	.02	[.03, .12]
Customer preservice negative emotions → Employee during-service negative emotions → Customer postservice negative emotions (Hypothesis 1b)	.041*	.02	[.01, .08]
Employee during-service positive emotions → Customer postservice positive emotions → Customer satisfaction (Hypothesis 2a)	.037*	.02	[.01, .07]
Employee during-service negative emotions → Customer postservice negative emotions → Customer satisfaction (Hypothesis 2b)	−.043*	.02	[−.02, −.08]

Control variables (estimates and standard errors in parentheses)

On employee during-service positive emotions	DA (.10**, .03), ESEC (−.02, .06)
On employee during-service negative emotions	DA (−.01, .04), ESEC (−.16*, .08)
On customer postservice positive emotions	SA (.04, .03), DA (.07*, .03), CSEC (.02, .04), PRO (.15**, .05), time (−.00, .01)
On customer postservice negative emotions	SA (.06, .03), DA (.03, .03), CSEC (.04, .05), PRO (−.11*, .05), time (.00, .01)
On customer satisfaction	Service climate (.19**, .05), time (.01**, .002)

Note. $N = 268$. The results remain unchanged whether we include the control variables in the analyses or not. ESEC = employee susceptibility to emotional contagion; CSEC = customer susceptibility to emotional contagion; DA = deep acting; SA = surface acting; PRO = professional ability; time = time spent with customer; Estimates = unstandardized path coefficients.
*$p < .05$. **$p < .01$.

With Hypothesis 4, we predict that employee deep acting moderates the relationship between employee during-service emotions and customer postservice emotions. As Table 2 reveals, the interaction term between employee during-service positive emotions and employee deep acting is not significant with regard to customer postservice positive emotions (estimate = .02, *ns*; 95% CI [−.02, .08]), in contrast with Hypothesis 4a. However, Table 2 indicates that the interaction between employee during-service negative emotions and employee deep acting exerts a significant influence on customer postservice negative emotions (estimate = −.09, $p < .05$; 95% CI [−.03, −.17]). With the procedure suggested by Aiken and West (1991)

and Dawson (2014), we plot the scores of customer postservice negative emotions at high (mean + 1 *SD*) and low (mean − 1 *SD*) levels of employee during-service negative emotions and deep acting in Figure 2. When employees engage in low levels of deep acting, their during-service negative emotions relate more strongly to customer postservice negative emotions ($\beta = .24, p < .001$) than when employees perform high levels of deep acting ($\beta = .05, ns$), in support of Hypothesis 4b.

Finally, we propose in Hypothesis 5 that employee surface acting moderates the relationship between employee during-service emotions and customer postservice emotions. Regarding the moderating effect of surface acting, the Mplus results
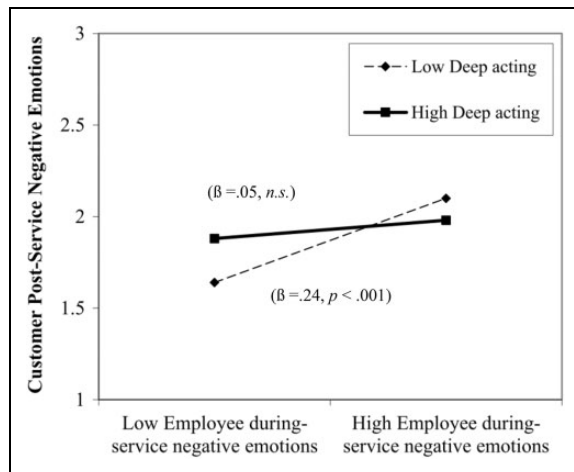
Figure 2. Moderating effect of employee deep acting on the relationship of employee during-service negative emotions with customer postservice negative emotions.
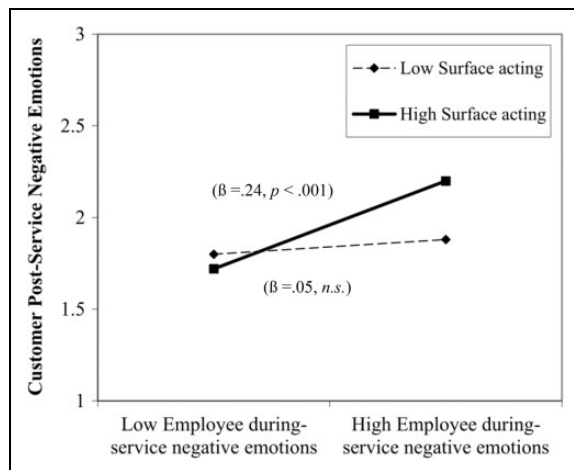

Figure 3. Moderating effect of employee surface acting on the relationship of employee during-service negative emotions with customer postservice negative emotions.

(Table 2) indicate that the interaction effect of employee during-service positive emotions and surface acting on customer postservice positive emotions is not significant (estimate = .03, *ns*; 95% CI [−.05, .12]), and we cannot confirm Hypothesis 5a. However, the interaction term between employee during-service negative emotions and employee surface acting is significant for customer postservice negative emotions (estimate = .10, *p* < .05; 95% CI [.03, .17]). To illustrate these patterns of the significant moderating effects of employee surface acting, we again plot high and low levels (Aiken and West 1991; Dawson 2014). As Figure 3 indicates, when employees engage in high levels of surface acting, employee during-service negative emotions relate more strongly to customer postservice negative emotions (β = .24, *p* < .001) than when they perform low levels of surface acting (β = .05, *ns*). Therefore, we find support for Hypothesis 5b.

Additional Analyses

We performed several additional analyses to rule out alternative explanations for our findings. First, employees' and customers' susceptibility to emotional contagion plausibly might moderate both positive and negative emotional contagion processes (Doherty 1997). Specifically, we explore whether employees' susceptibility to emotional contagion moderates the associations between customer preservice emotions and employee during-service emotions and whether customers' susceptibility to emotional contagion moderates the relationships between employee during-service emotions and customer postservice emotions. However, the results indicate that employees' and customers' susceptibility to emotional contagion does not moderate these relationships (estimates = −.01 to −.07, *ns*). Second, we test six interactions simultaneously in our model, so some of the significant interactions might arise by chance. To check the robustness of our findings, we include only the significant interaction term separately in the analyses and remove the other interaction terms. The Mplus results in this case indicate that deep acting still attenuates the association between employee during-service negative emotions and customer postservice negative emotions (estimate = −.07, *p* < .05, 95% CI [−.01, −.11]), and surface acting strengthens this relationship (estimate = .09, *p* < .05, 95% CI [.02, .15]). Thus, our findings appear stable and robust.

Discussion

In developing and empirically testing a model to examine the emotion cycle in service encounters and its influence on customer satisfaction, we find that (1) customer preservice emotions have a significant impact on customer satisfaction through employee during-service emotions and customer postservice emotions and (2) customer postservice positive emotions lead to higher customer satisfaction, whereas customer postservice negative emotions are negatively related to customer satisfaction. Finally, we find that employee deep acting weakens the positive relationship between employee during-service negative emotions and customer postservice negative emotions, whereas surface acting strengthens this relationship.

Theoretical Contributions

Our study makes several contributions to extant literature. First, we examine the reciprocal nature of the emotional exchange process in service encounters. Prior related research primarily examines emotional contagion processes from employees to customers in service encounters (e.g., Barger and Grandey 2006; Du, Fan, and Feng 2011; Hennig-Thurau et al. 2006; Tsai and Huang 2002; Wang et al. 2017), thereby overlooking the possibility that customer preservice emotions might influence employees' emotions during service interactions. We advance knowledge on emotional contagion by detailing the reciprocal nature of the emotional contagion process in a service setting. That is, customer preservice positive

emotions can trigger a positive emotion cycle in service interactions, and customer preservice negative emotions can activate a negative emotion cycle between customers and employees. It appears that customers who enter a service encounter with positive emotions are more likely to enjoy their service experience, due to employees' enhanced positive emotions, prompting a higher level of satisfaction. In contrast, when customers enter a service encounter with negative emotions, they likely continue to experience negative emotions due to employees' negative emotions, resulting in a lower level of satisfaction. Service satisfaction thus is not simply about what employees do to influence customers but also involves dynamic emotional exchanges between customers and employees. With these findings, we demonstrate the powerful influences of customer preservice emotions on employees' emotions in service encounters and emotion cycles, through which customers' influences on employees' emotions reemerge in customers' subsequent emotions.

In a related contribution, we extend prior findings by testing emotional contagion processes in a personalized service context (i.e., foot massage). The relationship between employee during-service positive emotions and customer postservice positive emotions in the current study is much stronger ($r =$ .44, $p <$ .01) than what has been observed in previous studies conducted in more standardized service contexts (e.g., $r =$ .06, ns, Barger and Grandey 2006; $r =$ .19, $p <$ .05, Pugh 2001; $r =$ .18, $p <$ .01, Tsai and Huang 2002; $r =$ .23 and .24, $p <$ .01, Wang et al. 2017). Because personalized services involve more individualized treatment, more extensive interpersonal contact, and increased intimacy in service interactions than standardized services (Grandey and Diamond 2010; Wang and Groth 2014), they seemingly may facilitate stronger emotional contagion between employees and customers. Overall, our findings suggest a robust, generalizable effect of emotional contagion but also acknowledge that its magnitude may differ across service contexts.

