Customer-sales employee encounters: a dyadic perspective

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Abstract

Although researchers have suggested that the performance of the salesperson during sales encounters is critical, many of the underlying mechanisms that govern the interaction between salespersons and customers are still unclear. In this research, we investigate sales encounters from a new approach based on the field of research of interpersonal perception. Results demonstrate that drivers of customer satisfaction may also be satisfying for the contact employee. Additionally, we find that customer satisfaction is not only determined by the customer's own perceptions, but also by the perceptions of the employee. Similarly, employee satisfaction is driven by the customer's perceptions. Finally, our study identifies that perceptions of employee performance and satisfaction do not only reflect the unique interaction between the customer and the employee, but also relatively stable characteristics of the employee. © 2002 by New York University. All rights reserved.

Keywords: Sales encounter satisfaction; Employee performance; Dyadic perspective; Partner effects

Introduction

There is a growing belief among academics and practitioners on the importance of turning each customer-company encounter into a satisfying experience (Gupta & Vajic, 2000; Pine & Gilmore, 1999). Where employees and customers contact is particularly intense, such as in consumer durables, this recognition of the importance of satisfying experiences draws attention to the need for a better understanding of the individual encounters. Although researchers have suggested that the success or failure of an individual encounter is dependent on the performance of the contact employee, there is little guidance regarding the underlying mechanisms that govern the interaction (Gupta & Vajic, 2000; Cappella, 1997).

We endeavor to break new ground in three ways. First, we introduce a new approach to examining based on *interpersonal perception,* a theoretical lens developed for the study of dyadic interactions in the field of social psychology (e.g., Barnes, 1995; Kenny, 1996a). In this methodology, we analyze the encounter from both the customer as well as the employee focus employing the constructs of customer and employee (job) satisfaction (Bettencourt & Brown, 1997; Hartline & Ferrell, 1996). However, these constructs have not been considered in parallel at the individual encounter level. Little is known, for example, whether behaviors of the employee that lead to customer encounter satisfaction are the same behaviors that drive employee encounter satisfaction.

Secondly, dyadic data measurements reflect not only the characteristics of the person providing the data, but also those of the partner (Kenny & Cook, 1999). For example, employee encounter satisfaction may be influenced by his or her customer's perceptions of performance as well as his or her own[1]. Yet, researchers have scarcely examined the influence of customer and employee perceptions simultaneously. We designed this study to introduce this perspective.

Thirdly, we address a long-standing issue in social psychology research that focuses on the difference between uniqueness and commonness in perceptions. In the present context, uniqueness refers to the extent customer's or employee's perceptions are exclusive to their personal interaction (Kenny, Kashy & Bolger, 1998). Commonness reflects the degree to which customers agree in their perceptions of the employee and to the

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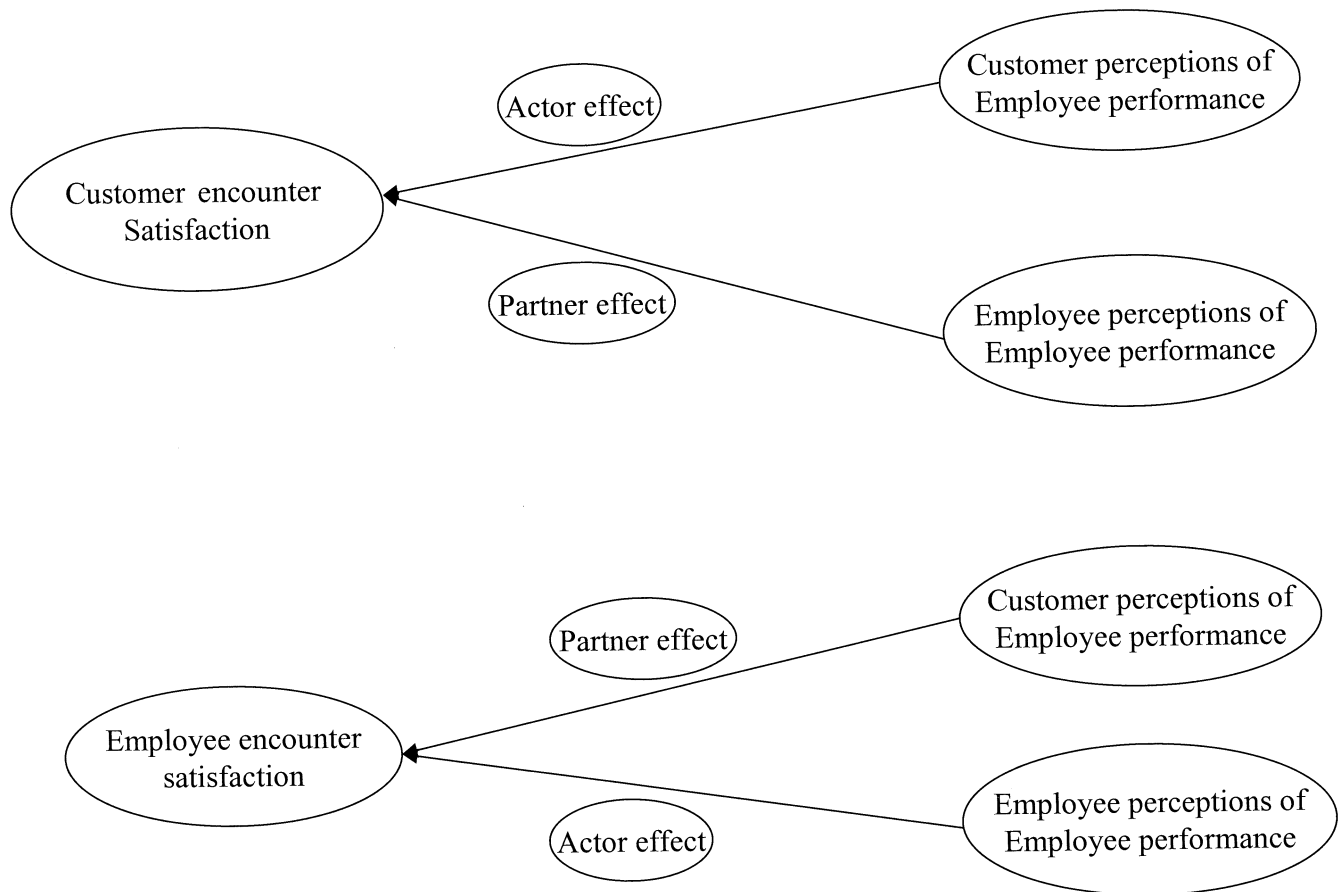*E-mail address:* w.vandolen@mw.unimaas.nl (W. van Dolen).

Fig. 1. Conceptual model of actor and partner effects in encounters.

extent employees are consistent in their perceptions. As such, commonness may reflect a relatively stable employee characteristic. Focusing on individual encounters, the question is whether the customer's and the employee's evaluations of performance and satisfaction are primarily determined by commonness, by the unique interaction between employee and customer, or both.

In the report that follows, we first review the relevant literature on key conceptual issues. Following this, we develop and test a multilevel model to determine which performance attributes influence customer and employee encounter satisfaction. Lastly, we conclude with a discussion of the results and implications.

A dyadic perspective on satisfaction

A customer's evaluation of the employee's encounter performance may influence his or her own satisfaction as well as the employee's satisfaction. We call the first effect an actor effect; the second is a partner effect (Fig. 1). The reverse pattern of effects is also true. In the next section, we discuss the actor effects for the customer and employee dyad and then elaborate on partner effects.

Actor effects in the sales encounter

The influence of customers' perceptions of employee performance on customer satisfaction has received considerable attention in the marketing literature and practice in recent years. It has been reported consistently that the behavior of the contact employee plays a critical role in shaping customers' perceptions of the interaction (Spiro & Weitz, 1990; Bitner, Booms & Tetrault, 1990). Employee performance can be grouped into two types, core tasks and socio-emotional aspects (Price, Arnould & Thierey, 1995a; Czepiel, 1990; Winsted, 1997). Core tasks include product knowledge, fulfilling customer service needs and helping customers to achieve their goals. Socio-emotional aspects comprise those employee behaviors that foster interpersonal relationships and satisfy customers' emotional needs. These facilitate interactions and create a positive evaluation by being friendly, enthusiastic, attentive, and showing empathy for the customer (Rafaelli, 1993; Beatty, Mayer, Coleman, Reynolds & Lee, 1996). Customers' perceptions of both aspects of the employee performance have been found to be important drivers of customer satisfaction (Price, Arnould & Deibler, 1995b; Winsted, 1997). Therefore, we hypothesize that:

H₁: Customer perceptions of employee task and social competence contribute positively to customer encounter satisfaction.

Compared to customer satisfaction, limited research has been done on employee satisfaction with individual encounters. This is remarkable since many researchers have emphasized the importance of satisfied employees to a firm's success (e.g., Hartline & Ferrell, 1996). From the relatively scarce empirical evidence, we conclude that employee encounter satisfaction is influenced by the employee's perceptions of his or her task-oriented performance as well as by interpersonal and social aspects (Czepiel, 1990; Beatty, Mayer, Coleman, Reynolds & Lee, 1996). It has been argued that contact employees are genuinely concerned and have a strong desire to provide their customers a good service or sale (Schneider, 1980; Bitner, Booms & Mohr, 1994). Beatty, Mayer, Coleman, Reynolds & Lee (1996) state that successful sales employees attempt to tackle customer problems as if they were their own, display a personal involvement and like to establish a bond with customers. Consequently, we expect that the extent to which employees see themselves as capable to deliver the service and to make the interaction enjoyable as well as sociable will influence their evaluation of the encounter. This results in the following hypothesis:

H₂: Employee perception of his or her task and social competence contributes positively to employee encounter satisfaction.

Partner effects in the sales encounter

To the authors' knowledge no marketing studies are reported that depart from an explicit focus on partner effects (i.e., in addition to actor effects). Therefore, we turn to other research disciplines for guidance. Psychologists Kenny & Cook showed in 1999 that a person's perceived control is negatively influenced by another person's perceived assertiveness and positively by perceived cooperativeness. They also found that one person's speech characteristics are not independent of his or her partner's speech. Bui, Peplau & Hill (1996) report partner effects in a study on relationship commitment. The rationale is that much of what we think and feel is not only determined by our own evaluations, but also by the evaluations of whom we are with (Kenny & Cook, 1999; Felson, 1992; Kenny, 1996b). With partner effects, a person is in some way, verbally or nonverbally, influenced by a characteristic, behavior or perception of the other. It is well known that people are sensitive to and monitor cues and reactions of others (DePaulo & Rosenthal, 1982; Mead, 1986). In general, there seems to be a common interest in people about what others perceive (Kenny, 1996a). Put differently, people try to get "into other people's head" and to "read their minds."

It is important to note that the partner effect of the employee on customer satisfaction reflects a different pro-

cess than the partner effect of the customer on employee satisfaction. The general question underlying the first effect is whether a person's perceptions (e.g., the customer) are influenced by the way his or her interaction partner (e.g., the employee) sees him or herself. The second effect reflects the issue whether the perceptions of a person (e.g., the employee) are influenced by the way in which the interaction partner (e.g., the customer) views him or her. The importance of the latter influence of perceptions has been acknowledged in several contexts and disciplines varying from psychology to anthropology (e.g., Mead, 1934; DePaulo, 1992; Goffman, 1959; Snodgrass, 1992; Kenny, 1996a). Several studies in a service or sales context exist that provide insight in the possible influences of partner effects.

With respect to the influence of employee perceptions on customer evaluations, Hartline & Ferrell (1996) found that employees' perceptions of their own abilities and job satisfaction increase customers' perceptions of service quality. Also, Schlesinger & Zornitsky (1991) showed that employees' perceptions of their capability related strongly to customers' perceptions of the service. In addition, Schneider & Bowen (1985) have substantiated the conclusion that the way the employees experience their work environment is reflected in customers' perceptions of service quality.

Despite the above, we note that these studies did not focus on individual encounters. Studies of individual encounters suggest that customers might be influenced by the experience of the employee (e.g., Beatty, Mayer, Coleman, Reynolds & Lee, 1996). Gremler & Gwinner (2000) found that customers might strongly care about an employee, feel genuine interest and a bond with an employee and also look forward to seeing him or her. Price, Arnould & Tierney (1995a) and Beatty, Mayer, Coleman, Reynolds & Lee (1996) describe how customers can wonder how an employee is feeling or what s/he is thinking. Whereas Price, Arnould & Tierney (1995a) state that this interest will be likely in extended encounters, others suggest that this also might occur in briefer or single encounters (Czepiel, 1990; Gremler & Gwinner, 2000). It is well known that partner effects might be created by a concern of people with the experiences of the interaction partner (Kenny & Cook, 1999). In addition to this concern, there might be *contagion;* one may feel satisfied when those around you are feeling good (Hatfield, Cacioppo & Rapson, 1993).

Drawing on the studies, we contend that the perceptions of the employee might influence customer encounter satisfaction. This results in the following hypothesis:

H₃: Employee perceptions of his or her task and social competence contribute positively to customer encounter satisfaction.

With respect to the influence of customers' perceptions on employee satisfaction, the findings of a number of studies suggest this influence to be positive; the rationale being that if the customer likes the performance of the employee,

this will increase the satisfaction felt by the employee. For instance, Beatty, Mayer, Coleman, Reynolds & Lee (1996) found how personally and profoundly rewarded salespersons felt in helping and serving customers. In their research, the positive reinforcement provided by customers provides satisfaction to sales employees. Also, other studies report that employees have respect for customers, are concerned about their feelings, and are pleased with the appreciation showed by them (Goodwin & Grembler, 1996; Price, Arnould & Tierney, 1995a).

Sometimes employees describe their relationship with customers as camaraderie and friendship and are genuinely concerned about what their customers think of them (Grembler & Gwinner, 2000). During interactions employees frequently look for cues that tell them how customers receive their service and modify their behavior accordingly (Bitner, Booms & Mohr, 1994). Beatty, Mayer, Coleman, Reynolds & Lee (1996) as well as Ramsey & Sohi (1997) found that successful salespeople sense incoming (verbal and nonverbal) stimuli from the customer. It might also be that the customer's perception is important to the employee because the employee feels a bond with the customer (Beatty, Mayer, Coleman, Reynolds & Lee, 1996; Price, Arnould & Tierney, 1995a). A complementary explanation may be reflecting impression management, that is, the employee may attempt to control his or her image towards the customer (e.g., Grayson & Shulman, 2000). In either case, the employee's interest in the customer's perceptions might explain a partner effect. Therefore, we hypothesize:

> H_4: Customer perceptions of employee task and social competence contribute positively to employee encounter satisfaction.

Agreement in perceptions between customers and employees

Although there may be partner effects on encounter satisfaction, this does not necessarily imply that customers and employees agree in their perceptions of employee performance. For instance, it might be that the employee derives satisfaction from experiencing that the customer perceives him or her as competent, but at the same time, s/he might think that his or her performance was not up to standard in that particular interaction. In dyadic research, the extent to which one person (e.g., the employee) perceives him- or herself as others do (e.g., the customer) is referred to as 'self-other agreement' (Shrauger & Schoeneman, 1979; Kenny, 1996a). An accurate employee understanding of a customer's perception of employee performance enables the employee to adjust his or her behavior appropriately to customers' needs (Bitner, Booms & Mohr, 1994).

Academic marketing research correlating customer and employee views is thin and does not always focus on self versus other perceptions. For instance, Schneider & Bowen (1985) found high correlations, but they focused on employee and customer perceptions of overall service quality.

Brown & Swartz (1989) gathered data on patient experiences with their physicians and compared them with the physician's perceptions of their patients' experiences. The differences they found were rather large and inversely related to patient satisfaction. In a qualitative study, Bitner, Booms & Mohr (1994) focused on events leading to customer (dis)satisfaction and the employee's perspective of events leading to customer (dis)satisfaction and found similarities as well as differences.

It has also been reported that customer service professionals consistently rated the importance of specific service skills and competencies and their actual performance higher than customers rated the same skills and competences (Services Marketing Newsletter, 1989). Studies in the field of interpersonal perception find different levels of self-other agreement, ranging from negative (e.g., Albright, Kenny & Malloy, 1988) to zero (e.g., Borkenau & Liebler, 1992) to very high (e.g., Kenny, Horner, Kashy & Chu, 1992).

In addition, the level of self-other agreement has been found to differ for separate constructs and found to be positively related to the level of acquaintance (Park & Judd, 1989; Paulhus & Bruce, 1992). Based on these findings, we would expect to find a significant level of self-other agreement. Therefore, we hypothesize:

> H_5: There is significant agreement between customers and employees about the employee's task and social competence during the interaction.

In the next section, we elaborate on interpersonal influence during interactions by discussing the difference between uniqueness versus commonness in perceptions.

Uniqueness versus commonness in perceptions

Commonness (e.g., consensus) in customers' perceptions of the performance of the employee suggests a consistency in the behavior of the employee. If a customer's perception is unique, this might reflect unique behaviors of the employee, a trait of the customer, or an extraneous factor like the mood of the customer. To separate these conceptually different factors, we employ a research design in which an employee participates in more than one encounter. In the investigation of interpersonal phenomena, some researchers studied how persons participate in multiple dyads (e.g., Levesque, 1997; Albright, Malloy, Dong, Kenny, Fang, Winquist & Yu, 1997).

In the present context, consider a customer's perception of the employee's empathy during an encounter. If an employee participates in only one encounter, then the perception of empathy may not be unique. A high empathy score could be due to employee empathy with each customer, an *across encounter* effect, or that empathy is determined at each encounter, a *unique encounter* effect.

By looking at the empathy scores of multiple customers, we can assess the degree to which an employee extends empathy by determining if there is consensus among customers' perceptions of the employee. Similarly, if beyond

the employee's general tendency to empathize, one customer especially empathizes with the employee, evidence appears that empathy is uniquely determined by the specific interaction (Kenny, Kashy & Bolger, 1998). In the same way, the employee's perceptions of his or her performance can be evaluated. Research on dyadic interactions found that both uniqueness and commonness might determine perceptions (Kenny, 1996a). Therefore, we hypothesize:

> H_6: Unique and across encounter effects determine customers' and employees' evaluations of employee performance.

Unique as well as common perceptions of employee performance may influence customer and employee satisfaction (Van Yperen & Snijders, 1999). A study of this influence in a design in which an individual (i.e., the employee) participates in multiple interactions with different others (i.e., customers) implies a hierarchical structure of data. We refer to a hierarchy as consisting of units grouped at different levels. The lower level contains all interactions and the upper level contains the employee or, in methodological terms, customers are nested within an employee. For this data structure, multilevel statistical techniques (Bryk & Raudenbush, 1992) can help to disentangle the *unique encounter* effects (leading to within salespeople differences) from the *across encounter* effects (leading to between salespeople differences). Consistent with the terms used in most multilevel analysis research, we refer to the first (*unique encounter*) effect as the individual-level effect and to the latter (*across encounter*) as the group-level effect.

In this study, we use individual and group assessments for all performance dimensions to determine whether performance data at the group-level explain variance to individual customer and employee satisfaction. In this way, we identify that part of the explained variance of customer or employee satisfaction attributable to unique perceptions and that part to another, more common perceptions, assuming that both influence satisfaction (Jonge, Breukelen, Landeweerd & Nijhuis, 1999). This is reflected in the following hypothesis:

> H_7: Individual-level and group-level indicators of employee performance influence customer and employee encounter satisfaction.

Regarding the linkage between customer characteristics and its influence on evaluations of employee performance and satisfaction, it was not possible to apply a design in which customer's perceptions of multiple encounters were evaluated. Therefore, we do not assess separately the degree to which a customer's ratings are consistent across all of his or her interactions with several employees.

The empirical investigation

Research setting

A study was conducted among customers and contact employees of a large furniture company operating two retail stores. The company's retail outlets were selected because of the kind of encounters between customers and contact employees that take place in these stores; they are extended, interactive encounters, designed to enhance the customer's experience. The selling of furniture is often combined with contact employee service regarding home remodeling and home decoration in a setting simulating the home situation. Furthermore, the interactions are intense and customers are highly involved; customers need information about materials, style and maintenance. In addition, customer participation is often high as they provide information about their requirements.

Questionnaire development

Each contact employee completed a questionnaire largely identical to that the customer completed. In some parts of the questionnaire, statements were transformed from the customer's to the employee's perspective and demographic questions were changed.

Encounter satisfaction

Encounter satisfaction was measured on a six item, equally weighted, 7-point Likert-scale ranging from 'totally disagree' to 'totally agree'. All items were measured with a scale developed by (Oliver 1997), that is, This was one of the best encounters I could have had; This encounter was exactly what I needed; I am satisfied with this encounter; I have truly enjoyed this encounter; This encounter was a good experience; I am not happy with this encounter (reverse coded). The statements were exactly the same for the customers and the employees. Cronbach's alpha coefficient for our sample was 0.88 for the customer scale and 0.84 for the employee scale.

Contact employee performance

Employee performance was measured with nine items reflecting the socio-emotional aspects of employee performance and six items reflecting task core aspects as suggested by Price, Arnould & Deibler (1995b). The task competence scale includes items that deal with the employee's performance of fulfilling product or service needs and accomplishing goals during the sales encounter. The social competence scale captured the perceived genuineness of the employee, the special concern of the employee towards the customer, and their mutual understanding. The items were measured on a 7-point Likert-scale ranging from 'totally disagree' to 'totally agree'.

Construct validity

Two techniques were employed to test the factor structure and item loadings of the employee performance scale. We initially examined coefficient alphas, and the factor structure through principal component analysis (varimax rotation) for all scale items simultaneously (customers' and

Table 1
Results of confirmatory factor analysis

Measures	factor loadings	t-value
Fit indices: (GFI = 0.90; AGFI = 0.86; RMSEA = 0.037; NFI = 0.93; NNFI = 0.97; CFI = 0.98)		
Social competence as perceived by the customer (n = 9; α = .92)		
The employee connected to my life/experiences	.69	12.98
The employee revealed personal information	.74	14.28
The employee invited me to reveal personal information	.93	20.66
The employee paid special attention to me	.84	17.18
The employee went out of his/her way	.80	15.95
The employee gave me a break (something special)	.78	15.41
The employee was truly out of the ordinary	.54	9.58
The employee was his/her own person	.76	14.77
The employee was genuine	.50	8.72
Task competence as perceived by the customer (n = 6; α = .87)		
The employee was capable	.57	10.18
The employee was efficient	.83	16.17
The employee was organized	.78	14.48
The employee was thorough	.87	17.25
The employee met my needs	.80	14.98
The employee performed as I expected	.51	8.76
Social competence as perceived by the employee (n = 9; α = .94)		
I connected to the customer's life/experiences	.74	14.29
I revealed personal information	.77	14.65
I invited the customer to reveal personal information	.92	20.00
I paid special attention to the customer	.88	18.54
I went out of my way	.89	18.78
I gave the customer a break (something special)	.81	16.02
I was truly out of the ordinary	.65	12.18
I was my own person	.65	12.10
I was genuine	.69	13.28
Task competence as perceived by the employee (n = 6; α = .86)		
I was capable	.53	9.46
I was efficient	.53	8.12
I was organized	.81	15.79
I was thorough	.89	18.50
I met the customer's needs	.71	13.50
I performed as I expected	.54	9.69

Note. All t-values are significant at $p < .05$.

employees' perceptions of task and social competence). A four-factor structure was achieved with items loading on the a priori dimensions. In addition, the items were subjected to confirmatory factor analysis (CFA) using LISREL (Jöreskog & Sörbom, 1993) to assess the critical measurement properties of the scales. The fit indices of the proposed four-factor model, construct reliabilities of the scales and confirmatory factor loadings with t-values for each item are represented in Table 1. The indices of the proposed factor model provided a good fit (GFI = 0.90; AGFI = 0.86; RMSEA = 0.037; NFI = 0.93; NNFI = 0.97; CFI = 0.98), revealing unidimensionality of the scales. Construct reliabilities of the scales were tested by means of Cronbach's alpha. Coefficients of all measures were higher than 0.86, which implies that reliability is deemed acceptable.

Next, we examined within-method convergent validity by investigating the significance and magnitude of the item loadings. All items loaded significantly on their respective construct (minimum t-value = 8.12) where all items had a standardized loading of at least 0.50. In addition, discrimi-

nant validity was evaluated by testing whether pairs of constructs were correlated less than unity. χ^2 difference tests with one degree of freedom were used to test for unity between pairs of constructs. All tests were significant by at least the 0.05 level.

Control variables

In addition to these constructs, the control variables age, gender, and sales experience of the contact employee served as control variables for the employee. For the customer sample age, gender, education, and actual purchase served as control variables. In addition, because some customers came to the store just to get advice, two outcome questions were asked: "What was the goal of your visit? (a) orientation/information or (b) to buy" and "Did you achieve this goal?". However, because 90.4% of the customers reported they achieved their visit goal, this control variable was limited to buy versus no buy and not whether their goal was achieved.

Sampling and surveying

Customers and contact employees both completed the questionnaire in the store immediately after the interaction had taken place. Due to the limited number of salespersons, all employees were included in our study, 59 in total. Customers were randomly approached in the store to fill out a questionnaire. To match the customer's evaluation of the interaction with that of the contact employee, we asked customers with whom they had interacted. Then, the contact employee was approached to fill out the questionnaire with respect to that specific interaction.

For all contact employees, seven different customer encounters were collected. This resulted in 413 questionnaires completed by both customers and by the 59 employees. We matched the responses of the employee and the customer. In case of missing data of an encounter, by either side of the dyad, both questionnaires related to that encounter were excluded (Kenny, 1996a). After this matching, 754 individual questionnaires remained for further analysis. Although contact employees of both stores participated, no significant differences between the two groups were found.

On the demographics for customers, our respondents consisted of 51% women and 49% men. Their age ranged from 25 to 66 with an average of 40 years. The level of respondent education was high, as 40% had completed college while another 45% had followed vocational education. According to customer databases provided by the retailer, the sample proved representative of its overall population of customers.

With regards to the contact employees, the sample consisted of 61% women and 39% men. Their age ranged from 21 to 59 with an average of 42 years. Sixty-one percentage of employees had more than five years experience selling furniture.

Data analysis

Multilevel analysis and model building

The investigation of hierarchically ordered structures has been of interest in a number of disciplines for some time. Using conventional statistical techniques, like ordinary regression analysis, would result in unreliable results because customers in the same 'group' share common influences (they interacted with the same employee). Therefore, the assumption of independent observations required for ordinary regression analysis would be violated (Bryk & Raudenbush, 1992). ANOVA and covariance analysis have shortcomings in presenting geometric relationships.

In the light of these difficulties, a hierarchical linear model, called the multilevel model, has been derived to deal with hierarchically nested data structures (Hofmann,

1997; Raudenbush, 1993). For a multilevel approach with our data, the analysis takes into account the hierarchical data structure (customers within employees) (Byrk & Raudenbush, 1992; Snijders & Bosker, 1999). A multilevel model is a form of the general linear model that combines the characteristics of ANOVA and multiple regression analysis with dummy variables, taking into consideration within-group variability as well as between-groups variability. It differs from the usual regression model in that the equation defining the hierarchical linear model contains more than one error term: one for each level.

In multilevel modeling, the dependent variable, Y has an individual as well as a group aspect. This carries through also for other individual-level predictor variables, X_{ij}. An X_{ij} variable, although it is a variable at the individual-level, may also contain a group, $X_{.j}$, aspect. The mean, $X_{.j}$, in one group may be different from the mean in another group. In other words, X_{ij} may have a significant within-group variance as well as a significant between-groups variance. The hierarchical linear model is like regression, but also includes random effects to represent the unexplained differences between groups. Fixed effects are entered into the model on the basis of theoretical considerations, as in multiple regression analysis.

In our application, we also estimated random effects at the group level. We designed our model for random variation among contact employees in the intercept (e.g., groups may differ randomly in their overall level on the dependent variable) as well as in the regression coefficients (e.g., the coefficients are allowed to vary across groups). This requires a simultaneous estimation of two models: one modeling relationships within each of the individual-level units, and a second one modeling how these relationships within units vary between units. The individual-level and the group-level models for customer encounter satisfaction are formulated as follows:

For the *individual-level,* there is:

$$\text{CUSTSATISFACTION}_{ij} = \beta_{0j} + \beta_{1j}\text{AGECUST}_{ij}$$
$$+ \beta_{2j}\text{GENDERCUST}_{ij} + \beta_{3j}\text{EDUCUST}_{ij}$$
$$+ \beta_{4j}\text{PURCUST}_{ij} + \beta_{5j}\text{TASKCUST}_{ij}$$
$$+ \beta_{6j}\text{SOCIALCUST}_{ij} + \beta_{7j}\text{TASKEMPL}_{ij}$$
$$+ \beta_{8j}\text{SOCIALEMPL}_{ij} + e_{ij} \tag{A1}$$

For the *group-level,* we estimate:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}\text{AGECUST}_{j} + \gamma_{02}\text{GENDERCUST}_{j}$$
$$+ \gamma_{03}\text{EDUCUST}_{j} + \gamma_{04}\text{PURCUST}_{j}$$
$$+ \gamma_{05}\text{TASKCUST}_{j} + \gamma_{06}\text{SOCIALCUST}_{j}$$
$$+ \gamma_{07}\text{TASKEMPL}_{j} + \gamma_{08}\text{SOCIALEMPL}_{j} + u_{0j},$$
$$\tag{A2a}$$

$$\beta_{1j} = \gamma_{10} + u_{1j}, \tag{A2b}$$

$$\beta_{2j} = \gamma_{20} + u_{2j}, \tag{A2c}$$

$$\beta_{3j} = \gamma_{30} + u_{3j}, \tag{A2d}$$

$$\beta_{4j} = \gamma_{40} + u_{4j}, \tag{A2e}$$

$$\beta_{5j} = \gamma_{50} + u_{5j}, \tag{A2f}$$

$$\beta_{6j} = \gamma_{60} + u_{6j}, \tag{A2g}$$

$$\beta_{7j} = \gamma_{70} + u_{7j}, \tag{A2h}$$

$$\beta_{8j} = \gamma_{80} + u_{8j}, \tag{A2i}$$

where i stands for individuals; j indicates groups (e.g., employees); $CUSTSATISFACTION_{ij}$ refers to the degree of satisfaction of customer i ($i = 1,\dots n_i$) who interacted with employee j ($j = 1,\dots n_j$);

$AGECUST_{ij}$, $GENDERCUST_{ij}$, $EDUCUST_{ij}$, $PURCUST_{ij}$ are age, gender, education, and actual purchase of the customer at the individual-level, respectively;

$AGECUST_j$, $GENDERCUST_j$, $EDUCUST_j$, $PURCUST_j$ are age, gender, education, and actual purchase of the customer at the group-level, respectively;

$TASKCUST_{ij}$, $SOCIALCUST_{ij}$, $TASKEMP_{ij}$, and $SOCIALEMPL_{ij}$ are customer perceived task competence, customer perceived social competence, employee perceived task competence, and employee perceived social competence at the individual-level, respectively;

$TASKCUST_j$, $SOCIALCUST_j$, $TASKEMPL_j$, and $SOCIALEMPL_j$ are customer perceived task competence, customer perceived social competence, employee perceived task competence, and employee perceived social competence at the group-level, respectively.

Substituting Equations A2a-A2i in Equation A1 yields the following multilevel model:

$$CUSTSATISFACTION_{ij} = \gamma_{00} + \gamma_{10}AGECUST_{ij}$$

$$+ \gamma_{20}GENDERCUST_{ij} + \gamma_{30}EDUCUST_{ij}$$

$$+ \gamma_{40}PURCUST_{ij} + \gamma_{50}TASKCUST_{ij}$$

$$+ \gamma_{60}SOCIALCUST_{ij} + \gamma_{70}TASKEMPL_{ij}$$

$$+ \gamma_{80}SOCIALEMPL_{ij} + \gamma_{01}AGECUST_j$$

$$+ \gamma_{02}GENDERCUST_j + \gamma_{03}EDUCUST_j$$

$$+ \gamma_{04}PURCUST_j + \gamma_{05}TASKCUST_j$$

$$+ \gamma_{06}SOCIALCUST_j + \gamma_{07}TASKEMPL_j$$

$$+ \gamma_{08}SOCIALEMPL_j + u_{0j} + u_{1j} + u_{2j} + u_{3j}$$

$$+ u_{4j} + u_{5j} + u_{6j} + u_{7j} + u_{8j} + e_{ij}. \tag{A3}$$

The section of the model incorporating the regression coefficients $\gamma_{00}, \dots \gamma_{08}$ is called the fixed part of the model because the coefficients are not stochastic. The remaining part, $u_{0j}, \dots u_{8j} + e_{ij}$, is the random part of the model. The individual-level error term e_{ij} is normally distributed with a mean of 0 and variance σ^2. The random effects u_{qj} ($q = 0,\dots 8$) are multivariate normal distributed over groups with an expected value of 0, variance $(u_{qj}) = \tau_{qq}$, and covariance $(u_{qj}, u_{q'j}) = \tau_{qq'}$ (q, $q' = 0,\dots 8$). u_{qj} is the unique deviation of group (e.g., employee) j from the overall effect on the intercept (β_{0j}) while controlling for the group-level predictor variables.

In addition, we also estimated a model for employee encounter satisfaction. Apart from the control variables, model and parameter specification are similar to the customer encounter satisfaction model. This multilevel model is formulated in equation A4 as follows:

$$EMPLSATISFATION_{ij} = \gamma_{00} + \gamma_{10}TASKCUST_{ij}$$

$$+ \gamma_{20}SOCIALCUST_{ij} + \gamma_{30}TASKEMPL_{ij}$$

$$+ \gamma_{40}SOCIALEMPL_{ij} + \gamma_{01}AGEEMPL_j$$

$$+ \gamma_{02}GENDEREMPL_j + \gamma_{03}EXPEMPL_j$$

$$+ \gamma_{04}TASKCUST_j + \gamma_{05}SOCIALCUST_j$$

$$+ \gamma_{06}TASKEMPL_j + \gamma_{07}SOCIALEMPL_j$$

$$+ u_{0j} + u_{1j} + u_{2j} + u_{3j} + u_{4j} + e_{ij}, \tag{A4}$$

where $EMPLSATISFACTION_{ij}$ refers to the degree of satisfaction with a single encounter i ($i = 1,\dots n_i$) as perceived by employee j ($j = 1,\dots n_j$); $AGEEMPL_j$, $GENDEREMPL_j$, and $EXPEMPL_j$ are age, gender, and experience of employee at the group-level, respectively.[2]

For the data analysis, we used the computer program MlwiN (Goldstein et al., 1998), a program that performs multilevel analysis of data with n levels. The analysis is also possible with the MIXED procedure in SAS. Size variations among groups pose no problem for this technology.

Analysis strategy

In our study, the group-level variables of employee performance are defined as the mean over all individual-level units (encounters), within a given group (employee). This implies that individual customer's perceptions of employee's performance during the encounter are aggregated to the group-level, that is, to the single employee's group. The employee data are handled in an identical manner. To disentangle the *unique encounter* effects (leading to *within-group* differences) from the *across encounter* effects (leading to *between-groups* differences), we split all performance variables into the group mean and the within-group deviation variable (individual score minus group mean) (Van Yperen & Snijders, 1999).

The regression coefficient of the group mean is the between-groups regression coefficient, whereas the coefficient of the deviation variable is the within-group coefficient. If the within-group regression and the between-groups regression coefficients are equal[3], then the variable operates at the

individual-level (i.e., encounter) without evidence for an independent main effect of this variable at the group-level (i.e., employee). If these coefficients are significantly different, one can test if the within-group or between-groups regressions are zero. If the regression coefficient is nonzero for the within-group variable and zero for the group mean, then the effect operates only at the individual-level. For this study, this would mean that there is a *unique encounter* effect, but not an *across encounter* effect. An identical analysis is conducted for the *across encounter* effect.

To examine within-group agreement (e.g., *across encounter* effects), the variance of all variables was decomposed into variance at the group-level, true variance at the individual-level and error variance. Error variance was defined as [1 - