The influence of angry customer outbursts on service providers' facial displays and affective states

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The influence of angry customer complaints on service providers' facial displays and affective states

Abstract

This paper explores the existence and extent of emotional contagion, as measured by facial displays and reported affective states, in a service failure event. Using video vignettes of customers complaining about a service failure as stimulus material, the facial displays and affective states of service providers were measured, as proxies for emotional contagion. Following a two-step approach, service providers' facial expressions were first recorded and assessed, revealing that service providers' facial displays matched those of the angry consumer. Second, a mixed ANOVA revealed service providers reported stronger negative affective states after exposure to an angry complaint than prior to exposure. The results demonstrated that during a complaint situation, angry outbursts by consumers can initiate the emotional contagion process, and service providers are susceptible to "catch" consumer anger through emotional contagion. Implications for complaint management and future research are discussed.

Most face-to-face service transactions involve a range of normative behaviors, such as polite greetings, smiling, and general pleasantries. Considerable research has focused on the use of these behaviors and how to optimize customer satisfaction. Less research, however, has investigated the interactive emotional dynamics of customer complaint encounters, especially from the service provider's perspective. When handling consumer complaints, service providers must not only deal immediately with the process demands of a service failure/recovery, such as providing an apology, rectifying the problem and/or offering compensation, but they must also manage the interactional, subjective emotional aspects (Menon and Dubé 2000; Sundaram and Webster 2000).

As noted by Pugh (2001), consumers have an expectation of emotional input as part of the service offering. For example, service providers reacting with empathy was considered an important dimension of service quality (Parasuraman, Zeithaml, and Berry 1988). An empathic response within a service encounter includes both cognitive and affective elements, where a service provider tries to both understand as well as experience the consumer's feelings as if they were their own. Part of that input or response is the expression of appropriate emotion which Menon and Dubé (2000) have shown to engender greater levels of satisfaction judgments, especially during service failure/ recovery interactions (Smith and Bolton 2002). The creation of desired consumer emotions is said to be achieved through the service provider maintaining appropriate positive expressive displays during all interactions (Ashforth and Humphrey 1993). To this end, most consumer-related research has tended to focus on either the emotional management of the service interaction by service providers or the techniques utilized to cope during service interactions. For example, recent work by Hennig-Thurau et al. (2006) and Pugh (2001) has demonstrated the impact of service providers' positive displays on consumers. In related organizational research, studies have investigated the post-interaction implications of consumers' negative emotion on service providers, such as stress (Dorman and Zapf 2004), and absenteeism (Grandey, Dickter and Sin 2004).

Since Hochschild's (1983) "The Managed Heart", there has been sustained interest in the interactional, experiential and emotional aspects of service encounters; for example, the influence on performance, sales and consumer mood of service providers' emotional displays (Sutton and Rafaeli 1988; Tsai 2001; Grandey et al. 2005; Luong 2005). This interest has led to a new field of research, which has integrated the psychological phenomenon of emotional transference or convergence, usually referred to as emotional contagion. Hatfield, Cacioppo, and Rapson (1992, p. 153) defined emotional contagion (EC) as "the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently to converge emotionally".

Service providers' positive emotional displays are usually associated with corresponding consumer positive affect, thus there has been an emphasis on "service with a smile", as advocated by Pugh (2001) and more recently Luong (2005). However, while positive EC is recognized, there is potential for EC to occur between customers and service personnel when there are negative emotions involved, such as during complaint encounters. While there is evidence suggesting that negative emotions are contagious (Barsade 2002), no studies have specifically investigated the impact of negative emotions and EC during service interactions. Through the use of simulated angry consumer complaint encounter role-plays, the present study seeks to extend the understanding of how EC operates within consumer and service provider interactions. The primary objective is to investigate the occurrence of EC generated from negative emotions expressed by consumers during highly charged angry complaint encounters. Measurement

of EC is based upon facial displays of the receiver and reported affective state (feelings of anger). This paper first reviews the literature on emotions in the service encounter as well as the broader EC research. This review material is then used to present a conceptual model depicting the EC process within an angry complaint encounter. Next, we discuss the role-play method and present the results of the study. Finally, theoretical and practical implications are discussed.

Definition of key terms

Emotions provide vital information that guides social behavior and plays a vital role in all service encounters. Throughout the literature, the terms *emotion* and *affect* are often used interchangeably, without clear delineation or agreement of meaning. For the purpose of our research, emotion is defined as a complex phenomenon that includes affective, physiological and expressive elements (Weiss 2002). Emotions are episodic; they occur in response to a particular stimulus or event, such as a service failure, operating as an interface between an environmental input and behavioral output, thereby acting as an internal signal (Scherer 1994). Related to emotion is affect, which is a feeling state that is frequently understood in terms of two superordinate dimensions, valence (positive/negative) and arousal (high/low) (Frijda 1986; Shaver et al. 1987). For example, anger can be categorized as a negatively valenced, high arousal affective state. Several discrete feelings can be aggregated into broader affective states: for example, a negative affective state might include the related feelings of anger, fear and disgust. Emotional contagion, discussed in greater detail later in the paper, involves taking on the emotions of another person, a process that may be manifested in the mimicking of another's behavior, such as their facial expressions, as well as 'catching' the other's affective state.

Emotions in Service Encounters

While emotions are communicated verbally and nonverbally, it is the nonverbal components that tend to dominate during service interactions, accounting for up to 90% of communication (Fromkin and Rodman 1983). Indeed, it is argued that nonverbal expressions or nonverbal communication (NVC) reveal an individual's true intentions during interactions, and are often relied upon by the receiver when inconsistencies exist between verbal and nonverbal messages (Ambady and Rosenthal 1992; Hess, Blairy and Kleck 2000). Nonverbal components are also central to the communication of feelings between service providers and consumers (Friedman and Riggio 1981). Three categories of NVC convey affective meaning during interactions (Sundaram and Webster 2000; Gabbott and Hogg 2001): proxemics (use of personal space), kinesics (body movements and postural orientations, eye contact, nodding, hand shaking, and smiling), and paralinguistics (vocal pitch, loudness or amplitude, pitch variation, pauses, and fluency).

The affective meaning conveyed by NVC not only has a direct effect on how service providers and consumers conduct themselves, but also contributes to consumer satisfaction and subsequent service quality evaluations (Sundaram and Webster 2000; Gabbott and Hogg 2001). During service interactions, service providers may be unaware of their nonverbal behaviors, and while saying the right things, their behavioral cues may provide alternative and possibly negative messages (Scherer and Ceschi 1997). It is for this reason that research has often focused upon, and demonstrated, the importance of service providers' positive NVC during service interactions (Bitner 1990; Sharma and Levy 2003). Recent empirical research has confirmed that service providers' positive emotional displays can prompt a corresponding change in a consumer's affective state (Hennig-Thurau et al. 2006). The practice of establishing organizationally desirable display rules for service encounters has been based on the assumption that consumers "catch" service providers' positive affect (Grandey and Brauburger 2002). That is, the

usual training approach of asking service providers to present a happy, smiling disposition is done in an effort to create a positively "infectious" environment, and implies that consumers are vulnerable to unconsciously "catch" service providers' positive emotion (Pugh 2001). Conversely, emotions can also trigger instant unconscious reactions to potential threats (Lord and Harvey 2002), such as a verbal attack from an angry consumer. Therefore, displays of anger and aggression by complaining consumers have the potential to create highly undesirable reactions in service providers, if they were to "catch" the consumer's emotion. Anger is investigated in this study, due to the potentially undesirable consequences should service providers "catch" consumers' anger through EC during complaint interactions.

Emotional Contagion

The phenomenon of "catching" an interaction partner's emotion, known as emotional contagion (EC), has a long history of research and several comprehensive models have been developed to depict its influence. Building on previous EC research, Hatfield, Cacioppo, and Rapson (1994) observed that an individual's subjective emotional state is continuously affected by the activation and/or feedback from unconscious behavioral mimicry of their interaction partner's nonverbal expressions and behaviors, so that, over time, the two parties converge emotionally. The emotional changes generated by both stages of the EC process (mimicry and subsequent afferent feedback) occur at an automatic or preconscious level rather than at a deliberate or conscious level (Hatfield, Cacioppo, and Rapson 1994).

Although authorities continue to debate whether emotional generation is a cognitive function, there is consensus between the appraisal theorists (Lazarus 1991; Scherer 1999) and those who propose non-cognitive processes (Izard 1993) that emotions are involuntary, capable of rapid onset, and that the pre-emotional processes are preconscious, automatic, or unreflective as they produce emotional change. Hatfield, Cacioppo, and Rapson's (1994) theory of EC operates through mimicry of an interaction partner's NVC with consequent afferent feedback, and provides an explanation of one of these preconscious automatic processes. Although service providers may have other reactions to angry consumer complaints, such as feelings of being hurt, offended or insulted, such feelings, as suggested by Appraisal Theory, result from meaning analysis (goal congruence). Meaning analysis is a post-evaluative judgment, a secondary appraisal or outcome about how you feel, derived from the preconscious response (Scherer 1999). Therefore, such feelings are more akin to secondary reactions resulting from the primary unconscious emotion or basic emotions generated through EC.

Previous studies have focused on service providers' NVC generating emotional change in consumers. Studies in the field by Pugh (2001) and Tsai (2001) measured the incidence of EC based on post-interaction indicators of consumer emotion, while others such as Luong (2005) and Hennig-Thurau et al. (2006) researched EC in a laboratory setting. In contrast, the present study investigates the impact of customer emotion on service providers via EC, during emotionally charged complaint interactions. That is, our focus is on how the customer's behavior and emotional state affect the service provider's behavior and emotional state through both stages of the EC process (facial displays and reported anger).

Complaining customers tend to express strong negative emotions. Indeed, the frequency of consumer complaints is directly related to the intensity of their experienced anger (Casado Diaz and Mas Ruiz 2002), resulting in consumers typically complaining when experiencing strong negative emotions (Weiner 2000). Thus, anger and verbal abuse are common following service failures. As an example, it is estimated that as many as 20% of call center interactions (Grandey, Dickter and Sin 2004), and as high as 50% of

complaints from airline passengers with lost luggage (Scherer and Ceschi 1997), are characterized by hostile and angry complaining customers. Intense levels of anger and non-verbal displays consistent with this affective state are often sustained throughout the duration of the complaint, regardless of service provider efforts to placate the consumer (Scherer and Ceschi 1997).

In developing our angry consumer complaint EC service interaction model, we incorporated the views of Hatfield, Cacioppo, and Rapson (1994) and Pugh (2001). In this model, EC can be viewed as a two-stage process, as illustrated in Figure 1. Stage 1 of EC involves the automatic mimicry of an interaction partner's nonverbal behaviors (Hatfield, Cacioppo and Rapson 1994). This spontaneous nonverbal mimicry may occur through many channels, including facial expressions (Howard and Gengler 2001), body language (Bernieri and Rosenthal 1991), vocal tones (Neuman and Strack 2002), accents, temporal sequencing, intensity and amplitude (Hatfield, Cacioppo and Rapson 1994). The present study primarily focuses on facial expressions to provide evidence of Stage 1 EC.

Insert Figure 1 about here

Stage 2 of the EC process shown in the model involves afferent feedback. Afferent feedback has been described as an automatic preconscious process where the brain receives signals via the automatic nervous system of nonverbal expressions and behaviors, which are processed and assist in formation of the emotion to be experienced (Duclos et al. 1989). For example, Duclos et al. (1989) demonstrated that the performance of an emotional behavior (a smile) could induce a change in feelings, which corresponded to that expression (feel happier). Therefore, cues or feedback regarding mimicked nonverbal expressions (Stage 1 of the EC process) are relayed to the brain, helping the individual to determine what emotion is being felt (Hatfield, Cacioppo and Rapson 1994). Therefore, if EC has occurred, there will be a degree of nonverbal mimicry and a change in the affective state experienced by interaction partners so that their affective states move towards, or "match", each other.

Thus, it is argued that through the automatic two-stage process of emotional convergence, service providers are potentially vulnerable to unknowingly "catch" consumers' negative emotions during complaint interactions, as illustrated in Figure 1.

Proposition 1. Service providers will demonstrate facial displays congruent with those displayed by complaining customers.

Proposition 2. Service providers exposed to angry customer complaints will report greater levels of negative affective states than will those exposed to non-angry customer complaints.

Gender differences. We include gender in the model (see Figure 1), as there are recognized differences in how the genders respond to each other during service interactions (McColl-Kennedy, Daus and Sparks 2003; Sutton and Rafaeli 1988). The gender of the service provider can influence a consumer's satisfaction when negative emotions are displayed (Mattila, Grandey and Fisk 2003). Therefore, the gender of the complaining consumer and the gender of the service provider are likely to generate different emotional expressions and afferent feedback, with subsequent differences in levels of EC sustained. During service interactions, Rafaeli (1990) found male consumers were attributed a higher status by both male and female service providers, while research by Goos and Silverman (2002) found that interaction partners more accurately perceive angry expressions displayed by males than those by females. Therefore, the higher status afforded to male consumers should position them as the dominant sender, whose angry expressions are more accurately perceived in a service interaction, and, as such, they are

likely to generate higher levels of emotional change in their interaction partners through EC than are female customers.

Proposition 3. Complaints from angry male consumers will generate greater levels of negative affective states in service providers than those from angry female consumers.

As Simpson and Stroh (2004) demonstrated, males tend to conform less often to display rules associated with femininity, such as suppression of negative emotions and simulation of positive emotions. Males also appear to be less able to recognize negative emotions such as anger and disgust, regardless of the gender of the sender (Rotter and Rotter 1988), but have been shown to be more expressive of anger (Kring and Emmons 1990). The evidence also indicates that gender influences susceptibility to EC, with males exhibiting a higher level of susceptibility to EC when anger is the stimulus emotion than females (Doherty et al. 1995). Therefore, compared to females, males should be more susceptible to EC from anger. More specifically, in line with our EC model, males should exhibit higher levels of negative mimicked expressions, with subsequent elevated levels of afferent feedback, and higher levels of negative emotional change. .

Proposition 4. Male service providers will report greater levels of negative affect change than female service providers when dealing with angry consumer complaints.

RESEARCH METHOD
Design Overview

This study used a scenario role-play-based experimental design to investigate the occurrence, and extent of, EC in a service encounter complaint event, with a focus on contagion from the customer to the service provider. The laboratory setting enabled the control of many of the task's environmental factors, including the type of service, noise and temperature levels, the number of complaints handled previously in the shift, and the type and status of the complaining consumer. A scenario capable of, and credible in, eliciting a high arousal negative emotion, such as anger, in a consumer was required. Therefore, the simulated consumer complaint scenario was based on an airline passenger disembarking to find their luggage lost. This service failure event was selected on the basis of: (1) lost luggage has been shown to trigger anger in passengers (Scherer and Ceschi 1997), and (2) airline travel and lost luggage represent a service and service failure familiar to many people. The simulated customer complaints were videotaped to represent four conditions: (1) a negative affective display (angry complaining) by a male customer, (2) a negative affective display (angry complaining) by a female customer, (3) a moderately positive affective display (non-angry complaining) by a male customer, and (4) a moderately positive affective display (non-angry complaining) by a female customer. Participants, who were role-playing as a service provider, were assigned to one of the four conditions.

Stimuli Development

Production of four videotapes provided the manipulations of affective display and customer gender. To minimize confounding effects and achieve a realistic looking scenario, steps were taken to standardize aspects of the scenario. Professional assistance was obtained with actors, sets, script and direction. First, a script that could convincingly be performed in both the angry and non-angry treatment conditions was developed. The complaint scenario, which focused on lost luggage, incorporated an important occasion for the consumer (attending a wedding), making it a more salient service failure event. The lost luggage contained the bridesmaid gown/groomsman suit needed for the wedding ceremony, thereby providing a plausible motive for an extremely angry response. The use of the same script in both conditions ensured control over the verbal content. Therefore,

the only differences in the performances were the nonverbal expressive behaviors (facial expressions, gestures, body movements, vocal tone, tempo, and volume). Second, to minimize any specific actor effects such as age, physical attractiveness, power and status, and any individual differences in the expression of anger, the same female and male actors performed the role of complaining customer in each condition. Finally, all four conditions were identical in terms of lighting, set, sound, and message content. A small variation of four seconds in tape playing times reflected changes in vocal tempo associated with the affective display condition: angry or non-angry.

With the assistance of a professor from the university's drama department, professional actors were selected based upon dramaturgical expertise in performing the required emotional expressions, and experience in being filmed, thus ensuring more natural performances. Direction given to the actors for the negative affective display (angry customer) condition was to feel extreme anger, frustration, and fury. The actors' expressions were to include displays of prototypical anger, compressed/pursed lips, frowning, narrow eyes/squint or eyes wide open, glaring, clenching or baring of teeth, lowering of the eyebrows/frown, raised voice, tightened fists, and pointing at the service provider (Frijda 1986; Izard 1991; Scherer and Ceschi 2000). In contrast, for the moderate affective display (non-angry consumer) condition, the actors were briefed to display a calm countenance with no visible signs of anger. As it is impossible for expressions to be emotionally neutral (Field and Hole 2003), the performances were to take a slightly positive almost jovial tone where the customer is able to see the funny side of the service failure. Directions were given to display a soft/relaxed face, with some smiling, whilst speaking in a normal conversational manner with no angry expressions. A list of the actors' NVC in the final videos filmed can be seen in Table 1.

Insert Table 1 about here

The final stimulus materials were filmed in a studio, with a background set replicating a lost luggage service counter. The film commenced with a short introduction scene of airline passengers (played by semi-professional actors) moving about the airport, with airport background sounds edited into the soundtrack. Walking toward the camera the "customer" arrived at the lost baggage counter. The camera focused on the head and shoulders of the "customer" (actor) as he/she began to complain. All conditions were filmed in exactly the same manner.

Participants and Data Collection Procedure

A total of 192 volunteer students enrolled in business, psychology or engineering participated in this study. The sample comprised 98 females and 94 males. Ages ranged from 17 to 49 years of age, M = 22 years. As the focus of the study was on service providers' reactions to customers' emotional states, part of the recruitment process determined students' eligibility for participation by restricting the sample to those who had recent frontline service provider experience (currently employed or within three months of the study). Students were seen as representative of frontline service workers with mixed levels of training and experience, as would occur in the frontline service provider population. As a small incentive, all participants were eligible to win a selection of minor prizes at the completion of the study.

The study was conducted in a research laboratory that contained cubicles fitted with a personal computer (PC) and stereo headphones. Digital-video recorders, pre-focused to record the participant's facial expressions, were mounted on the PC monitors . Each participant had his/her own private cubicle and headphones.

A strict set of protocols was observed to ensure a standardized approach to data collection. These protocols involved six steps. First, as part of the recruitment process, students were screened for frontline service experience, then booked into individual session times and provided with a general description of the research using a cover story. The cover story, included in the briefing material, informed them that the study was investigating their verbal responses when replying to a complaint, drawing their attention away from their nonverbal expressions, and the real intent of the research. Second, upon arrival at the laboratory, participants were provided with a briefing sheet, detailing their role as a service provider working for an airline at the lost luggage counter. The third step involved participants answering pre-test questions directly on the PC. Step four provided instructions on the PC screen advising them to call the researcher. The researcher then turned on the video-recorder, while reaffirming that they were taking the role of the airline representative at the lost luggage counter and that the research was only interested in their verbal response to the complaint, while stressing the importance of using their own words. In the fifth step, a randomly assigned video complaint scenario was played through the PC for each individual participant. Finally, at the conclusion of the video scenario, participants remained at the same PC and completed the post-test survey on-line.

Measuring Emotional Contagion

To test the four propositions, two sets of data were collected: (1) observational measures of mimicry; and (2) self-reports of affective states, measured before and after the complaint encounter. This combination of observational and self-report data provides two relatively independent sources of information about occurrence of emotional contagion.

Mimicry observations. Recording participants' facial expressions provided observational data for describing participants' NVC. In this study we have operationalized mimicry, not as the exact mirroring of every minute discrete expression, but rather the matching of the overall expressive valence of the facial expressions for the duration of participant exposure to the complaint. It was felt that the cumulative impact of the valence of the service providers' NVC would have a greater impact on their affective state than singular momentary discrete expressions. The Displayed Emotion Index (Rafaeli and Sutton 1989), and FACES (Kring, Smith and Neale 1989) were used in this study to classify nonverbal expressions, providing data for an actual observation count. These data were also converted to a frequency rating scale consisting of four ratings 1 = none, 2 = Low (one to two), 3 = Medium (three to five) and 4 = High (six to 17). As in coding with FACES, the type of expression was noted when change occurred. Expressions were predetermined as either positive or negative from established prototypical emotional displays. Negative expressions included blinking rapidly, avoiding eye contact, pursed lips, negative smiles (false, and masking smiles as described by Ekman and Friesen (1982) where there is no movement of the muscles surrounding the eyes), frowning, as per prototypical anger expressions (Ekman and Friesen 1982; Frijda 1986; Izard 1991). Positive expressions were direct eye contact, positive (enjoyment) smiling and nodding (Frijda 1986; Rafaeli and Sutton 1990; Izard 1991). Rather than measuring the duration of each observed expression, an overall facial expression valence was assigned from one of three categories, either (1) positive, (2) neutral (for those exhibiting no dominant valence), or (3) negative.

Facial expressions were noted on an observation sheet to provide a frequency observation for each participant for each type of expression. There is support that video-coders have the ability to reliably judge NVC, including facial expressions (Gump and Kulik 1997). For example, it has been shown that observers are able to discern the difference between an enjoyment smile and a false or non-enjoyment smile (Frank and

Ekman 1993). In the present study, two judges (graduate students) were trained using the video recordings from the pilot study, which they reviewed separately and then together to facilitate inter-judge consistency and reliability. Only one of the judges was blind to the purpose of the research; however, both judges were unaware of the treatment condition participants received.

Affective state. The second approach used to investigate the existence (and intensity) of emotional contagion was the application of the self-reported PANAS, which has been used in previous studies into EC during service interactions (Pugh 2001; Luong 2005). Measuring both positive and negative affect, PANAS items load onto two different factors in line with their valence (Watson, Clark and Tellegen 1988). However, as this research focuses on the strong negative affect that service providers may "catch" from complaining consumers, factor analysis was used to isolate the strong negative affect items. All PANAS items were measured on a five-point Likert-type scale.

RESULTS

Realism and manipulation checks. Based on a seven-point Likert-type scale, checks for realism of the video scenarios were undertaken. Results revealed that most participants (94%) agreed with the question, "I think there would be similar complaint situations in real life" (M = 6.17, SD = 1.09). Similarly, most participants (92.4%) agreed with the statement "As a portrayal of a customer complaint, this scenario is believable" (M = 5.99, SD = 1.11), affirming that when taking on the role of the airline service provider participants viewed the situation to be both realistic and believable.

A one-way analysis of variance (ANOVA) was conducted as a manipulation check that the actors' affective displays varied in terms of the degree of anger projected. Participants rated the level of anger displayed by the complaining consumer on a seven-point Likert-type scale where the higher the score, the higher the rating of anger. As expected, there was a significant main effect for affective display $F(1,182) = 58.56$, $p < 0.001$, supporting the effectiveness of the manipulation. Those who viewed the negative affective display (angry customer) video rated the complaining consumer as displaying a high degree of anger (M = 5.74, SD = 1.70) compared to the moderate affective display condition (M = 3.96, SD = 1.45).

Observed mimicry. First, as a test of Proposition 1, we were interested to determine the facial expressions displayed by the participant/service provider and whether there was evidence of mimicry of the consumer's non-verbal expressions. The two judges reviewed the video recording of each individual participant separately. All facial expression frequencies were recorded, and the judges' results were averaged for use in analysis. The judges had an initial agreement on 93% of the overall valence categories (positive, neither positive or negative, and negative). After reviewing the 12 disputed overall valence cases together, the judges then reached complete agreement.

Most participants displayed a range of facial expressions while viewing the treatment videos. However, although 20 expressions were measured, many of those were observed only once or twice in just a few participants. We did not further analyze such infrequently observed expressions. Table 2 summarizes the most frequently observed positive and negative facial displays.

Insert Table 2 about here

Three levels of analysis were performed on the facial expression observations. First, facial displays were cross-tabulated based upon the frequency of occurrence of these displays within each of the non-angry or angry complaint condition (see Table 3). Second,

a series of one-way independent ANOVAs was performed (see Table 4) to establish the significance of any differences between the treatment groups for each of the nonverbal expressions. Last, Chi-square analysis was performed on the overall facial expression valence.

Insert Table 3 and Table 4 about here

Negative expressions. From the observed expression ratings we found that participants who viewed the angry treatment displayed more negative facial expressions compared to those who viewed the non-angry treatment. For example, negative smiles (miserable or false smiles) occurring at medium and high levels were observed in 87.9% of those who viewed the angry complaint, nearly ten times that of the non-angry treatment, at only 9.1%. Similarly, blinking rapidly occurring at medium and high levels was observed in 18.7% of those who viewed the angry complaint, compared to only 1.1% of the non-angry condition participants. In addition, avoiding eye contact was observed at medium and high levels in 68.1% of those who viewed the angry complaint, compared to only 27.3% for the non-angry participants.

Positive expressions. Participants who viewed the non-angry treatment displayed more positive facial expressions compared to those who viewed the angry treatment. Participants exposed to the non-angry treatment displayed twice as many high to medium levels of positive smiles at 76.2%, compared to those from non-angry treatment at only 28.6%. Nodding behavior also presented differences between the treatment groups, where 31.9% of non-angry participants showed medium or high levels of nodding, compared to only 13.2% in the angry group. Of those who viewed the angry complaint, 64.8% did not nod at all, compared to 40.9% in the non-angry treatment group. Fifty-five per cent of participants, who viewed the non-angry condition, maintained direct eye contact to the customer compared to 4.4% of those participants in the angry condition.

Negative expressions and treatment exposure. ANOVA results from the observed expressions, shown in Table 4, supported the overall expression ratings and indicated significant differences between the treatment groups in the level of negative expressions displayed. For example, negative smiles (e.g. miserable or fake), avoiding eye contact and licking lips were especially prevalent among those service providers in the angry, versus non-angry, treatments.

Positive expressions and treatment exposure. ANOVA results from the observed expressions, shown in Table 4, indicate significant differences between the two treatment types in all of the positive expressions, supporting the Overall Expression Rating findings (given in Table 2). In particular, positive smiles were evident in service providers exposed to the non-angry customer, compared to those exposed to the angry customer.

In summary, these results indicate that those participants who viewed the angry condition exhibited more negative expressions and less positive expressions than those from the non-angry condition. In contrast, those participants exposed to the non-angry condition exhibited more positive, and less negative expressions, than the angry condition.

Overall facial expression valence. The overall facial expression valence was used to indicate the level of overall facial mimicry occurring between the complaining consumer and service provider participants. Chi-square analysis revealed significant differences between the two treatment groups in the overall valence of NVC (positive, neutral or negative) displayed by participants, χ^2 (2) = 74.19, p < .001. Of those participants exposed to the angry customer treatment, 79% were observed to show facial displays consistent with overall negative emotion, whereas only 21% of participants

exposed to the non-angry customer treatment were observed to have facial displays consistent with negative emotion. Conversely, 88.2% of participants had overall positive facial displays when exposed to the non-angry customer compared to 11.8% participants exposed to the angry customer. These results reinforce the differences found in the discrete expressions shown in the Observation Expression Ratings. Combined, the findings indicate that the complaining consumers' (senders) overall NVC valence was mimicked by the participants (receivers), in a manner consistent with stage one of the EC process.

Self-reported emotional change. Next, to test Propositions 2 to 4, we describe the self-report affective state measures taken pre- and post-exposure to the customer complaint. First, principal components analysis of the five negative affect items from the PANAS taken at both pre-test and post-test revealed the presence of a single component with an eigenvalue over 1, explaining 59.38%, and 67.09% of the variance, respectively. All five items had a loading in excess of .6 on Component 1, confirming that all the items measured the same emotional dimension of strong negative emotion of primary interest in this research. These five items (anger, irritation, annoyed, cross and hostile) were averaged to produce a new dependent variable, "negative affect". The Cronbach alpha coefficient for the 5-item negative affect scale was 0.82 at pre-test, and 0.87 at post-test, revealing good internal consistency.

To test Proposition 2, a two-way mixed between-within ANOVA was performed with complaining customer affective display (angry or non-angry) as the between subject factor. Negative affect was the within-subject variable and was based on a measure taken at two different times: prior to viewing the video and after viewing the video. ANOVA revealed a significant main effect for complaining customer affective display $F (1, 175) = 5.145, p = .025$, partial $\eta^2 = .03$, with the angry affective display evoking higher levels of service provider negative affect. There was also a significant customer affective display by negative affective state interaction effect $F (1, 175) = 6.08, p = .015$, partial $\eta^2 = .03$. Figure 2 illustrates that while there was no significant difference in the affective state reported by participants in either condition prior to exposure to the complaining customer (angry display; $M = 1.40, SD = .57$ vs. non-angry display; $M = 1.32, SD = .56$), there was a significant difference between the two groups after exposure (angry display; $M = 1.85$, $SD = .79$ vs. non-angry display; $M = 1.51, SD = .71$). Thus, negative affect rose .45 in the angry customer affective display, compared to .19 in the non-angry customer affective display. Thus, Proposition 2 is supported, with service providers reporting greater levels of negative affect following exposure to an angry, compared to a non-angry, display by customers.

Insert Figure 2 and Table 5 about here

Complainant gender and emotional contagion. To test Proposition 3, a mixed between-within analysis of variance was performed. Complaining customer gender was the between subject variable, while affective state pre and post treatment was the within-subject variable. ANOVA revealed no support for Proposition 3: those who viewed the angry male consumer did not show significantly greater negative emotional change than did those who viewed the angry female, $p > .05$ (see Table 5 for means).

Service provider gender and emotional contagion. To test Proposition 4, a mixed between-within analysis of variance was performed. Service (participant) gender was the between subject variable, while affective state pre and post treatment was the within-subject variable. ANOVA revealed no support for Proposition 4 (see Table 5 for means).

DISCUSSION

This study adds a new dimension to the growing understanding of EC and is generally supportive of the theory of a two-stage process, mimicry with subsequent afferent feedback (Hatfield, Cacioppo and Rapson. 1994). Strong evidence of mimicking behaviors (stage one of the EC process) was provided by the study and this was complemented by the self-report data showing corresponding affective states (potentially as a result of stage two afferent feedback). By conducting research into EC in service encounters, the findings provide a new perspective, with the evidence substantiating Pugh's (2001) proposal that during service interactions EC is not solely driven by service provider emotional displays but is potentially a bi-directional interactive process. The data also suggest that during an angry complaint, the consumer, by initiating the interaction, can be a dominant force in influencing emotional convergence, consistent with the findings of Grandey, Dickter and Sin (2004) and Schoenwolf (1990). These results reveal that during such interactions the service provider is susceptible to "catch" the consumer's strong negative emotions, as demonstrated by the mimicking of facial displays and self reported negative affect. As such, the present study supplements the earlier more general social psychological research that negative emotions are able to induce EC (Blairy, Herrera and Hess 1999). Our research is important as it signals the need for a deeper and more comprehensive understanding of the emotional dynamics between customers and service providers.

Although the results supported the emotional convergence of the service provider with an angry complaining consumer, they were not consistent with Barsdade's (2002) findings that the intensity of emotion caught by receivers can be equivalent to that of the sender. Possibly, the recalled emotion, as portrayed by the actors, may not have truly replicated all the subtleties of first-hand anger as experienced and expressed by a real consumer with lost luggage. Similarly, the lack of a continuing dyadic interaction may have restricted the build-up of anger in the service provider (participants), as in actual complaint interactions the consumer's angry tirade can continue unabated. Importantly, the results provide a record that, during an angry complaint encounter, service providers can exhibit undesirable negative nonverbal expressions that may be observed by consumers. The observations clearly showed that service providers display undesirable behaviors, including negative smiles, excessive blinking, avoiding eye contact, pouting, and frowning. This potentially detrimental NVC occurred primarily in those who were dealing with the angry customer. What is also of interest is that service providers dealing with angry complaints did not display important positive NVC, such as good eye contact, nodding and positive smiling, demonstrating attention, understanding and willingness to help. Negative EC may hinder and/or prohibit the development of rapport and empathy essential to quality service delivery.

As service providers catch negative emotions from complaining consumers, the resulting display of negative NVC may then contribute or potentially add to the consumer's negative emotion. If this was indeed the case, this phenomenon could be a contributing factor in the persistence of consumer anger during and after complaint interactions, as detected by Scherer and Ceschi (1997). Taken to extremes, the ongoing dynamic of EC during actual angry complaint interactions, especially if the service provider feels the consumer anger is unwarranted, has the potential to escalate the situation into conflict (Tarvis 1984). Such a situation has been referred to as the incivility spiral, based upon the theory of reciprocity, where counter-aggression (service provider's response to an angry consumer) shows a direct linear relationship to the initial aggression (consumer anger) (Andersson and Pearson 1999). Such negative spirals triggered by ongoing EC during angry complaint interactions are likely to have two potentially

negative outcomes. First, they are likely to result in a lack of satisfaction and possibly the non-resolution of a complaint, leading to customer defection from the firm as well as negative word of mouth. Second, other customers could observe the negative spiraling behavior, which might be negatively evaluated.

The results failed to reveal that angry expressions by male consumers are more accurately perceived than those of females, as suggested by Goos and Silverman (2002). Therefore, the predicted potential for angry male complainants' to generate higher levels of EC was not substantiated, although the trend was in this direction.

In line with Grandey and her associates' work (2004), no differences between service provider genders on the impact of customer anger were found, and therefore the results did not support the previous work that females are more susceptible to EC (Grandey, Dickter and Sin 1994). Rather, in our study the evidence offers little support for service provider gender as a factor in strong negative emotion EC. There was a trend for the female service providers to report lower levels of negative pre-test affect, and for this to increase at a rate parallel to that of the males, such that the females exhibited the same proportion of difference to males at the posttest. This could indicate that female service providers generally have (or report) lower levels of strong negative affect when dealing with consumers and complaints. This suggests that one of the gender differences between service providers is that females, regardless of the consumer's emotional state, are typically less angry than males. Future research could shed light on this issue.

Managerial Implications

In today's highly competitive climate, managers need to be cognizant of the consequences of emotionally charged complainants affecting frontline service providers. As noted by Tarvis (1984), the consequences of experiencing and expressing anger include miscommunication, emotional dissonance, acquiring a hostile disposition, loss of self-esteem and respect for others, and making a bad situation worse. All such outcomes are undesirable, especially for service providers dealing with complaining consumers. Frontline staff selection, support and training are essential, if not critical, as substantial evidence points to consumers' dissatisfaction with their complaint-handling experiences (Tax, Brown and Chandrashekaran 1998). Furthermore, managers who do not deal with emotional stresses facing their frontline employees will be likely to encounter rising staff absenteeism, lack of commitment, burnout, stress and turnover among employees (Dorman and Zapf 2004). These issues, in turn, can lead to lower consumer satisfaction, lower re-patronage and potentially higher levels of negative word of mouth, all eventually having a negative impact on service quality and profitability (Zeithaml 2002).

More specifically, the results from this study suggest that frontline staff who deal more often with angry complaining customers are particularly susceptible to EC in general and anger transference in particular. They are, therefore, more at risk of the adverse outcomes identified in the preceding paragraph. Hence, managers need to consider more specific training activities to minimize risk, job rotation techniques for these at risk staff, and debriefing sessions to relieve the impact of dealing with negative emotions and emotional transference. That is, creative staff management techniques may well require consideration of how to intervene, perhaps using time out and or joke sessions, or cartoons to re-orient staff to a more positive frame of mind after angry customer exchanges. Otherwise it may be inevitable that the next customer after an angry customer exchange may confront a negatively charged service provider.

Limitations and Future Research

Experimental methodologies may never replicate the true dynamics of any interaction, and will always suffer to some extent from problems of limited external

validity. However, they do provide an opportunity to investigate research problems under controlled conditions. This study concentrated on one part, the initial opening complaint statement from the consumer, of what in reality would be an ongoing interaction. By focusing on service providers' reactions to an uninterrupted complaint monologue, we were not able to capture the ongoing bi-directionality of real-life service encounters, and may have under-estimated the extent to which EC and emotional convergence occur in reality. Service provider behavior in real life may well vary from that exhibited in role-play conditions. For instance, the facial expressions may have been masked or suppressed to a greater degree in a real service event. The present research used student participants who were working part-time in the service sector. It may have been preferable to use full-time employees in the study to get closer to the response that might occur in real settings. The similarity in age and appearance of the actor complainants and the participant service providers may not have provided the power/ status differential that sometimes exists between a service provider and an older business man or woman. Other studies could investigate if such a power differential influences EC during complaint interactions. While the present study was limited to one service incident, future research could investigate different service failure complaint situations. Furthermore, other methods such as field studies could be used to complement the laboratory-based research.

This study utilized human observation to record changes in facial expressions and used an overall facial expression valence to represent mimicry. To record facial expressions more precisely and thereby gain an exact measure of mimicry, electromyographic (EMG) measurements would be required. Future research could endeavor to create an EC study that does not require a cover story, enabling the use of EMG equipment. An investigation of various emotional regulation techniques (Grandey and Brauburger 2002;Gross 1998) and training methods for minimizing the impact of EC could also be undertaken. Individual differences that influence susceptibility to EC need to be identified to further expand our understanding of EC in service interactions. Individual differences of interest could include self-assertiveness, emotional stability, and alienation (Doherty 1997), being a powerful transmitter or infection-prone powerful catcher (Grandey, Dickter and Sin 1994), emotional expressivity (Grandey, Dickter and Sin 1994; Kring, Smith and Neale 1994), emotional intelligence (Goleman 1995) and/or personality types such as charismatics, empathizers, expansives and blands (Verbeke 1997). In summary, this study has extended services EC research, and demonstrated the existence of negative EC on the behalf of service provider when exposed to an angry outburst by a customer. Further research is needed to understand more about the dynamics of this contagion process and how best to control its negative impacts.

In conclusion, this study has revealed a deeper insight into the behavior of service providers during complaint encounters by investigating for the first time the type and valence of facial expression mimicry displayed by service providers, and demonstrated that consumers can be the instigating party in complaint interactions. Findings were broadly consistent with the idea of a two-stage EC process, in which the negative emotions expressed by consumers influence the facial expressions displayed, and negative affect reported, by service providers. These findings have a range of managerial implications including the need to develop strategies to enable service providers to resist the EC process in complaint centered interactions, and therefore reduce the likelihood of escalating customer-service provider spirals of incivility.

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Table 1

Video Treatment Profile of Complaining Customer Nonverbal Communication

	Angry	Non-angry
Mouth	snarl pursed baring teeth no smiling	smile relaxed
Eyes	staring / glaring squint threatening / wild eyebrows down & in (frown)	bright / relaxed / open good eye contact looking up during recall
Nostrils	flared	relaxed
Head	chin jutting forward jerky/ stiff movements forehead down & in (frown)	tilts slow/ smooth movement
Body	tense / stiff confrontation stance forward movements neck muscles tensed shoulders raised	relaxed body sway smooth movements
Voice	raised to shouting aggressive tone speech fast paced	soft laugh conversational tone speech normal pace

Table 2

Frequency, Means and Rankings of Observed Facial Expressions

Facial displays				Participants observed displaying expression	Rank		
					All	Neg.	Pos.
Positive facial displays	Max [a]	M	SD	%			
Positive smile	17	3.55	3.50	79.4	2		1
Nodding	12	1.44	2.20	46.9	5		2
Direct eye contact	5	0.66	1.22	29.6	6		3
Negative facial displays							
Avoiding eye contact	10	2.46	1.98	79.9	1	1	
Negative smile	10	2.66	2.49	70.9	3	2	
Licking Lips	9	1.50	1.93	51.4	4	3	
Frown	6	0.48	1.06	22.3	8	5	
Blinking - rapidly	7	0.60	1.44	29.1	7	4	
Pursed lips	5	0.41	1.00	19.6	9	6	

[a] Max represents the maximum number of times the facial expression was displayed by a single participant. The minimum number of observations for all facial expressions was zero.

Table 3

Incidence (%) of Various Participant Facial Displays under Non-Angry and Angry Complaint Conditions [a]

| Facial Displays | Group Based on Frequency of Displays [b] | | | | | | | |
| | No Display | | Low Display | | Medium Display | | High Display | |
	Non-angry	Angry	Non-angry	Angry	Non-angry	Angry	Non-angry	Angry
Positive Facial Displays								
Positive smile	8.0	30.8	15.9	40.7	39.8	25.3	36.4	3.3
Nodding	40.9	64.8	27.3	22.0	23.9	11.0	8.0	2.2
Direct eye contact	44.3	95.6	38.6	2.2	17.0	2.2	0.0	0.0
Negative Facial Displays								
Avoiding eye contact	21.6	18.7	51.1	13.2	25.0	56.0	2.3	12.1
Negative smile	56.8	2.2	34.1	9.9	9.1	65.9	0.0	22.0
Licking lips	50.0	47.3	37.5	14.3	12.5	28.6	0.0	9.9
Frown	80.7	74.7	17.0	15.4	2.3	8.8	0.0	1.1
Blinking - rapidly	68.2	73.6	30.7	7.7	1.1	17.6	0.0	1.1
Pursed lips	83.0	78.0	15.9	9.9	1.1	12.1	0.0	0.0

[a] Numbers represent percentage of participants under each treatment condition (Non-Angry, n=88, or Angry, n=91) who displayed the designated level of various facial expressions

[b] Participants were categorized into four groups based on frequency of facial displays: No display = 0, Low Display = 1 – 2, Medium Display = 3 – 5, High Display = 6 – 17

Table 4

Facial Display Observations: Means and ANOVA results

Facial Displays	Non-angry (88)		Angry (91)		F[a]		η²[b]
	M	SD	M	SD			
Positive Facial Displays							
Nodding	2.01	2.57	0.89	1.59	12.41	**	.07
Direct eye contact	1.25	1.46	0.09	0.46	51.96	***	.23
Positive smile	5.43	3.89	1.73	1.67	69.39	***	.28
Negative Facial Displays							
Blinking - rapidly	0.40	0.70	0.78	1.43	4.81	*	.03
Avoiding eye contact	1.69	1.46	3.20	2.14	29.92	***	.14
Negative smile	0.73	1.01	4.54	2.01	253.30	***	.59
Licking Lips	1.01	1.24	1.97	2.33	11.63	***	.06
Pursed lips	0.22	0.53	0.60	1.28	6.92	**	.04
Frown	0.31	0.70	0.65	1.29	4.77	*	.03

[a] df = 1, 177; Significant levels: * .05, ** .01, *** .001

[b] Cohen's (1988) guidelines indicate .01 = small effect, .06 = moderate effect, and .14 = large effect

Table 5

Means for Negative Affect by Type of Complainant Display, Gender of Complainant and Gender of Service Provider

Condition		Pre-test		Post-test	
	n	M	SD	M	SD
Angry Complainant	92	1.40	.57	1.85	.80
Non-angry Complainant	91	1.32	.55	1.51	.71
Male complainant	89	1.34	.54	1.86	.87
Female complainant	94	1.37	.59	1.61	.73
Male Service Provider	85	1.44	.59	1.77	.80
Female Service Provider	98	1.28	.53	1.60	.75

Figure 1
Angry Complaining Customer EC Process Model

| Sender's Gender | Receiver's Gender |

(P3)   (P4)

| Sender Customer | Emotional Contagion Process | Receiver Service Provider |

Sender Customer

Angry, Complaining

Emotional Contagion Process

Stage 1
(P1)
SP - Receiver Mimic sender through congruent facial displays

Stage 2
(P2)
SP - Receiver Afferent feedback resulting in corresponding affective state

Receiver Service Provider

Changed Emotional State

Convergence with sender anger

Ongoing Emotional Contagion Process - service encounter dyadic interactions, receiver becomes sender
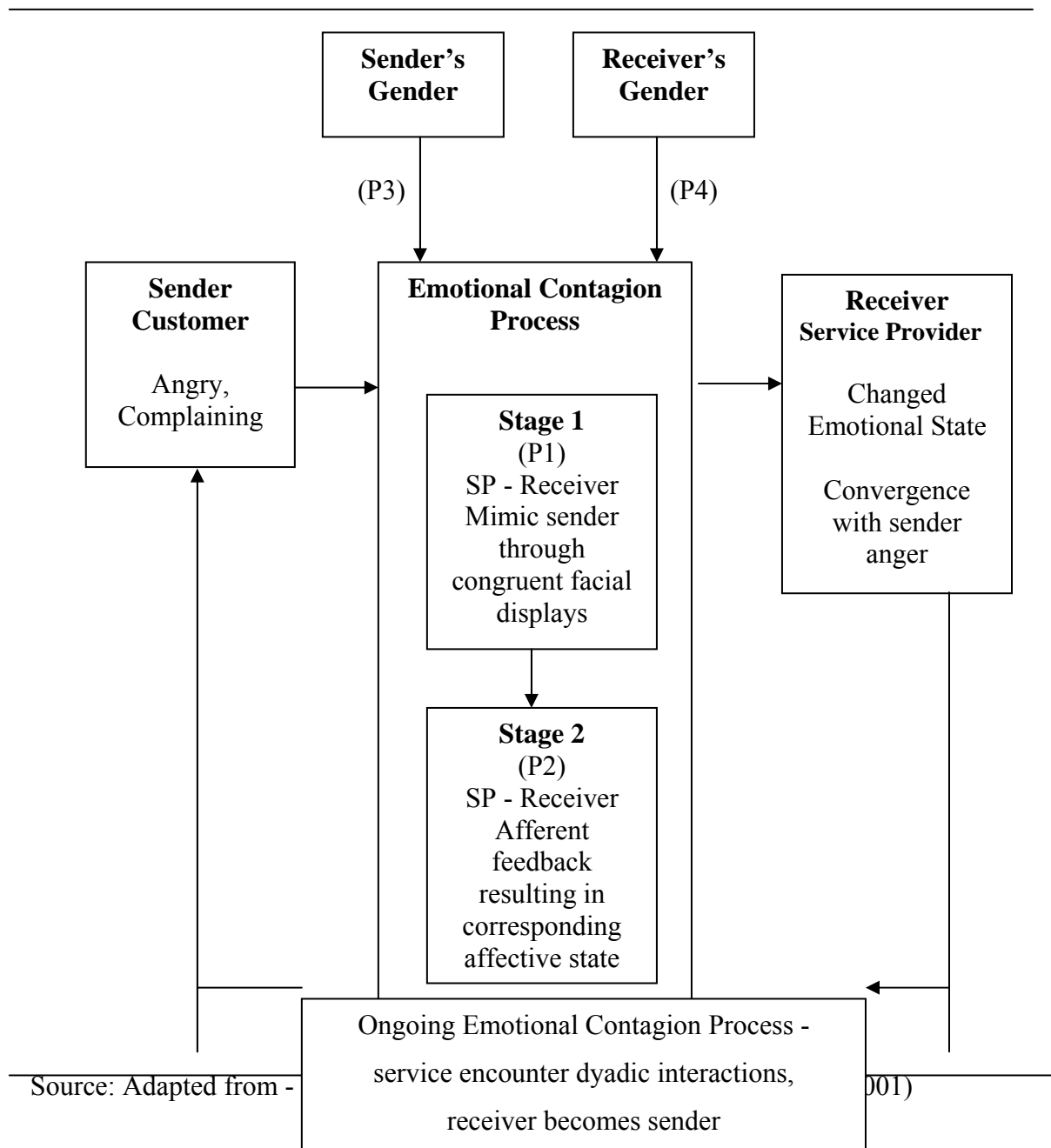
Source: Adapted from - (2001)

Figure 2
Interaction Effect of Time and Exposure to Customer Complaint on Self-reported Negative Affective State