Second, few studies examine both positive and negative emotional contagion processes simultaneously in service contexts (e.g., Dallimore, Sparks, and Butcher 2007; Du, Fan, and Feng 2011). Our findings demonstrate the presence of both types of emotional contagion and also highlight that employees' emotional labor strategies have differential effects on the two emotional contagion processes. Specifically, the effect of the negative emotional contagion process (i.e., positive relationship between employee during-service negative emotions and customer postservice negative emotions) is moderated by employees' deep and surface acting, but this is not the case for the positive emotional contagion process. These findings point to the possibility that positive emotions and negative emotions operate differently in service encounters. Positive emotional contagion involves more favorable experiences (Chi et al. 2011), so the effects of positive emotions are less likely to be influenced by employees' emotional labor strategies. However, people tend to pay more attention to information about negative emotions during social interactions because of the risk of

detrimental interpersonal outcomes (Barsade 2002). Thus, employees' use of deep and surface acting strategies to regulate negative emotions is very salient for determining customers' postencounter negative emotions.

Third, we examine the role of emotional labor in emotional contagion processes; prior research rarely investigates these two topics in an integrated model. Our findings have several implications for emotional labor literature. The influence of emotional labor appears primarily in the second stage of the emotion cycle, when employees' emotions get transmitted to customers, contingent on the emotional labor strategy used. Deep acting, as an antecedent-focused emotion regulation strategy that helps people manage their cognitive appraisals of the situation and change emotional states, does not appear to influence the transmission of emotions from customers to employees. It is likely that most employees in our sample do not recognize the impact of customer preservice emotions on their own emotional states and thus do not proactively manage this emotional contagion process. Grandey and Melloy (2017) also note that there is no perfect match between deep/surface acting and Gross's (1998) antecedent-/response-focused regulation. Our findings provide evidence for the comparisons of deep/surface acting and Gross's (1998) antecedent-/response-focused regulation and demonstrate that emotional labor which includes both *intrapersonal* and *interpersonal* regulation processes is more complex than just antecedent-/response-focused emotion regulation.

Our findings also suggest that deep acting and surface acting influence negative emotional contagion processes differently. Employees may exert effort to regulate their emotions to inhibit the negative emotional contagion processes (Gabriel and Diefendorff 2015), but the two acting strategies actually result in opposite effects. When employees engage in deep acting during service encounters, they mitigate the consequences of negative feelings; however, when employees employ surface acting, they "put on a mask" to suppress their negative feelings. Such superficial expressions are likely to be detected by customers, provoking their negative reactions (Grandey 2003). These findings thus provide new evidence of the roles of surface and deep acting in the emotional labor literature (Grandey 2003; Groth, Hennig-Thurau, and Walsh 2009).

Managerial Implications

We have highlighted the importance of understanding the reciprocal nature of the emotional contagion process in service interactions. Service managers have traditionally paid much attention to facilitating employee during-service positive emotions and inhibiting employee during-service negative emotions to enhance customer satisfaction. However, in noting the powerful influence of customer preservice positive/negative emotions on employee during-service positive/negative emotions, service organizations must recognize that customer satisfaction depends not only on what service employees do during their interactions with customers but also on what customers bring emotionally to the encounter. Therefore, customer

emotions should be closely monitored and addressed even before the service encounter begins; service organizations also might explore ways to enhance and improve customer emotions before they come in contact with employees. For example, a well-designed, relaxing store environment can facilitate customers' positive preservice emotions, shorter wait times or fun distractions while they wait could help mitigate customer frustration, and ensuring that repeat customers receive service from their preferred employees may improve emotions on both sides.

Furthermore, since customer postservice positive emotions enhance and customer postservice negative emotions reduce customer satisfaction, service employees need to monitor how customers feel after the service encounters. For example, service employees can actively seek feedback during the service experience from customers to improve their services immediately. These findings also emphasize the importance of employee emotional competence (Delcourt et al. 2016). Service employees must be aware of the emotional dynamic inherent in their service encounters and be prepared to manage emotional contagion processes as necessary. Ideally, employees express positive emotions to customers, yet some negative emotions are inevitable. When they confront customers who express their own negative emotions, service employees likely participate, albeit unconsciously, in a negative emotion cycle that makes it even more difficult to establish positive service experiences. Awareness of this emotional contagion process may help service employees manage emotional episodes more effectively or prevent the emergence of negative emotions in the initial stages of the service transaction. For example, employees might proactively offer a warm reception, using humor and sincere smiles to relieve customers' preservice negative emotions.

Consistent with prior research (e.g., Grandey 2003), our study also suggests that deep acting is more effective than surface acting for delivering a pleasant service experience. Therefore, managers should teach service employees when and how to use deep acting, including organization-wide training to enhance their emotional competence and improve their ability to perform deep acting.

Limitations and Further Research

A few limitations of our study are noteworthy. First, to avoid interrupting the service process, we asked employees to recall their during-service emotions after the service encounter had taken place. This protocol may have reduced the accuracy of the reported emotions, due to a recall bias. However, the time gap was quite short, so any such bias should be minimal. Still, we cannot completely rule out the presence of recall bias, so caution is necessary when interpreting the results of this study.

Second, we focused on customers' and employees' felt emotions, not emotional expressions in the emotion cycle. Although the present findings provide support for the existence of both positive and negative emotional contagion in service contexts, we could not determine the extent to which the felt emotions were actually expressed and whether their emotional expressions might influence the strength of emotional contagion processes. In addition, we asked customers/employees to evaluate how they felt in general before/during/after their interactions, so our emotion measures did not account for moment-by-moment shifts in the emotional states of employees and customers. Further research might collect observational data on customer and employee emotional expressions (Barger and Grandey 2006) or use an experience sampling method to collect customers' and employees' felt emotions across the different stages of the service delivery process (i.e., pre-, during-, and postservice), which could enable tests of the emotion cycle and interplay of customers' and employees' emotional expressions/felt emotions. Researchers also might consider discrete emotions (e.g., anger, joy, anxiety) rather than simply their valence. Emotions have different relational meanings and may be perceived by employees and customers differently, prompting distinct reactions. We recommend further research to examine how the contagion of various discrete emotions differs and how emotional labor targeting these discrete emotions might facilitate positive customer outcomes.

Third, the specific service context of foot massage parlors, with their relatively long service interactions and intimate atmosphere, may reduce the generalizability of the findings. We assume that the goal of emotional labor is to facilitate positive, and decrease negative, customer emotions, because that is what customers want and what service organizations pursue in most service contexts, including foot massage parlors. However, in some contexts, facilitating negative emotions may be a meaningful goal, such as when customers watch a dramatic movie or attend a funeral service. Our findings must be interpreted according to the service context.

In addition, researchers might go beyond dyadic interactions to examine emotion cycles at the group level. Groth and Grandey (2012) suggest that negativity in employee-customer interactions represents an "open loop" negative exchange spiral whose influences go beyond interactional partners to affect subsequent customers and nearby employees. Hareli and Rafaeli (2008) also discuss emotion cycles that extend beyond immediate interaction partners and influence observers of emotional exchanges. The joint influence of emotional contagion and emotional labor, in settings beyond employee-customer interactions (e.g., customer-to-customer interactions, supervisor-subordinate interactions), may provide further insight into emotional contagion's influence in commercial settings.

Finally, our findings reveal interesting differences between emotion cycles involving positive versus negative emotions. Whether positive or negative emotions are more contagious is still up for debate (e.g., Barsade 2002); our results do not provide conclusive findings in this regard. Perhaps instead of positive emotions being more contagious, employees are comparatively less likely to enact an emotional labor process when customers enter the service encounter with positive emotions. More research is needed to examine why the moderating effects of emotional labor vary with the valence of emotions.

Appendix

Construct Measures

Employees' and customers' emotions. Likert-type scale, ranging from 1 (*not at all*) to 7 (*very much*) (Watson, Clark, and Tellegen 1988)

Positive emotions

1. interested
2. excited
3. strong
4. enthusiastic
5. proud
6. alert
7. inspired
8. determined
9. active

Negative emotions

1. distressed
2. guilty
3. scared
4. hostile
5. irritable
6. ashamed
7. nervous
8. jittery
9. afraid

Emotional labor strategies. Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (Groth, Hennig-Thurau, and Walsh 2009)

Employee deep acting

1. I tried to actually experience the emotions I had to show to the customer.
2. I worked hard to feel the emotions that I needed to show to this customer.
3. I made a strong effort to actually feel the emotions that I needed to display toward this customer.

Employee surface acting

1. I just pretended to have the emotions I needed to display to this customer.
2. I put on a "mask" in order to display the emotions my manager wants me to display.
3. I put on a "show" or "performance" when interacting with this customer.

Customer satisfaction. Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (Susskind, Borchgrevink, and Kacmar 2003)

1. Overall, I am happy with the service I just received.
2. The employee(s) who assisted me seemed interested in providing excellent service.
3. The employee(s) who assisted me appeared happy to serve me.
4. The employee(s) performed their duties as I anticipated.
5. The employee(s) who assisted me appeared to be cold and distant (*reverse coded*).
6. This business's employees really focus on customer service.

Employee and customer susceptibility to emotional contagion. Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (Doherty 1997)

1. If someone I am talking with begins to cry, I get teary-eyed.
2. Being with a happy person picks me up when I'm feeling down.
3. When someone smiles warmly at me, I smile back and feel warm inside.
4. I get filled with sorrow when people talk about the death of their loved ones.
5. I clench my jaws and my shoulders get tight when I see angry faces on the news.
6. It irritates me to be around angry people.
7. I tense when I hear an angry quarrel.
8. Being around happy people fills my mind with happy thoughts.
9. I cry at sad movies.

Service climate. Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (Ray, Barney, and Muhanna 2004)

1. Customer service representatives are adequately trained to handle different situations that are likely to arise in the customer service function.
2. There is open communication and teamwork in the customer service unit.
3. There is coordination between internal departments to provide quality customer service.
4. The policies and procedures in the customer service unit make it easy to deliver excellent customer service.

Employee professional ability. Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*)

1. This employee has good massage skill.
2. I know the problem of my body or the area I should pay attention to from this employee.
3. This employee eased the pain and fatigue of my body.
4. The massage provided by this employee makes me feel very comfortable and relaxed.
5. This employee taught me some regimen or health knowledge.

Authors' Note

ORCID iD

Xiao-Yu Liu ⬤ https://orcid.org/0000-0001-8589-1655

Notes

1. Emotional labor strategies have been conceptualized as individual-level tendencies (Beal et al. 2006; Chi et al. 2011; Groth, Hennig-Thurau, and Walsh 2009) or within-person responses (Judge, Woolf, and Hurst 2009; Scott and Barnes 2011). Our theoretical model focuses on how service employees' emotional labor tendencies influence the effects of emotional contagion processes (rather than within-person variations). With this conceptualization, we can directly compare our results with prior findings at the individual level (e.g., meta-analyses by Hüsheger and Schewe 2011; Kammeyer-Mueller et al. 2013; Mesmer-Magnus, DeChurch, and Wax 2012).

2. We also controlled for the effects of *employee gender*, *gender match of employee-customer pair (same vs. opposite gender)*, and *employee job tenure*. However, none of these variables were significantly related to our main variables, so we did not include them in the main analyses.

References

Aiken, Leona S. and Stephen G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*. Thousand Oaks, CA: Sage.

Anderson, James C. and David W. Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, 103 (3), 411-423.

Ashforth, Blake E. and Ronald H. Humphrey (1995), "Emotion in the Workplace: A Reappraisal," *Human Relations*, 48 (2), 97-115.

Ashforth, Blake E., Marc A. Tomiuk, and Carol T. Kulik (2008), "Doing Emotion in Service Encounters: Service Agent's Perceptions of Emotional Labor and Emotional Contagion," in *Research Companion to Emotion in Organizations*, Neal M. Ashkanasy and Cary L. Cooper, eds. Cheltenham, UK: Edward Elgar, 335-348.

Barger, Patricia B. and Alicia A. Grandey (2006), "'Service With a Smile' and Encounter Satisfaction: Emotional Contagion and Appraisal Mechanisms," *Academy of Management Journal*, 49 (6), 1229-1238.

Barsade, Sigal G. (2002), "The Ripple Effect: Emotional Contagion and Its Influence on Group Behavior," *Administrative Science Quarterly*, 47 (4), 644-675.

Beal, Daniel J., John P. Trougakos, Howard M. Weiss, and Stephen G. Green (2006), "Episodic Processes in Emotional Labor: Perceptions of Affective Delivery and Regulation Strategies," *Journal of Applied Psychology*, 91 (5), 1053-1065.

Brislin, Richard W. (1980), "Translation and Content Analysis of Oral and Written Material," in *Handbook of Cross-Cultural Psychology*, Vol. 1, Harry C. Triandis and John W. Berry, eds. Boston, MA: Allyn and Bacon, 389-444.

Chi, Nai-Wen and Alicia A. Grandey (2019), "Emotional Labor Predicts Service Performance Depending on Activation and Inhibition Regulatory Fit," *Journal of Management*, 45 (2), 673-700.

Chi, Nai-Wen, Alicia A. Grandey, Jennifer A. Diamond, and Kathleen Royer Krimmel (2011), "Want a Tip? Service Performance as a Function of Emotion Regulation and Extraversion," *Journal of Applied Psychology*, 96 (6), 1337-1346.

Clore, Gerald L. (1992), "Cognitive Phenomenology: Feelings and the Construction of Judgment," in *The Construction of Social Judgments*, Leonard L. Martin and Abraham Tesser, eds. Hillsdale, NJ: Erlbaum, 133-163.

Côté, Stéphane (2005), "A Social Interaction Model of the Effects of Emotion Regulation on Work Strain," *Academy of Management Review*, 30 (3), 509-530.

Dallimore, Karen S., Beverley A. Sparks, and Ken Butcher (2007), "The Influence of Angry Customer Outbursts on Service Providers' Facial Displays and Affective States," *Journal of Service Research*, 10 (1), 78-92.

Dawson, Jeremy F. (2014), "Moderation in Management Research: What, Why, When, and How," *Journal of Business and Psychology*, 29 (1), 1-19.

Delcourt, Cécile, Dwayne D. Gremler, Allard C. R. van Riel, and Marcel J. H. van Birgelen (2016), "Employee Emotional Competence: Construct Conceptualization and Validation of a Customer-Based Measure," *Journal of Service Research*, 19 (1), 72-87.

Doherty, R. William (1997), "The Emotional Contagion Scale: A Measure of Individual Differences," *Journal of Nonverbal Behavior*, 21 (2), 131-154.

Du, Jiangang, Xiucheng Fan, and Tianjun Feng (2011), "Multiple Emotional Contagions in Service Encounters," *Journal of Academy of Marketing Science*, 39 (3), 449-466.

Ekman, Paul, Richard J. Davidson, and Wallace V. Friesen (1990), "The Duchenne Smile: Emotional Expression and Brain Physiology II," *Journal of Personality and Social Psychology*, 58 (2), 342-353.

Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models With Unobservable Variables and Measurement Error," *Journal of Marketing Research*, 18 (1), 39-50.

Gabriel, Allison S. and James M. Diefendorff (2015), "Emotional Labor Dynamics: A Momentary Approach," *Academy of Management Journal*, 58 (6), 1804-1825.

Grandey, Alicia A. (2000), "Emotion Regulation in the Workplace: A New Way to Conceptualize Emotional Labor," *Journal of Occupational Health Psychology*, 5 (1), 95-110.

Grandey, Alicia A. (2003), "When 'The Show Must Go On': Surface Acting and Deep Acting as Determinants of Emotional Exhaustion and Peer-Rated Service Delivery," *Academy of Management Journal*, 46 (1), 86-96.

Grandey, Alicia A. and Jennifer A. Diamond (2010), "Interactions With the Public: Bridging Job Design and Emotional Labor Perspectives," *Journal of Organizational Behavior*, 31 (2), 338-350.

Grandey, Alicia A. and Allison S. Gabriel (2015), "Emotional Labor at a Crossroads: Where Do We Go From Here?" *Annual Review of Organizational Psychology and Organizational Behavior*, 2 (1), 323-349.

Grandey, Alicia A. and Robert C. Melloy (2017), "The State of the Heart: Emotional Labor as Emotion Regulation Reviewed and Revised," *Journal of Occupational Health Psychology*, 22 (3), 407-422.

Gross, James J. (1998), "Antecedent- and Response-Focused Emotion Regulation: Divergent Consequences for Experience, Expression, and Physiology," *Journal of Personality and Social Psychology*, 74 (1), 224-237.

Gross, James J. and Oliver P. John (2003), "Individual Differences in Two Emotion Regulation Processes: Implications for Affect, Relationships, and Well-Being," *Journal of Personality and Social Psychology*, 85 (2), 348-362.

Groth, Markus and Alicia A. Grandey (2012), "From Bad to Worse: Negative Exchange Spirals in Employee-Customer Service Interactions," *Organizational Psychology Review*, 2 (3), 208-233.

Groth, Markus, Thorsten Hennig-Thurau, and Gianfranco Walsh (2009), "Customer Reactions to Emotional Labor: The Roles of Employee Acting Strategies and Customer Detection Accuracy," *Academy of Management Journal*, 5 (5), 958-974.

Hareli, Shlomo and Anat Rafaeli (2008), "Emotion Cycles: On the Social Influence of Emotion in Organizations," *Research in Organizational Behavior*, 28, 35-59.

Hatfield, Elaine, John T. Cacioppo, and Richard L. Rapson (1993), "Emotional Contagion," *Current Directions in Psychological Science*, 2 (3), 96-99.

Hatfield, Elaine, John T. Cacioppo, and Richard L. Rapson (1994), *Emotional Contagion*. New York, NY: Cambridge University Press.

Hennig-Thurau, Thorsten, Markus Groth, Michael Paul, and Dwayne D. Gremler (2006), "Are All Smiles Created Equal? How Emotional Contagion and Emotional Labor Affect Service Relationships," *Journal of Marketing*, 70 (3), 58-73.

Hochschild, Arlie Russell (1983), *The Managed Heart: Commercialization of Human Feeling*. Berkeley: University of California Press.

Hüsheger, Ute R. and Anna F. Schewe (2011), "On the Costs and Benefits of Emotional Labor: A Meta-Analysis of Three Decades of Research," *Journal of Occupational Health Psychology*, 16 (3), 361-389.

Judge, Timothy A., Erin Fluegge Woolf, and Charlice Hurst (2009), "Is Emotional Labor More Difficult for Some than for Others? A Multilevel, Experience-Sampling Study," *Personnel Psychology*, 62 (1), 57-88.

Kammeyer-Mueller, John D., Alex L. Rubenstein, David M. Long, Michael A. Odio, Brooker R. Buckman, Yiwen Zhang, and Marie D. K. Halvorsen-Ganepola (2013), "A Meta-Analytic Structural Model of Dispositional Affectivity and Emotional Labor," *Personnel Psychology*, 66 (1), 47-90.

Martin, David, Martin O'Neil, Susan Hubbard, and Adrian Palmer (2008), "The Role of Emotion in Explaining Consumer Satisfaction and Future Behavioral Intention," *Journal of Services Marketing*, 22 (3), 224-236.

Mesmer-Magnus, Jessica R., Leslie A. DeChurch, and Amy Wax (2012), "Moving Emotional Labor beyond Surface Acting and Deep Acting: A Dissonance-Congruence Perspective," *Organizational Psychology Review*, 2 (1), 6-53.

Noone, Breffni M., Sheryl E. Kimes, Anna S. Mattila, and Jochen Wirtz (2009), "Perceived Service Encounter Pace and Customer Satisfaction: An Empirical Study of Restaurant Experiences," *Journal of Service Management*, 20 (4), 380-403.

Parkinson, Brian (1996), "Emotions Are Social," *British Journal of Psychology*, 87 (4), 663-683.

Podsakoff, Philip M., Scott B. MacKenzie, Jeong Yeon Lee, and Nathan P. Podsakoff (2003), "Common Method Bias in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology*, 88 (5), 879-903.

Preacher, Kristopher J. and Andrew F. Hayes (2004), "SPSS and SAS Procedures for Estimating Indirect Effects in Simple Mediation Models," *Behavior Research Methods, Instruments, and Computers*, 36 (4), 717-731.

Pugh, Scott D. (2001), "Service With a Smile: Emotional Contagion in the Service Encounter," *Academy of Management Journal*, 44 (5), 1018-1027.

Rafaeli, Anat and Robert I. Sutton (1987), "Expression of Emotion as Part of the Work Role," *Academy of Management Review*, 12 (1), 23-37.

Rafaeli, Anat and Robert I. Sutton (1989), "The Expression of Emotion in Organizational Life," *Research in Organizational Behavior*, 11 (4), 1-42.

Ray, Gautam, Jay B. Barney, and Waleed A. Muhanna (2004), "Capabilities, Business Processes, and Competitive Advantage: Choosing the Dependent Variable in Empirical Tests of the Resource-Based View," *Strategic Management Journal*, 25 (1), 23-37.

Schwarz, Norbert and Gerald L. Clore (1988), "How Do I Feel About It? Information Functions of Affective States," in *Affect, Cognition, and Social Behavior*, Klaus Fiedler and Joseph Forgas, eds. Toronto: Hogrefe International, 44-62.

Scott, Brent A. and Christopher M. Barnes (2011), "A Multilevel Field Investigation of Emotional Labor, Affect, Work Withdrawal, and Gender," *Academy of Management Journal*, 54 (1), 116-136.

Söderlund, Magnus and Sara Rosengren (2008), "Revisiting the Smiling Service Worker and Customer Satisfaction," *International Journal of Service Industry Management*, 19 (5), 552-574.

Solnet, David and Neil Paulsen (2006), "Service Climate, Employee Identification, and Customer Outcomes in Hotel Property Rebrandings," *Journal of Hospitality and Leisure Marketing*, 13 (3/4), 3-27.

Susskind, M. Alex, Carl P. Borchgrevink, and Michele K. Kacmar (2003), "Customer Service Providers' Attitudes Relating to Customer Service and Customer Satisfaction in the Customer–Server Exchange," *Journal of Applied Psychology*, 88 (1), 179-187.

Tan, Hwee Hoon, Maw Der Foo, and Min Hui Kwek (2004), "The Effects of Customer Personality Traits on the Display of Positive Emotions," *Academy of Management Journal*, 47 (2), 287-296.

Tsai, Wei-Chi (2001), "Determinants and Consequences of Employee Displayed Positive Emotions," *Journal of Management*, 27 (4), 497-512.

Tsai, Wei-Chi and Yin-Mei Huang (2002), "Mechanisms Linking Employee Effective Delivery and Customer Behavioral Intentions," *Journal of Applied Psychology*, 87 (5), 1001-1008.

Voorhees, Clay M., Michael K. Brady, Roger Calantone, and Edward Ramirez (2016), "Discriminant Validity Testing in Marketing: An Analysis, Causes for Concern, and Proposed Remedies," *Journal of the Academy of Marketing Science*, 44 (1), 119-134.

Wang, Karyn L. and Markus Groth (2014), "Buffering the Negative Effects of Employee Surface Acting: The Moderating Role of Employee–Customer Relationship Strength and Personalized Services," *Journal of Applied Psychology*, 99 (2), 341-350.

Wang, Ze, Surendra N. Singh, Yexin Jessica Li, Sanjay Mishra, Maureen Ambrose, and Monica Biernat (2017), "Effects of Employees' Positive Affective Displays on Customer Loyalty Intentions: An Emotions-as-Social Information Perspective," *Academy of Management Journal*, 60 (1), 109-129.

Watson, David, Lee Anna Clark, and Auke Tellegen (1988), "Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales," *Journal of Personality and Social Psychology*, 54 (6), 1063-1070.

Wild, Barbara, Michael Erb, and Mathias Bartels (2001), "Are Emotions Contagious? Evoked Emotions While Viewing Emotionally Expressive Faces: Quality, Quantity, Time Course and Gender Differences," *Psychiatry Research*, 102 (2), 109-124.

Zablah, Alex R., Nancy J. Sirianni, Daniel Korschun, Dwayne D. Gremler, and Sharon E. Beatty (2017), "Emotional Convergence in Service Relationships: The Shared Frontline Experience of Customers and Employees," *Journal of Service Research*, 20 (1), 76-90.

Author Biographies

Xiao-Yu Liu is a professor at the Department of Human Resource Management and Organizational Behavior, Business School, the University of International Business and Economics, China. She received her PhD degree in human resource management from the Renmin University of China and her doctoral research was carried out in a joint-PhD program with visiting study at the Department of Management, Monash University, Australia. Her current research focuses on emotions in organizations and leadership. She has published in such journals as *Journal of Applied Psychology*, *Human Relations*, *Journal of Business Ethics*, *International Journal of Human Resource Management*, and *Asia Pacific Journal of Management*. She serves on the Editorial Board of *Journal of Management and Organization*. She is the corresponding author and can be contacted at liuxy@uibe.edu.cn.

Nai-Wen Chi is a distinguished professor of Graduate Institute of Human Resource Management, National Sun-Yat Sen University. He completed his PhD degree at the Department of Business Management, National Cheng Chi University. His research areas include emotions at work, employee attitudes and behaviors, and team management. His research has been published at *Journal of Applied Psychology*, *Journal of Management*, *Organizational Behavior and Human Decision Processes*, *Personnel Psychology*, *Journal of Organizational Behavior*, *Journal of Vocational Behavior*, *Human Relations*, *Human Performance*, *Group & Organization Management*, *Applied Psychology: An International Review*, *Journal of Occupational and Organizational Psychology*, *British Journal of Industrial Relations*, *Journal of Business and Psychology*, *Journal of Occupational Health Psychology*, *Journal of Applied Social Psychology*, *International Journal of Human Resource Management*, and other outlets.

Dwayne D. Gremler is a distinguished teaching professor in the Department of Marketing in the College of Business at Bowling Green State University and a member of the research faculty of the Center for Services Leadership in the W.P. Carey School of Business at Arizona State University. His research is concerned with customer-employee interactions in service delivery, service guarantees, servicescapes, and word-of-mouth communication. He has published articles in the *Journal of Marketing*, *Journal of Service Research*, *Journal of Retailing*, *Journal of the Academy of Marketing Science*, *Journal of Service Management*, and *Journal of Business Research*. He is a coauthor (with Valarie Zeithaml and Mary Jo Bitner) of the textbook: *Services Marketing: Integrating Customer Focus Across the Firm*. He received the Christopher Lovelock Career Contributions Award from the American Marketing Association's Services Marketing Special Interest Group in 2014. He received his PhD from Arizona State University.