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*Responsiveness: Emotion and
Information Dynamics in Service
Interactions*

by
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Abstract: This research poses the following basic research question: *What is the value of emotional and informational responsiveness in service interactions and what are their antecedents?* Through a cross-sectional study of 250 service interactions, this dissertation provides evidence regarding individual and environmental differences in emotional and informational responsiveness in service interactions. The research design is multi-method and field-based. The data include transcribed and coded audio recordings of the service interactions, as well as surveys and standardized tests of individual service representatives.

In addition to the recordings, organizational and customer evaluations of the interactions are used to answer the research questions. Participant observation and focus groups are used to get a richer sense of the nature of the work in general, and of the emotional and informational labor performed. In preliminary analyses, tests of the models of the antecedents and outcomes of emotional and informational responsiveness explain between 18% and 48% of the variance in service quality and duration of the interaction. Interesting differences between antecedents of customer rated quality and organization rated quality are identified.

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INTRODUCTION

In searching for improvements in organizational performance, scholars advocate increased responsiveness to customers (Tsui, 1994). In this research, two types of responsiveness relevant to service interactions are considered. The first is emotional responsiveness, the second is informational responsiveness.

Responsiveness characterizes one person's behavior during an interaction with a target person. A person is responsive if their behavior is adapted to the behavior of the target. More specifically, a person is emotionally responsive when they adapt their emotional expressions to the emotional expressions of the target. Emotional expressions are the non-verbal behaviors that signal emotions (e.g. smiling, laughing, sighing, soft voice tone). For example, if a person smiles when the target smiles, she is being emotionally responsive. If a person smiles when another person cries, she is not being emotionally responsive. Similarly, a person is informationally responsive when they adapt their verbal communication to that of the other person. Transmission of information refers to verbal utterances (form and content) during an interaction. For example, a target could initiate a conversation regarding computer products using simple laymen's terms. If a person responds to the target in the same type of language (e.g. simple laymen's terms), she is informationally responsive. If she responds in a different language (e.g. complex, technical jargon), she is not informationally responsive.

Emotional Responsiveness

It is argued that the expression of emotions by front line employees has value for customers and hence, for the organization (Rafaeli & Sutton, 1989). At the same time, scholars claim that emotional labor is costly to employees (Hochschild, 1983; Morris & Feldman, 1996; Ashforth & Humphrey, 1993). The research evidence to support either of

these claims is still quite limited (Ashforth & Humphrey, 1995). For example, in an attempt to test the hypothesis that smiles by convenience store clerks lead to increased sales, Sutton and Rafaeli (1988) instead find that when stores are busy, clerks have no time to smile and are discouraged from doing so by the customers. The authors argue that the value of any particular emotional expression is strongly affected by situational factors such as time pressure.

Situational cues for appropriate emotional displays come from multiple sources. Rafaeli and Sutton (1989) categorize situational cues into transaction-defining cues and feedback from the target person. Transaction-defining cues include things like age, sex and race of the target person, as well as other contextual features such as time of day, temperature and surrounding levels of activity. Based on these cues, a person might tailor her emotional expression to suit the context. For example, she might smile less in a busy environment than in a slow one. Once the initial emotional move is made, the target person provides feedback that influences subsequent emotional moves. If a cheerful customer really wants the person to smile, regardless of how busy the store is, he might try various moves to elicit a smile from the server. Perhaps the most salient feedback cues are the emotions expressed by the customers themselves during a service interaction. The cheerfulness, anger and impatience displayed by customers' non-verbal behaviors are important emotional signals that provide opportunities for emotional responsiveness by service representatives. A service representative is being emotionally responsive when she adapts her emotional expression (e.g. facial expression, tone of voice) to the emotional expression of the customer. An emotionally responsive service representative smiles when a customer smiles, frowns when a customer frowns and does not smile when a customer frowns. The links between these contingent emotional displays and the value or cost to the customers, organization and employees have yet to be studied in depth. This study will address this gap in the research. In addition to exploring issues of value, the

antecedents of these contingent emotional displays will also be studied. Using a multi-level approach, individual and environmental determinants of emotional responsiveness will be examined.

Informational Responsiveness

When customers enter into a service interaction with an organization, they usually require other types of responsiveness in addition to emotional responsiveness. Many service interactions include the transfer of information between service provider and customer. Service representatives provide information about airline flight schedules, verify bank account balances, describe product features and process other customer requests. I propose that this information transfer can be conducted with varying degrees of responsiveness by the service provider.

Grice (1975), in his seminal work, articulated the cooperative principle of communication, which states that interactants have an unspoken pact to cooperate in communication in order to make it efficient. Based on this foundation, he argues that communication efficiency is achieved through adherence to the four maxims of quantity, relevance, manner, and quality. The maxims of relevance and manner are useful for my study of responsiveness in service interactions because they are contingent responses (i.e. they are determined by factors that emerge during the interaction). The maxims of quantity and quality are not considered, because these are absolute conventions and are not related to issues of responsiveness.

Grice (1975)'s maxim of relevance proposes that verbal utterances should be relevant to the given context. This implies that the speaker should take the situation into consideration when choosing the subject of his utterances during an interaction. Simply stated, in following the maxim of relevance, the speaker should address the topic at hand

when choosing utterances, and not introduce unrelated material. I call this content-based informational responsiveness. In the case of a service interaction, take the example of a customer requesting information regarding her bank account balance. If the service representative addresses the topic at hand, and provides the bank account balance, she is being informationally responsive. If, however, she provides bank account interest rates instead, she is not being informationally responsive.

According to the maxim of manner, Grice also argues that verbal utterances should be produced in a manner that is clear. In order to do so, people should choose the appropriate form or code (i.e. language) for the conversation. I call this form-based informational responsiveness. The most obvious clue for appropriate language or form of utterance would be the language or form used by the other person in the interaction. If one person speaks English, the informationally responsive choice would be to respond in English, not in a different language. In the case of a service interaction, take the example of the technically unsophisticated customer requesting information about computer products. The service representative can modify her use of computer jargon based on the level of technical language used by the customer. The service representative who talks "over the customer's head" is not being informationally responsive, whereas the service representative who talks at the same level as the customer is responsive.

Although Grice (1975) argues that communication always follows the cooperative principle, I posit that variations in adherence to the cooperative principle (i.e. variations in informational responsiveness) occur. Grice argues that all interactants have an unspoken pact to cooperate, yet, research shows that adherence to the cooperative principle varies by gender (Rundquist, 1992), by social identity and power (Sarangi & Slembrouck, 1992; Gumpertz, 1982), for aphasics (Ahlsen, 1993) and for the learning disabled (McCord & Haynes, 1988). Variation in adherence to the cooperative principle is associated with such

outcomes as student achievement (Needels, 1988), deception (McCornack, Levine, Morrison, & Lapinski 1996) and judgmental biases (Schwartz, 1995). I am interested in the value of maintaining this pact during service interactions (i.e. the value of being informationally responsive), as well as understanding variations in a service representative's adherence to the pact to cooperate in conversation (i.e. variations in informational responsiveness).

HYPOTHESES

Value of Emotional Responsiveness

Researchers argue that people have a natural preference for coherence in interpersonal interactions (Burgoon, Stern & Dillman, 1995). Kendon (1990) argues that behavioral coordination is triggered by a desire to experience rapport (a positive emotional state). He argues that behavioral alignment signals "liking of " and "desire to interact with " partners. Others argue that behavioral alignment such as postural mimicry (e.g. slouching when another person is slouching) is used to communicate solidarity and involvement (La France, 1982; Bavelas, Black, Chovil, Lemery, & Mullet, 1988). Other studies have found a relationship between behavioral synchrony (through postural mirroring) and rapport (Charney, 1966; La France, 1979; La France and Broadbent, 1976; Trout and Rosenfeld, 1980). Couples have been found to feel more rapport when vocal interactions are well-coordinated (Capella & Flagg, 1992; Warner, 1990; Warner, Wagener, & Kronauer, 1983). Taken together, this literature indicates that there is a positive relationship between behavioral coordination and the experience of positive emotion or rapport. If a service representative is more responsive to the emotional cues provided by the customer, their emotional behaviors are more coordinated, thereby inducing an experience of positive emotion for both participants. These favorable emotions will positively affect service quality as well as service representative satisfaction (see Figure 1).

H1: The emotional responsiveness of a service representative will be positively related to service quality.

H2: The emotional responsiveness of a service representative will be positively related to service representative satisfaction.

What is unclear is the cost associated with emotional responsiveness, especially in a business environment. In such a case, where "time is money", the length of the interaction is a key performance criterion. It is unclear whether emotional responsiveness should have a consistent effect on interaction length. As Kendon (1990) argues, coordination or responsiveness is a signal of desire to interact. If the desire to interact implies a desire to prolong an interaction, then emotional responsiveness may lead to longer interactions.

H3a. The emotional responsiveness of a service representative will be positively related to the duration of the interaction (i.e. cost).

On the other hand, since non-responsive interactions may be problematic, this may lengthen the business interaction as long as the interactants persist in overcoming the difficulties. In this case, the emotionally responsive service representative should have more efficient interactions.

H3b: The emotionally responsiveness of a service representative will be negatively associated with the duration of the interaction (i.e. cost).

Determinants of Emotional Responsiveness

Individual level

One of the most important psychological constructs related to emotional responsiveness is empathy. Levenson and Ruef (1992) and Redmond (1989) provide reviews of the various conceptualizations of the empathy construct. Empathy is defined as sensitivity to the feelings of another person. I consider two types of empathy: cognitive and affective. Cognitive empathy refers to "knowing what another person is feeling (Levenson and Ruef, 1992, p.234)" and affective empathy refers to "feeling what another person is feeling (Levenson and Ruef, 1992, p.234)." Both affective and cognitive empathy should be considered skills in interpersonal monitoring that should influence emotional responsiveness. Service representatives who are more empathic should be more emotionally responsive to customers because they are better at detecting emotions in others.

H4: Empathic service representatives will be more emotionally responsive to customers than non-empathic service representatives.

Evidence indicates that one of the prime motivators to avoid using empathic skills in human services is emotional exhaustion in service providers (Maslach, 1982). In the extensive literature regarding the phenomenon of burnout in human services (for review, see Cordes & Dougherty, 1993), depersonalization of customers (or, treating customers like objects) is a component of the burnout syndrome that is preceded by emotional exhaustion. Emotional exhaustion has been found to be a result of extended human service work in high intensity, heavy caseload environments (Lee & Ashforth, 1996; Saxton, Phillips & Blakeney, 1991). For example, in a comparison of three job categories, Maslach & Jackson (1985) found that telephone service representatives had the highest caseloads and the highest burnout scores when compared to two other categories of service representatives in a federal service agency. The depletion of emotional reserves of

a human service worker provides a disincentive for exercising empathic skills and adapting their behavior in response. This should decrease emotional responsiveness.

H5: Burned-out service representatives will be less emotionally responsive than those who are not burned-out.

Snyder (1974) describes a personality type that has the tendency to monitor and adapt to the environment. Self-monitoring is defined as "self-observation and self-control guided by situational cues to social appropriateness (p.526)." High self-monitors (sometimes referred to as chameleons (Kilduff & Day, 1994)) are very concerned with the image they present to others, and hence frequently scan their social environment for feedback regarding their expressive behaviors. In contrast, low self-monitors attend to internal cues regarding the appropriateness of their behavior. They tend to be more true to themselves, relying on their own feelings and attitudes to guide their behavior in different situations. High self-monitors perform better than low self-monitors in boundary-spanning roles, where they are required to attend more frequent and varied social cues regarding desired behaviors (Caldwell & O'Reilly, 1982). They are also more likely to use collaboration and compromise to resolve conflicts (Baron, 1989). Given their predisposition to monitor and adapt to others, high self-monitors should be more emotionally responsive than low self-monitors.

H6: Service representatives who are high self-monitors will be more emotionally responsive than those who are low self-monitors.

Transaction-specific determinants

The degree of emotional attention and hence, responsiveness, allocated to a given interaction should be affected by the nature of the relationship between the two people.

Hatfield, Cacciopo & Rapson (1994) hypothesize that a person will be more susceptible to emotional contagion, or "catching the feelings" of the target, if they see themselves as fundamentally interrelated with the target. This sense of interrelatedness or interdependence may be a cultural norm. For example, Markus & Kitayama (1991) review the evidence that members of Western cultures are less likely to see themselves as fundamentally interrelated, and are hence, less susceptible to emotional contagion. This sense of interrelatedness also varies within cultures (Kato & Markus, 1992). Individuals are more likely to see themselves as interrelated with other members of their ingroup, than with members of their outgroup (Tajfel, 1978; Tajfel & Turner, 1979). Ingroup identification is often based on gender (Linville, Fischer, & Yoon, 1996; Carpenter, 1993; Jackson & Hymes, 1985). In an experimental study of emotional contagion, Feshbach and Roe (1968) found that emotional contagion was higher in same gender conditions than in mixed gender conditions. Female subjects were more likely to share the emotions displayed by female targets, whereas males subjects were more likely to share the emotions displayed by male targets. Hence, a service representative's emotional responsiveness should be higher for members of her ingroup than members of her outgroup.

H7: Service representatives will be more emotionally responsive with customers who are ingroup members than with customers who are members of the outgroup.

Environmental determinants

Rafaeli & Sutton (1989) discuss the various norms or display rules (Ekman, 1973) that influence the expression of emotion at work. Norms regarding emotional displays exist at the societal, occupational and organizational level. For example, Sutton (1991) identified the norm for urgency in emotional expression when bill collectors contact debtors. In addition, bill collectors are selected, socialized and rewarded for their use of contingent

emotional displays. Collectors are expected to adjust their emotional behaviors in response to the emotions expressed by debtors. Rafaeli (1989) found that although customers had the most immediate influence on supermarket cashier emotional expressions, co-workers and managers had more legitimate influence over display rules, based on their expertise or control of rewards. Given these findings, I expect managers and co-workers to influence the level of emotional responsiveness demonstrated by the service representative.

H8: Service representatives whose managers promote emotional responsiveness will be more emotionally responsive to customers.

H9: Service representatives whose work group members promote emotional responsiveness will be more emotionally responsive to customers.

Value of Informational Responsiveness

Research shows that people have positive responses to behavioral convergence during interactions, including convergence on speech style and language (Coupland, 1984; Street, 1984; 1991, Berger & Bradac, 1982; Feldman, 1968). For example, Kikuchi (1994), found that listeners who adapted their rate of backchanneling (minor, supportive responses such as *uh huh* and head nodding) to the speaker were rated more positively than those who did not. Based on these findings, I expect a customer to respond favorably to a service representative who adapted the form and content of his speech to that of the customer. This favorable response will influence service quality. Based on the general preference for coordinated interactions, I also expect the service representative to have a positive reaction to the coordinated interaction (see Figure 2).

H10: Service representative informational responsiveness will be positively related to service quality.

H11: Service representative informational responsiveness will be positively related to service representative satisfaction.

Grice's (1975) cooperative principle posits that interactants have an unspoken pact to cooperate in making conversation efficient. In particular, adherence to the maxim of relevance, or sticking to the topic at hand, should make an interaction shorter or more efficient. If one of the participants introduces irrelevant topics, they are not being informationally responsive, and the interaction will take longer. Adherence to the maxim of manner also affects interaction efficiency. Responding in the appropriate code (i.e. one that is understood by the other person), will allow the message to be communicated in the least amount of time. For example, if a person starts a conversation in English, replying in English should allow the conversation to proceed quickly. A response in another language might not be understood by the first person. In this case, extra conversation time would be required to address the lack of understanding, thereby rendering the conversation problematic and inefficient.

H12: Informational responsiveness will be negatively related to duration of the interaction (i.e. cost).

Determinants of Informational Responsiveness

Individual level

Individual differences in informational responsiveness are affected by basic cognitive abilities. For example, aphasics and the learning disabled break the rules of communicative coherence regularly (Ahlsen, 1993; McCord & Haynes, 1988). Cognitive

abilities are those used when performing tasks requiring the manipulation of information (Murphy, 1996). These tasks include verbal comprehension, verbal fluency and perceptual speed (Baucum, 1996). Superior abilities in verbal comprehension, fluency and perceptual speed should help agents better perceive and process the code and content of verbal utterances made by customers. This, in turn, should enable them to choose more appropriate responses.

H13: Service representatives with higher cognitive skills will be more informationally responsive than those with lower cognitive ability.

An informationally responsive service representative must have a broader repertoire of verbal utterance code and content to draw on than a non-responsive service representative. For example, a computer expert can tailor her responses to the level of expertise of the customer, whereas a novice could not. Likewise, an experienced banker can draw on a full range of banking terminology and product knowledge, whereas a neophyte must rely on a narrower information base. The broader the range of code and content from which the service representative can draw, the more he is able to be responsive. Task-related verbal repertoires (code and content) are acquired through formal training and informal learning on the job. Hence, a service representative who has more work experience should be more informationally responsive.

H14: Knowledgeable service representatives will be more informationally responsive to customers than unknowledgeable service representatives

As I've mentioned in an earlier section, Snyder (1974) describes self-monitors as people who are more attentive to environmental cues regarding socially appropriate behavior. High self-monitors adapt their behavior based on social cues and feedback, whereas low

self-monitors are more likely to attend to their own feelings and thoughts for directing their behavior. Self-monitoring has been shown to be related to communication behaviors (Gudykunst, Gao, Schmidt, & Nishida, 1992; Dabbs, Evans, Hopper, & Purvis, 1980; Daly, Vangelisti, & Daughton, 1987). For example, Daly et.al. (1987) found self-monitoring to be positively related to conversational sensitivity. Since high self-monitors are more likely to attend to other people and their expressed preferences regarding speech form and content, they are more likely to be informationally responsive.

H15: Service representatives who are high self-monitors should be more informationally responsive than those who are low self-monitors.

Transaction-specific determinants

Researchers have found that "interactants are more inclined to converge on speech styles (including accent, language choice, verbal content, formality) with ingroup members and well-regarded others but to diverge styles with outgroup members and disliked others (Burgoon, Stern & Dillman, 1995, p.255)." For example, when gender is made salient, males tend to be judged as converging more on masculine behaviors than when gender is not salient (Hogg, 1985). Ethnic groups have been found to converge on speech styles during interactions to reinforce their ethnic ingroup identity (Giles, Bourhis, & Taylor, 1977; LaFrance, 1985). Converging on speech styles is an example of informational responsiveness. So, in a more general sense, service representatives are expected to be more informationally responsive with ingroup members than with outgroup members.

H16: Service representatives will be more informationally responsive with ingroup members than with outgroup members.

Environmental determinants

Contrary to Grice's (1975) proposal that adherence to the cooperative principle is a universal, researchers have found that coherent discourse does not happen naturally, but needs to be coerced (Penman, 1987). Studying 8 court trials, Penman (1987), identified 19 discourse rules consistent with Grice's cooperative principle. These rules needed to be actively enforced by the courts to ensure coherent discourse. Rules or norms regarding behavior can be enforced by influential others, such as managers and co-workers (Trice, 1993; Martin, 1992). Hence, service representatives will be informationally responsive if such norms or rules are promoted by managers or co-workers.

H17: Service representatives whose managers promote informational responsiveness will be more informationally responsive to customers.

H18: Service representatives whose work group members promote informational responsiveness will be more informationally responsive to customers.

METHOD

Sample and Setting

The research was conducted on service interactions occurring in one major retail bank service call center. The call center setting is appropriate for this study because service representatives handle the large volumes of clients associated with burnout (Maslach & Jackson, 1985). The financial services setting also provides an interesting blend of emotional and informational demands on service representatives. Financial transactions and their related services require the exchange of detailed information on a myriad of products. At the same time, through participant observation, I have noticed that customers often have strong emotional reactions to issues regarding their personal finances.

Two hundred and fifty service interactions of one hundred and fifty service representatives were sampled in a cross-sectional fashion in order to capture the relevant sources of variation described above. Service interactions were tape-recorded and transcribed. Evaluations of these service interactions were conducted by the organization, using its existing quality evaluation system. Customers' evaluations of the interactions were collected through follow-up telephone interviews. Service representatives completed surveys, took standardized tests, and participated in focus-groups.

Measures

Dependent variables

Tapes of service interactions were coded for emotional responsiveness using two approaches. First, raters assessed emotion expressed in each speaking turn using 3 categories (unpleasant, neutral, pleasant). These ratings were based solely on voice tone, not on the content of the speech. Research has shown that vocal cues to emotion can be reliably detected by untrained raters (Mallo Carrera & Jimenez Fernandez, 1988; Johnson, Emde, Scherer, & Klinnert, 1986; Cosmides, L. 1983). Nine categories of emotion dynamics were created from the combinations of customer cues and representative responses (e.g. pleasant - pleasant, pleasant - neutral, etc). Each speaking turn by the service representative was categorized into one of the 9 categories. Once this was done for the entire interaction, the fraction of representative speaking turns falling into each of the 9 categories was calculated. At this stage of analysis, these categories are treated separately.

The emotion expressed in each speaking turn was then measured using a second technique. Content analysis of the words used was performed, using the Dictionary of Affect in Language (Whissel, Fournier, Pelland, Weir, & Makarec, 1986) to assign emotion ratings to the words in a given turn. The Dictionary of Affect in Language

contains over 4000 English words with associated emotion ratings. Ratings are assigned for two aspects of emotion: *evaluation* (or pleasantness) and *activation* (or arousal). Each word in the dictionary is assigned a score for evaluation (mean=4.00; standard deviation=1.00; range 1-7) and a second score for activation (mean=4.00; standard deviation=1.00; range 1-7). For example, the word *angry* has an evaluation score of 2.7 (i.e. unpleasant) whereas the word *delighted* has an evaluation score of 6.4 (i.e. pleasant). For this analysis, I focused on the evaluation rating, as it tends to be a more reliable measure (Whissel, et. al 1986). Every word spoken during an interaction turn would be assigned an evaluation score (as long as the word was in the dictionary). The average evaluation score was then computed for the turn. Once emotion scores were assigned to individual speaking turns, emotional responsiveness scores were calculated in the same manner as described in the previous paragraph.

The measure of informational responsiveness has been adapted from Eadie & Paulson (1983) measures of communicative competence, based on Grice's cooperative principle. This measure refers to the responsiveness of the agent's choice of language and content during the interaction. Raters were instructed to rate the agent's responsiveness by considering such things as: *Was the agent's use of language adapted to what the customer was saying ? Was language used in a way that was appropriate for the situation ? Was the agent's response relevant to what the customer had said or requested?* Raters assigned responsiveness scores to each speaking turn for the service representative (0=non-responsive, 1=responsive). Average responsiveness scores were calculated for the entire interaction.

Customer-rated service quality. In a telephone survey, customers rated their service interaction using the organization's standard 8-item measure of the customer's perception of service quality. Customers were asked to rate such factors as *overall quality of the*

service and the service representative's ability to make you feel like a valued customer.

These factors were rated on a 5-point scale (1-poor, 5-excellent). The coefficient alpha of this measure was .96.

Organization-rated service quality. The taped service interactions were evaluated using the in-house system for quality evaluation. The evaluation consists of 24 items that are rated on a pass/fail basis. The 24 items are averaged to compute the *organizational overall quality* score. 12 items are averaged for the *organizational delivery quality* score. 12 different items are averaged for the *organizational technical quality* score. *Interaction length* was measured in seconds.

Representative satisfaction. Job satisfaction was measured using the Hackman and Oldham's (1980) Job Diagnostic Survey scale consisting of 14 items which were rated on a 7-point scale (1-extremely dissatisfied, 7-extremely satisfied). Sample items include *how satisfied are you with the amount of job security you have* and *how satisfied are you with the amount of challenge in your job.* The coefficient alpha of this scale was .89.

Independent Variables

Methods for measuring dispositions or skills for empathy range from "picture story" indices (Strayer, 1987) to physiological indices (Eisenberg, Fabes, Bustamante, & Mathy, 1987; see appendix for a detailed review of the measurement of empathy). It is widely recognized that empathy is difficult to measure, and no consensus exists on the best way to do this. Given this difficulty, use of multiple methods is required. I have used the following five measures of empathy. *Empathy I.* I used the 33-item Mehrabian and Epstein (1972) paper-and-pencil measure of affective empathy (labeled *emotional empathy*, see appendix for items). The items include such statements as *I tend to get emotionally involved with a friend's problem* that are rated on an 8-point scale (-4 never

true for me; +4 always true for me). The coefficient alpha of this measure was .70.

Empathy 2. I also used a 7-item subset of the Mehrabian and Epstein (1972) self-report measure, identified by Dillard and Hunter's (1986) structural analysis and labeled *emotional contagion*. An example of an item from this scale would be *I become nervous if others around me are nervous*. These items are also rated on an 8-point scale (-4 never true for me; +4 always true for me). The coefficient alpha of this measure was .68.

I used two 6-item sub-components of the Davis (1980; 1983) Interpersonal Reactivity Index which are self-report scales for affective and cognitive empathy (labeled *empathic concern* and *perspective taking*). The empathic concern scale (*Empathy 3*) consists of items like *I would describe myself as a pretty soft-hearted person*. The perspective taking scale (*Empathy 4*) has items like *before I criticize somebody, I try to imagine how I would feel in their place*. Both scales are measured using an 8-point scale (-4 never true for me; +4 always true for me). The coefficient alpha of *Empathy 3* was .64. The coefficient alpha of *Empathy 4* was .66. I also used the PONS 47-minute video cassette stimulus-response measure (*Empathy 5*) of cognitive empathy (Rosenthal, DiMatteo, Rogers, & Archer, 1979). This test consists of 220 audio-visual emotional scenes with corresponding multiple-choice items describing the situation. In order to ensure the robustness of the findings regarding empathy, each of these five measures of empathy is used in parallel when testing the research hypotheses.

To measure burnout, I used the measure developed by Maslach & Jackson (1981; 1986) (see appendix for full details of the scale). This self-report measure consists of the three main components of the burnout syndrome: *emotional exhaustion*, *depersonalization* and *personal accomplishment*, which are rated on a 7-point frequency scale (1-never, 4-a few times a month, 7- every day). Emotional exhaustion is measured with 9 items like *I feel emotionally drained from my work*. The coefficient alpha for this measure was .90. The

5-item scale for depersonalization includes such items as *I've become more callous toward people since I took this job*. The coefficient alpha for this measure was .74. Personal accomplishment is measure by 8 items like *I deal very effectively with the problems of my customers*. The coefficient alpha for this measure was .69. These coefficients are consistent with past research done on the burnout syndrome (Maslach, & Jackson, 1981).

Self monitoring. Self-monitoring was measured using Snyder's (1974) 25-item self-report measure (see appendix for complete scale). High self-monitors would agree to such statements as *in order to get along and be liked, I tend to be what people expect me to be rather than anything else*. The Kuder-Richardson 20 (KR20) coefficient of this measure was .69. *Gender ingroup* was coded as follows. If the gender of the representative and the customer were the same, gender ingroup membership was coded as 1, otherwise it was coded as 0. *Cognitive ability* was measured using the 12-minute, 50 question Wonderlic Personnel Test, Form V(1988). This test was designed to measure general cognitive ability and includes questions on various problem types (Wonderlic & Hovland, 1939) such as vocabulary, mathematics, and formal logic. *Knowledge* was measured by job tenure (in years), which was obtained from company records.

I created my own scales to measure the influence of managers and coworkers on the responsiveness of the service representative (see appendix for full scales). I created four scales; two for *informational responsiveness* (manager influence and co-worker influence), and two for *emotional responsiveness* (manager influence and co-worker influence). The scales included items like *my unit manager frequently talks about dealing with customers' feelings* (managerial influence on emotional responsiveness), and *when it comes to learning how to talk to customers, I learn a lot from the other representatives in my unit* (co-worker influence on informational responsiveness). These items were rated on a 5-point likert scale (1-strongly disagree; 5-strongly agree). The coefficient alphas for

these measures were .58 for *manager influence on emotional responsiveness*, .75 for *co-worker influence on emotional responsiveness*, .80 for *manager influence on informational responsiveness*, .71 for *co-worker influence on informational responsiveness*.

PRELIMINARY RESULTS

The following results are early findings based on partial data. The taped service interactions are in the process of being transcribed, rated, and timed, so the measures of *emotional* and *informational responsiveness* and *duration of the interaction* are currently available for 42 interactions. The following section will focus on the areas where strong support has already been found for certain relationships. These findings will be expanded once the interaction ratings have been completed.

Table 1 provides the means, standard deviations, and correlations for the variables of this study. Of particular interest is the consistent relationship between negative emotional contagion (customer unpleasant - representative unpleasant) and customer rated quality, organization rated quality and duration of the interaction. Unprompted negative emotion (customer neutral - representative unpleasant) is also negatively associated with customer rated quality, but not with organization rated quality. On the other hand, positive emotional contagion (customer pleasant - representative pleasant) is positively associated with organization rated quality, but not with customer rated quality. Informational responsiveness is associated with organization rated quality and duration of the interaction, but not with customer rated quality.

Performance

Regression results reported in Table 2 partially support H10 and fully support H11. Informational responsiveness is positively related to service quality as rated by the

organization, but not as rated by the customer. It is also negatively related to duration of the interaction (i.e. lowers costs). Although not included in the original hypotheses, negative emotional contagion was found to have a negative impact on service quality as rated by the organization and the customer, but did not have any effect on the duration of the interaction. Both call complexity and gender ingroup were found to have important effects on duration of the interaction, independent of information and emotion dynamics. Based on these preliminary analyses, emotion and information dynamics explain between 18% and 47% of the variance in service quality and duration of the interaction.

Emotion and Information Dynamics

Regression results reported in Table 3 provide some preliminary finding regarding the antecedents of negative emotional contagion and informational responsiveness. Informational responsiveness is significantly affected by the complexity of the call being handled. Negative emotional contagion is significantly affected by the gender characteristics of the interaction. Representatives dealing with customer of the opposite gender are more likely to engage in negative emotional contagion than those dealing with customers of the same gender. Negative emotional contagion is also influenced by the representative's level of empathy. Empathic representatives are more likely to engage in negative emotional contagion than non-empathic representatives. These three factors explain between 22% and 24% of the variance in emotion and information dynamics in service interactions.

Discussion

The performance outcomes considered here are not uniformly affected by emotion and information dynamics. Customer rated quality is primarily affected by the emotion dynamics whereas the duration of the call is primarily affected by the information

dynamics. Organization rated quality is sensitive to both emotion and information dynamics.

Emotion dynamics, especially negative emotional contagion, are related to information dynamics. Interactions where representatives are more informationally responsive are less likely to contain negative emotional contagion. Anecdotal evidence suggests that difficulties in the information exchange aspect of the interaction (which prolongs the call) lead to negative emotional contagion between the customer and the representative (which lowers customer rated quality). This effect may be worse for empathic representatives or representatives dealing with customers of the opposite gender.

These findings offer opportunities for improving performance in service interactions. Information exchange can be improved through training in communication skills. There is a tendency for some representatives to be system driven and allow the conversation with the customer to be dictated by the procedural demands of the information technology or the organization thereby alienating the customer. Other representatives are able to keep the customer in the foreground of the conversation. This behavior can be encouraged through training.

Anecdotal evidence suggests that difficulties in dealing with information technology also impede information exchange. Hence, in addition to training on communication skills, the design of information technology and training in its use are also likely to improve information exchanges with customers. In focus groups, service representatives noted that they experience difficulty in tracking down critical pieces of information in a timely fashion while servicing a call. This information dilemma can distract the representative from the conversation with the customer, giving the customer the impression of non-responsiveness. Although this problem may be remedied with improved IT design and

training, there may also be a need for improved access to information experts to deal with gaps in information as they occur.

Given that service representatives may still experience some informational difficulties while serving customers, there is a need to address the emotion dynamics of the interaction. Service representatives can be selected according to their predisposition to engage in negative emotional contagion (i.e. empathy). They can also be trained to avoid negative emotional contagion, especially with informationally challenging calls. On the other hand, informationally challenging calls could be routed to representatives who have been specially selected and trained to avoid negative emotional contagion.

One of the challenges in this particular setting is the variation in the complexity of service interactions. Approximately 50% of the calls dealt with are short (one minute or less), incredibly routine, and emotionally neutral. Dealing with these calls reinforces a very routinized mentality, where attentiveness to the customer is not much of an issue. On the other hand, complex calls from irritated customers do arrive unexpectedly. The low frequency of these calls, coupled with their informational and emotional demands make it very difficult for representatives to develop the sophisticated informational and emotional skills to deal with these special cases. Managing representative behaviors in these special cases through the various initiatives discussed above will improve performance.

References

- Ahlsen, E. (1993). Conversational principles and aphasic communication. *Journal of Pragmatics*, 19(1), 57-70.
- Ashforth, B.E. & Humphrey, R.H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18, 88-115.
- Ashforth, B.E. & Humphrey, R.H. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, Vol.48, No.2., 97-125.
- Baron, R.A. (1989). Personality and organizational conflict: Effects of the Type A behavior pattern and self-monitoring. *Organizational Behavior and Decision Processes*, 44:281-296.
- Baucum, D. (1996). *Psychology*. New York: Barron's Educational Series, Inc.
- Bavelas, J.B., Black, A., Chovil, N., Lemery, C.R., & Mullet, J. (1988). Form and function in motor mimicry: Topographic evidence that the primary function is communication. *Human Communication Research*, 14. 275-299.
- Berger, C.R., & Bradac, J.J. (1982). *Language and Social Knowledge*. London: Edward Arnold.
- Bryant, B.K. (1987). Critique of comparable questionnaire methods in use to assess empathy in children and adults. In N.Eisenberg & J.Strayer (Eds.), *Empathy and its Development*: 361-373. New York: Cambridge University Press.
- Burgoon, J.K., Stern, L., & Dillman, L. (1995). *Interpersonal Adaptation: Dyadic Interaction Patterns*. Cambridge University Press.
- Caldwell, D.F., & O'Reilly, C.A. (1982). Boundary spanning and individual performance: The impact of self-monitoring. *Journal of Applied Psychology*, 67:124-127.
- Cappella, J.N., & Flagg, M.E. (1992, July 23-28). Interactional adaptation, expressiveness, and attraction: Kinesic and vocal responsiveness pattern in initial liking. Paper presented at the VI International Conference on Personal Relationships, University of Maine, Orono.
- Carpenter, S. (1993). Organization of in-group and out-group information: The influence of gender-role orientation. *Social Cognition*, 11(1):70-91.
- Charney, E.J. (1966). Psychosomatic manifestations of rapport in psychotherapy. *Psychosomatic Medicine*, 28, 305-315.

- Cordes, C.L. & Dougherty, T.W. (1993). A review and an integration of research on job burnout. *Academy of Management Review*, Vol.18, No.4, 621-656.
- Cosmides, L. (1983). Invariances in the acoustic expression of emotion during speech. *Journal of Experimental Psychology: Human Perception and Performance*, 9(6), 864-881.
- Coupland, N. (1984). Accommodation at work: Some phonological data and their implications. *International Journal of Sociology of Language*, 46, 49-70.
- Dabbs, J.M., Jr., Evans, M.S., Hopper, C.H., & Purvis, J.A. (1980). Self-monitors in conversation: What do they monitor? *Journal of Personality and Social Psychology*, 39, 278-284.
- Daly, J.A., Vangelisti, A.L., Daughton, S.M. (1987). The nature and correlates of conversational sensitivity. *Human Communication Research*, 14(2), 167-202.
- Davis, M.H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology*, 10, 85.
- Davis, M.H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 1, 113-126.
- Dillard, J.P. & Hunter, J.E. (1986). Questions about the construct validity of three scales: Emotional empathy, self-consciousness scales and self-monitoring. Unpublished manuscript, Department of Communication Arts, University of Wisconsin-Madison.
- Eadie, W.F., & Paulson, J.W. (1983). Relationships among attitudes toward communication, communicator style, and communication competence. Paper presented at the meeting of the International Communication Association, Dallas.
- Eisenberg, N. & Strayer, J. (eds) (1987). *Empathy and its Development*. New York: Cambridge University Press.
- Eisenberg, N., Fabes, R.A., Bustamante, D. & Mathy, R.M. (1987). Physiological indices of empathy. In N.Eisenberg & J.Strayer (Eds.), *Empathy and its Development*: 380-385. New York: Cambridge University Press.
- Ekman, P. (1973). Cross cultural studies of facial expression. In Paul Ekman (Ed.), *Darwin and Facial Expression: A Century of Research in Review*: 169-222. New York: Academic Press.
- Feldman, R.E. (1968). Response to compatriots and foreigners who seek assistance. *Journal of Personality and Social Psychology*, 10, 202-214.

- Feshbach, N.D. & Roe, K. (1968). Empathy in six- and seven-year-olds. *Child Development*, 34, 133-145.
- Giles, H., Bourhis, R.Y., & Taylor, D.M. (1977). Towards a theory of language in ethnic group relations. In H. Giles (Ed.), *Language, Ethnicity and Intergroup Relations*; 307-348.
- Grice, H.P. (1975). Logic and conversation. In P. Cole and J.L. Morgan (eds.) *Syntax and Semantics 3: Speech Acts*. New York: Academic, pp.41-58.
- Gudykunst, W.B., Gao, G., Schmidt, K.L., & Nishida, T. (1992). The influence of individualism-collectivism, self-monitoring, and predicted-outcome value on communication in ingroup and outgroup relationships. *Journal of Cross-Cultural Psychology*, 23(2), 196-213.
- Gumpertz, J.J. (1982). *Discourse Strategies*. New York: Cambridge University Press.
- Hackman, J.R., & Oldham, G.R. (1980). *Work Redesign*. Reading, MA: Addison-Wesley Publishing Company.
- Hatfield, E., Cacioppo, J.T., & Rapson, R.L. (1994). *Emotional Contagion*. Cambridge University Press.
- Hochschild, A.R. (1983). *The Managed Heart: Commercialization of Human Feeling*. Berkeley, CA: University of California Press.
- Hogg, M. (1985). Masculine and feminine speech in dyads and groups: A study of speech style and gender salience. *Journal of Language and Social Psychology*, 4:99-112.
- Jackson, L.A. & Hymes, R.W. (1985). Gender and social categorization: Familiarity and ingroup polarization in recall and evaluation. *Journal of Social Psychology*. 125(1): 81-88.
- Johnson, W.F., Emde, R.N., Scherer, K.R., & Klinnert, M.D. (1986). Recognition of emotion from vocal cues. *Archives of General Psychiatry*, 43(3), 280-283.
- Kato, K., & Markus, H. (1992). Interdependence and culture: Theory and measurement. Unpublished manuscript, University of Michigan, Ann Arbor.
- Kendon, A. (1990). *Conducting Interaction: Patterns of Behavior in Focused Encounters*. New York: Cambridge University Press.
- Kikuchi, T. (1994). Effects of backchannel convergence on a speaker's speech rate and track-checking behavior. Paper presented to the annual meeting of the International Communication Association, Sydney.

- Kilduff, M. & Day, D. (1994). Do chameleons get ahead? The effects of self-monitoring on managerial careers. *Academy of Management Journal*, 37(4), 1047-1060.
- La France, M. (1979). Nonverbal synchrony and rapport: Analysis by the cross-lag panel technique. *Social Psychology Quarterly*, 42, 66-70.
- La France, M. (1982). Posture mirroring and rapport. In M. Davis (Ed.), *Interaction rhythms: Periodicity in communicative behavior* (pp. 279-298). New York: Human Sciences Press.
- La France, M. (1985). Postural mirroring and intergroup relations. *Personality and Social Psychology Bulletin*, 11: 207-217.
- La France, M., & Broadbent, M. (1976). Group rapport: Posture sharing as a non-verbal indicator. *Group and Organization Studies*, 1, 328-333.
- Lee, R.T., & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123-133.
- Levenson & Ruef (1992). Empathy: A physiological substrate. *Journal of Personality and Social Psychology*, 63: 234-246.
- Linville, P.W., Fischer, G.W., & Yoon, C. (1996). Perceived covariation among the features of ingroup and outgroup members: The outgroup covariation effect. *Journal of Personality & Social Psychology*, 70(3); 421-436.
- Littlejohn, S. W. (1992). *Theories of Human Communication*. Belmont, CA: Wadsworth Publishing Company.
- Mallo Carrera, M.J., & Jimenez Fernandez, A. (1988). Recognition of emotion expressed through voice. *Estudios do Psicologia*, 33-34, 31-52.
- Marcus, R.F. (1987). Somatic indices of empathy. In N.Eisenberg & J.Strayer (Eds.), *Empathy and its Development*: 374-379. New York: Cambridge University Press.
- Markus, H.R., & Kitayama, S. (1991). Culture and self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Martin, J. (1992). *Cultures in Organizations: Three Perspectives*. New York, Oxford University Press.
- Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice-Hall.

Maslach, C. & Jackson, S.E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2:99-113.

Maslach, C. & Jackson, S.E. (1985). The role of sex and family variables in burnout. *Sex Roles*, 12, 837-851.

Maslach, C. & Jackson, S.E. (1986). *The Maslach Burnout Inventory*. Palo Alto, CA: Consulting Psychologists Press.

McCord, J.S. & Haynes, W.O. (1988). Discourse errors in students with learning disabilities and their normally achieving peers: Molar versus molecular views. *Journal of Learning Disabilities*, 21(4), 237-243.

McCornack, S.A., Levine, T., Morrison, K., & Lapinski, M. (1996). Speaking of information manipulation: A critical rejoinder. *Communication Monographs*, 63(1), 83-92.

Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, 40(4), 525-543.

Morris, J.A. & Feldman, D.C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review*, 21(4), 989-1010.

Murphy, K.R. (1996). Much more than *g*. In K. Murphy (ed.) *Individual Differences in Behavior in Organizations*. San Francisco: Jossey-Bass, pp 3-30.

Needels, M.C. (1988). A new design for process-product research on the quality of discourse in teaching. *American Educational Research Journal*, 25(4), 503-526.

Penman, R. (1987). Discourse in courts: Cooperation, coercion, and coherence. *Discourse Processes*, 10(3), 201-218.

Rafaeli, A. (1989). When cashiers meet customers: An analysis of the role of supermarket cashiers. *Academy of Management Journal*, 32(2): 245-273.

Rafaeli, A. & Sutton, R.I. (1989). The expression of emotion in organizational life. In L.L. Cummings & B.M. Staw (Eds.), *Research in organizational behavior*, vol. 11: 1-42. Greenwich, CT: JAI Press.

Redmond, M.V. (1989). The functions of empathy (decentering) in human relations. *Human Relations*, Vol.42, No.7, pp.593-605.

Rosenthal, DiMatteo, Rogers, and Archer (1979). *Sensitivity to Nonverbal Communication*. Baltimore: John Hopkins University Press.

Rundquist, S. (1992). Indirectness: A gender study of flouting Grice's maxims. *Journal of Pragmatics*, 18(5), 431-449.

Sarangi, S.K., & Slembrouk, S. (1992). Non-cooperation in communication: A reassessment of Gricean pragmatics. *Journal of Pragmatics*, 17(2), 117-154.

Saxton, M.J., Phillips, J.S., & Blakeney, R.N. (1991). Antecedents and consequences of emotional exhaustion in the airline reservations service sector. *Human Relations*, 44:583-602.

Schwartz, N. (1995). *Cognition and Communication: Judgmental Biases, Research Methods, and the Logic of Conversation*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 30, 526-537.

Strayer, J. (1987). Picture-story indices of empathy. In N.Eisenberg & J.Strayer (Eds.), *Empathy and its Development: 351-355*. New York: Cambridge University Press.

Street, R.L., Jr. (1984). Speech convergence and speech evaluation in fact-finding interviews. *Human Communication Research*, 11, 139-169.

Street, R.L., Jr. (1991). Accommodation in medical consultations. In H.Giles, N.Coupland, & J. Coupland (Eds.), *Contexts of accommodation: Developments in applied sociolinguistics*, 131-156. Cambridge: Cambridge University Press.

Sutton, R. & Rafaeli, A. (1988). Untangling the relationship between displayed emotions and organizational sales: The case of convenience stores. *Academy of Management Journal*, 31(3), 461-487.

Sutton, R.I. (1991). Maintaining norms about expressed emotions: The case of bill collectors. *Administrative Science Quarterly*, 36, 245-268.

Tajfel, H. (1978). Interindividual behavior and intergroup behavior. In H. Tajfel (Ed.), *Differentiation Between Social Groups*, 27-60. New York: Academic Press.

Tajfel, H., & Turner, J.C. (1979). An integrative theory of social conflict. In W. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations*, 7-24. Monterey, CA: Brooks/Cole.

Tansik, D. (1985). Nonverbal communication and high-contact employees. in *The Service Encounter* (eds. Czepiel, Solomon, Surprenant)

Trice, H.M. (1993). *Occupational Subcultures in the Workplace*. ILR Press. Ithaca, NY.

Trout, D.L., & Rosenfeld, H.M. (1980). The effect of postural lean and body congruence on the judgment of psychotherapeutic rapport. *Journal of Nonverbal Behavior*, 4, 176-190.

Tsui, A.S. (1994). Reputational effectiveness: Toward a mutual responsiveness framework. In L.L. Cummings & B.M. Staw (Eds.), *Research in organizational behavior*, vol. 16: 257-307. Greenwich, CT: JAI Press.

Warner, R.M. (1990). Interaction tempo and evaluation of affect in social interaction: Rhythmic systems versus causal modeling approaches. Unpublished manuscript, University of New Hampshire, Durham.

Warner, R.M., Waggener, T.B., & Kronauer, R.E. (1983). Synchronized cycles in ventilation and vocal activity during spontaneous conversational speech. *Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology*, 54, 1324-1334.

Whissel, C.M., Fournier, M., Pelland, R., Weir, D., & Makarec, K. (1986). A dictionary of affect in language: IV. Reliability, validity and applications. *Perceptual and Motor Skills*, 62, 875-888.

Wonderlic, E.F., & Hovland, C.I. (1939). The personnel test: A restandardized abridgment of the Otis S-A test for business and industrial use. *Journal of Applied Psychology*, 23(6), p.685-702.

Wonderlic Personnel Test Inc. (1988) Wonderlic personnel test :Form V. Libertyville, IL.

Figure 1: Theoretical model of emotional responsiveness

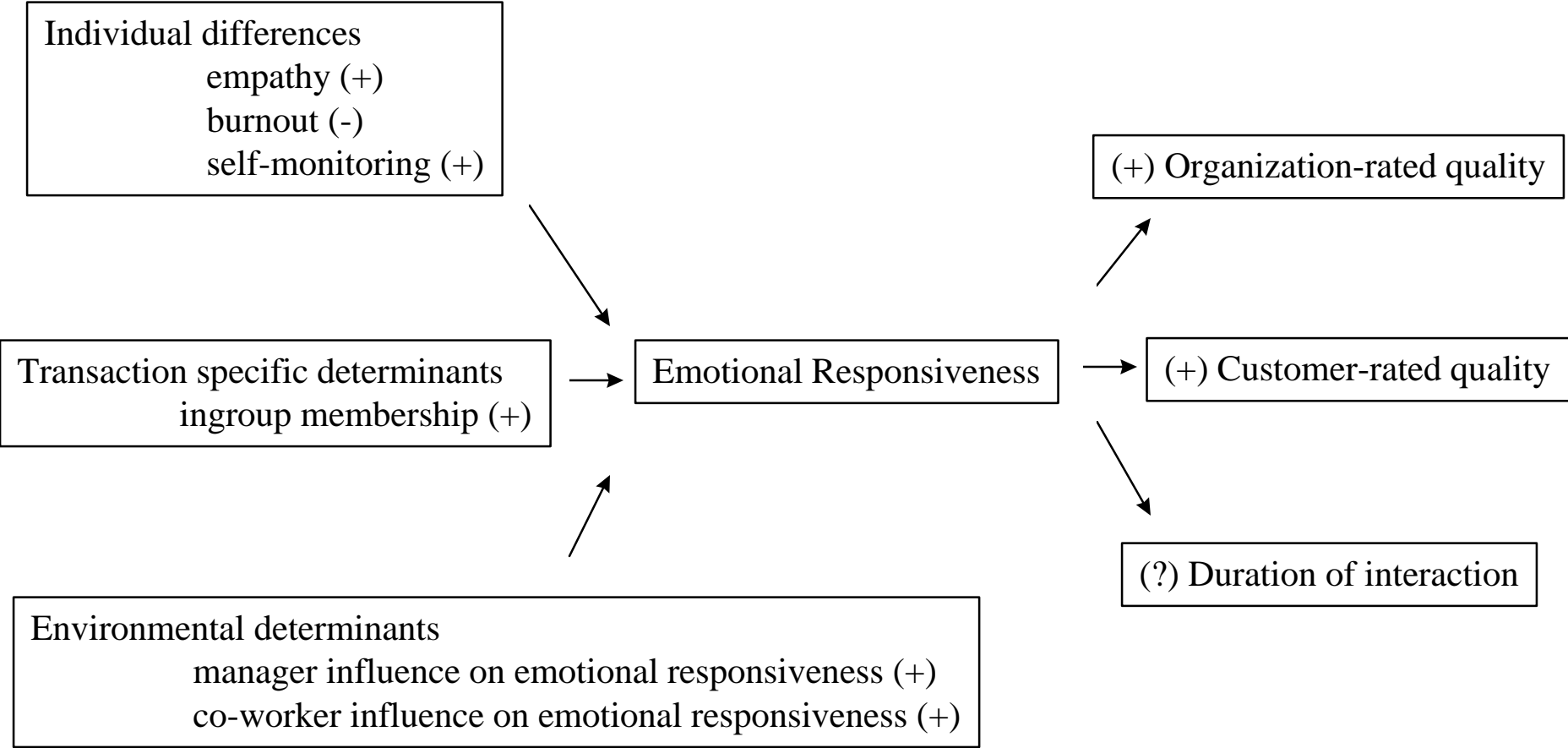


Figure 2: Theoretical model of informational responsiveness

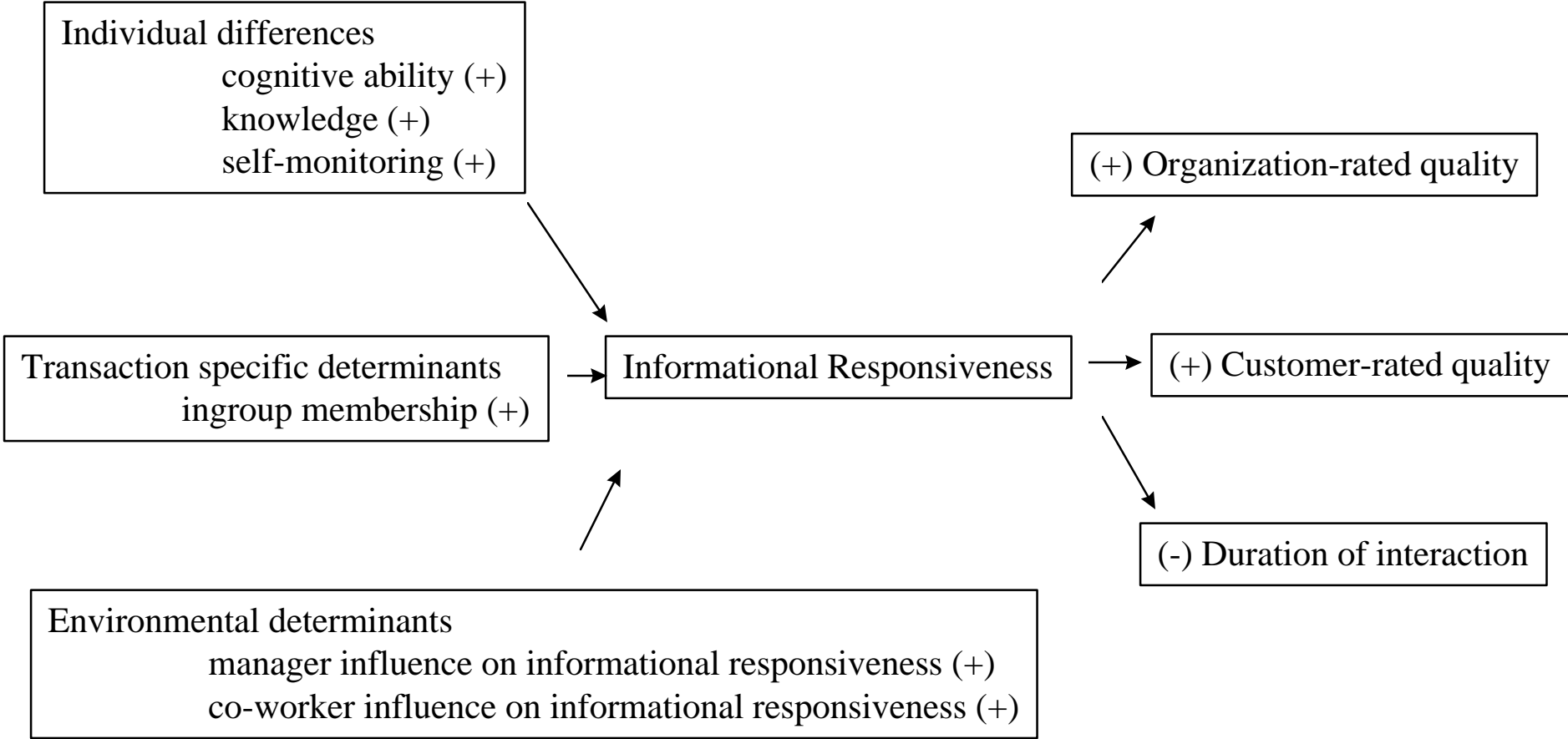


Table 1
Means, Standard Deviations, and Intercorrelations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Customer rated quality														
2. Organization rated delivery quality	0.147													
3. Duration of interaction	-0.300	-0.184												
4. Emotional response (0,+)	0.054	0.117	-0.254											
5. Emotional response (0,0)	0.100	0.163	-0.081	-0.273										
6. Emotional response (0,-)	-0.412	-0.292	0.583	-0.277	-0.091									
7. Emotional response (+,+)	0.100	0.315	-0.194	0.116	-0.338	-0.307								
8. Emotional response (+,0)	0.293	0.273	-0.223	-0.227	-0.185	-0.210	0.296							
9. Emotional response (+,-)	0.009	0.160	0.091	-0.074	-0.035	0.156	-0.080	0.127						
10. Emotional response (-,+)	-0.028	0.078	-0.097	-0.090	-0.194	-0.059	-0.098	-0.047	0.229					
11. Emotional response (-,0)	-0.070	-0.410	0.143	-0.281	-0.415	0.001	-0.262	-0.293	-0.101	0.247				
12. Emotional response (-,-)	-0.484	-0.425	0.516	-0.221	-0.228	0.422	-0.095	-0.156	-0.081	-0.100	0.162			
13. Informational responsiveness	0.306	0.459	-0.568	-0.070	0.107	-0.345	0.208	0.259	-0.074	0.161	-0.080	-0.423		
14. Empathy 1	-0.106	0.048	0.240	-0.200	-0.134	0.099	0.061	-0.105	-0.120	-0.073	0.246	0.274	0.027	
15. Empathy 2	0.060	-0.006	-0.204	0.141	-0.062	-0.109	-0.170	0.098	-0.156	0.058	0.035	-0.051	0.263	0.475
16. Empathy 3	-0.143	-0.015	0.330	-0.189	-0.177	0.125	0.093	-0.113	-0.189	-0.034	0.268	0.327	-0.191	0.599
17. Empathy 4	0.132	0.065	0.142	-0.147	0.233	0.193	0.056	-0.076	0.167	-0.243	-0.225	0.193	-0.101	0.037
18. Empathy 5	-0.052	-0.016	0.391	-0.269	-0.177	0.414	-0.041	-0.021	0.022	-0.116	0.189	0.327	-0.146	0.236
19. Burnout- emotional exhaustion	-0.053	-0.039	0.037	-0.014	-0.060	-0.049	-0.278	-0.245	0.140	0.005	0.420	0.022	-0.063	-0.026
20. Burnout- depersonalization	-0.032	-0.216	-0.091	-0.024	-0.070	-0.116	-0.190	-0.193	-0.004	0.062	0.389	0.007	0.162	0.037
21. Burnout- personal accomplishment	0.097	0.062	0.114	0.054	0.058	0.082	0.235	0.022	-0.085	-0.051	-0.308	0.073	-0.060	-0.036
22. Self-monitoring	0.035	0.021	0.037	-0.166	0.103	0.077	0.207	0.119	0.129	-0.244	-0.150	-0.068	-0.043	0.166
23. Cognitive ability	0.021	0.003	0.039	-0.311	-0.052	-0.026	0.083	0.247	-0.189	0.049	0.105	0.144	-0.088	0.160
24. Knowledge	-0.003	-0.009	0.072	0.137	-0.087	0.005	-0.115	-0.040	-0.060	-0.018	0.055	0.053	0.038	0.057
25. Gender ingroup	0.086	0.205	-0.416	0.144	0.013	-0.228	0.084	-0.025	-0.172	-0.211	0.102	-0.408	0.200	-0.041
26. Manager influence on emotional responsiveness	-0.007	-0.105	-0.237	0.331	-0.060	-0.133	0.110	0.015	-0.076	0.036	-0.174	-0.257	-0.004	-0.404
27. Co-worker influence on emotional responsiveness	-0.145	0.108	-0.135	0.304	-0.022	0.005	0.126	0.039	-0.045	0.197	-0.396	0.023	0.104	-0.056
28. Manager influence on informational responsiveness	-0.023	-0.019	-0.023	0.247	-0.134	0.157	-0.020	0.144	-0.080	0.101	-0.272	-0.009	-0.078	-0.263
29. Co-worker influence on informational responsiveness	-0.054	-0.023	-0.076	0.249	-0.119	-0.033	0.063	0.012	-0.011	0.156	-0.146	-0.013	0.185	0.068
30. Representative gender	0.050	0.182	0.040	0.092	0.020	-0.112	0.231	-0.089	-0.233	-0.286	-0.035	-0.022	0.237	0.232
31. Customer gender	-0.026	-0.023	-0.428	0.214	0.013	-0.311	0.019	0.117	0.099	0.121	-0.090	-0.263	0.201	0.056
32. Representative age	0.027	0.187	-0.193	0.279	0.089	-0.319	-0.077	0.009	-0.174	0.154	-0.153	-0.023	0.151	-0.003
33. Call complexity	-0.171	-0.132	0.553	-0.199	-0.029	0.206	0.007	-0.107	0.156	-0.113	0.079	0.436	-0.503	0.274
Mean	32.135	0.885	155.838	0.027	0.356	0.024	0.018	0.023	0.000	0.002	0.041	0.008	0.929	32.444
Std	8.254	0.113	156.885	0.059	0.072	0.037	0.035	0.045	0.003	0.012	0.064	0.015	0.061	18.725

(N=42; bold numbers p<.05)

Table 2
Preliminary Regression Analyses - Performance

	Customer Rated Quality	Organization Rated Quality	Duration of Interaction
Call complexity	0.107	0.264	0.297 *
Gender ingroup	0.078	-0.112	-0.249 +
Negative emotional contagion	-0.429 *	-0.387 *	0.157
Informational responsiveness	0.162	0.453 *	-0.302 *
R sq	0.261	0.326	0.520
F	3.177 *	4.230 **	10.024 ***
Adjusted R sq	0.179	0.249	0.468

+ p<.10; *p<.05; **p<.01; ***p<.001
Standardized betas are reported
N=42

Table 3
Preliminary Regression Analyses - Emotion and Information Dynamics

	Negative Emotion Contagion	Informational Responsiveness
Call complexity		-0.503 **
Gender ingroup	-0.388 **	
Empathy 3	0.302 *	
R sq	0.257	0.253
F	6.753 **	13.517 **
Adjusted R sq	0.219	0.234

+ p<.10; *p<.05; **p<.01; ***p<.001
Standardized betas are reported
N=42

Appendix

Review of measures of empathy

Tansik (1985) used the Profile of Nonverbal Sensitivity (PONS), developed by Rosenthal and his colleagues (Rosenthal, DiMatteo, Rogers and Archer, 1979), to demonstrate that individuals higher in interpersonal perceptiveness perform better, especially in high contact jobs (like sales and service). The test measures cognitive empathy. The test is administered via a forty-seven minute video-cassette. Scoring of the PONS test yields several video and audio channel scores as well as a summary score for each test taker. The summary score is the measure of nonverbal perceptivity. The PONS test measures the ability to detect the following dimensions of emotion through non-verbal cues : positive versus negative emotion and dominance versus submissiveness. The original instrument was constructed to measure sensitivity to emotion intensity as well, but that was found to be too highly correlated with the other two dimensions, so it was dropped.

Other researchers have created questionnaires or paper-and-pencil measures to assess empathy (for review, see Bryant, 1987). These are used to assess overall tendencies in emotional and behavioral responses to recalled stimuli, as opposed to specific, current reactions to controlled stimuli. Bryant remarks that : "In sum, the paper-and-pencil measures of empathy highlight the metaexperience and reporting of vicarious emotional response to the perceived emotional experience of others and emphasize emotional responsiveness rather than accuracy of cognitive insight (p.361)." The Mehrabian and Epstein (1972) measure, which consists of 33 items, has been shown to have good reliability and construct validity for adults. It is one of the most commonly used paper-and-pencil measures of affective empathy.

Another well-known pencil and paper measure was created by Davis (1980;1983). The scale, called The Interpersonal Reactivity Index (IRI) measures four dimensions of empathy; perspective taking (cognitive empathy), fantasy, empathic concern (affective empathy) and personal distress (see appendix for items). The subcomponent empathic concern is correlated with the Mehrabian and Epstein (1972) measure of affective empathy.

Other methods for measuring empathy include somatic indices (see Marcus, 1987 for review) and physiological indices (see Eisenberg, Fabes, Bustamante, & Mathy, 1987 for review). Somatic indices measure facial, gestural or vocal empathic responses. Physiological indices measure responses such as changes in skin conductance, heart rate, palmar sweating, skin temperature, vasoconstriction, and electromyographic (EMG) procedures.

Appendix

Mehrabian, A., & Epstein, N. (1972) A measure of emotional empathy. Journal of Personality 40(4), 525-543. (note that *'d items are used for the subscale Emotional Contagion, identified by Dillard & Hunter (1986))

(+ 4 always true for me ; - 4 never true for me)

- (+) 1. It makes me sad to see a lonely stranger in a group.
- (-) 2. People make too much of the feelings and sensitivity of animals.
- (-) 3. I often find public displays of affection annoying.
- (-) 4. I am annoyed by unhappy people who are just sorry for themselves.
- (+) 5. I become nervous if others around me seem to be nervous. *
- (-) 6. I find it silly for people to cry out of happiness.
- (+) 7. I tend to get emotionally involved with a friend's problems.
- (+) 8. Sometimes the words of a love song can move me deeply.
- (+) 9. I tend to lose control when I am bringing bad news to people. *
- (+) 10. The people around me have a great influence on my moods. *
- (-) 11. Most foreigners I have met seemed cool and unemotional.
- (+) 12. I would rather be a social worker than work in a job training center.
- (-) 13. I don't get upset just because a friend is acting upset. *
- (+) 14. I like to watch people open presents.
- (-) 15. Lonely people are probably unfriendly.
- (+) 16. Seeing people cry upsets me.
- (+) 17. Some songs make me happy.
- (+) 18. I really get involved with the feelings of the characters in a novel.
- (+) 19. I get very angry when I see someone being ill-treated.
- (-) 20. I am able to remain calm even though those around me worry. *

- (-) 21. When a friend starts to talk about his problems, I try to steer the conversation to something else.
- (-) 22. Another's laughter is not catching for me.
- (-) 23. Sometimes at the movies I am amused by the amount of crying and sniffing around me.
- (-) 24. I am able to make decisions without being influenced by people's feelings.
- (+) 25. I cannot continue to feel OK if people around me are depressed. *
- (-) 26. It is hard for me to see how some things upset people so much.
- (+) 27. I am very upset when I see an animal in pain.
- (-) 28. Becoming involved in books or movies is a little silly.
- (+) 29. It upsets me to see helpless old people.
- (-) 30. I become more irritated than sympathetic when I see someone's tears.
- (+) 31. I become very involved when I watch a movie.
- (-) 32. I often find that I can remain cool in spite of the excitement around me. *
- (-) 33. Little children sometimes cry for no apparent reason.

Appendix

Davis, M.H. (1980;1983) Interpersonal Reactivity Index

(+ 4 always true for me ; - 4 never true for me)

Perspective Taking

1. Before I criticize somebody, I try to imagine how I would feel in their place.
2. If I'm sure I'm right about something, I don't waste much time listening to other people's argument's. (*reverse-scored*)
3. I believe there are two sides to every question and I try to look at both of them.
4. I sometimes find it difficult to see things from the other person's point of view.
(*reverse-scored*)
5. I try to look at everybody's side of a disagreement before I make a decision.
6. When I am upset at someone, I usually try to put myself in his or her "shoes" for a while.

Empathic Concern

1. When I see someone being taken advantage of, I feel kind of protective toward them.
2. When I see someone being treated unfairly, I sometimes don't feel much pity for them.
(*reverse-scored*)
3. I often have tender, concerned feelings for people less fortunate than me.
4. I would describe myself as a pretty soft-hearted person.
5. Other people's misfortunes do not usually disturb me a great deal. (*reverse-scored*)
6. I am often touched by the things that I see happen.

Appendix

Maslach Burnout Inventory (Maslach & Jackson, 1981; p.102-103)

Answer key:

- 1- *never*
- 2- *a few times a year*
- 3- *monthly*
- 4- *a few times a month*
- 5- *every week*
- 6- *a few times a week*
- 7- *every day*

I. Emotional Exhaustion

I feel emotionally drained from my work

I feel used up at the end of the workday.

I feel fatigued when I get up in the morning and have to face another day on the job.

Working with people all day is really a strain for me.

I feel burned out from my work.

I feel frustrated by my job.

I feel like I'm working too hard on my job.

Working with people directly puts too much stress on me.

I feel like I'm at the end of my rope.

II. Personal Accomplishment

I can easily understand how my recipients feel about things.

I deal very effectively with the problems of my recipients.

I feel I'm positively influencing other people's lives through my work.

I feel very energetic.

I can easily create a relaxed atmosphere with my recipients.

I feel exhilarated after working closely with my recipients.

I have accomplished many worthwhile things in this job.

In my work, I deal with emotional problems very calmly.

III. *Depersonalization*

I feel I treat some recipients as if they were impersonal "objects".

I've become more callous toward people since I took this job.

I worry that this job is hardening me emotionally.

I don't really care what happens to some recipients.

I feel recipients blame me for some of their problems.

Appendix

Snyder, Mark (1974), Self-Monitoring of Expressive Behavior. Journal of Personality and Social Psychology 30 (4) : 526 - 37.

(true or false)

1. I find it hard to imitate the behavior of other people. (F)
2. My behavior is usually an expression of my true inner feelings, attitudes, and beliefs.
(F)
3. At parties and social gatherings, I do not attempt to do or say things that others will like. (F)
4. I can only argue for ideas which I already believe. (F)
5. I can make impromptu speeches even on topics about which I have almost no information. (T)
6. I guess I put on a show to impress or entertain people. (T)
7. When I am uncertain how to act in a social situation, I look to the behavior of others for cues. (T)
8. I would probably make a good actor. (T)
9. I rarely need the advice of my friends to choose movies, books or music. (F)
10. I sometimes appear to others to be experiencing deeper emotions than I actually am.
(T)
11. I laugh more when I watch a comedy with others than when alone. (T)
12. In a group of people I am rarely the center of attention. (F)
13. In different situations and with different people, I often act like a very different person.
(T)
14. I am not particularly good at making other people like me. (F)
15. Even if I am not enjoying myself, I often pretend to be having a good time. (T)
16. I'm not always the person I appear to be (T)

17. I would not change my opinions (or the way I do things) in order to please someone else or win their favor. (F)
18. I have considered being an entertainer. (T)
19. In order to get along and be liked, I tend to be what people expect me to be rather than anything else. (T)
20. I have never been good at games like charades or improvisational acting. (F)
21. I have trouble changing my behavior to suit different people and different situations. (F)
22. At a party I let others keep the jokes and stories going. (F)
23. I feel a bit awkward in company and do not show up quite as well as I should. (F)
24. I can look anyone in the eye and tell a lie with a straight face (if for a right end). (T)
25. I may deceive people by being friendly when I really dislike them. (T)

Appendix

Managerial influence- emotional responsiveness

I have constructed the following scale:

(5-point scale; 1-strongly disagree; 5-strongly agree)

1. When a customer is very cheerful, my unit manager expects me to become a little more "perky" in response.
2. If a customer seems angry, I know that my unit manager expects me to pay special attention to that customer's feelings.
3. My unit manager frequently talks about dealing with customers' feelings.
4. My unit manager doesn't really expect my customer's mood to play a big part in my getting the job done. *(reverse coded)*
5. My unit manager prefers that I "stick to business" and not really react to any strong feelings that my customers have. *(reverse coded)*
6. My unit manager is pretty clear that we have other priorities that are more critical than being careful in dealing with our customers' feelings. *(reverse coded)*
7. My unit manager makes sure that we deal with our customers' feelings before "getting down to business".

Appendix

Managerial influence- informational responsiveness

I have constructed the following scale:

(5-point scale; 1-strongly disagree; 5-strongly agree)

1. My unit manager talks to our unit about the importance of good listening skills.
2. My unit manager doesn't really have time to notice whether my communication skills are as good as they should be. *(reverse-coded)*
3. My unit manager has given me some good advice about how to ask customers probing questions to "get to the bottom" of their problems.
4. If I don't explain things to my customers in a clear way, I expect my unit manager to say something about it.
5. My unit manager notices when I don't pay close attention to what my customers are saying to me.
6. I would be surprised if my unit manager were to comment on my listening skills. *(reverse-coded)*

Appendix

Work-group influence- emotional responsiveness

I have constructed the following scale:

(5-point scale; 1-strongly disagree; 5-strongly agree)

1. It is common for me and the other representatives in my unit to discuss how to respond to angry customers.
2. Most of the representatives in my unit will "perk up" when dealing with a cheerful customer.
3. I think that the representatives in my unit are sensitive to their customers' feelings and try to manage the "human side" before moving on to "business".
4. Sometimes it seems like the representatives in my unit forget that our customers have feelings. (*reverse-coded*)
5. The representatives in my unit have much bigger challenges to deal with than worrying about customers' feelings. (*reverse-coded*)
6. The representatives in my unit work closely together in figuring out how to deal with customers' feelings.
7. It's clear to me that the representatives in my unit are careful when they deal with customers' feelings.

Appendix

Work-group influence- informational responsiveness

I have constructed the following scale:

(5-point scale; 1-strongly disagree; 5-strongly agree)

1. The representatives in my unit rarely share "tricks" that help in explaining things to customers. (*reverse-coded*)
2. The representatives in my unit have good listening skills.
3. When I need it, I can usually rely on a representative in my unit to give me some "tips" on how to ask the right questions to find out exactly what a customer's problem is.
4. I don't know very much about the communication skills of the other representatives in my unit. (*reverse-coded*)
5. When it comes to learning how to talk to customers, I learn a lot from the other - representatives in my unit.
6. If I were to make a list of things that the representatives in my unit tend to discuss, "how to talk to customers" would not rank very high. (*reverse-coded*)
7. I think that representatives in my unit have other things on their minds that make it hard for them to listen carefully to their customers. (*reverse-coded*)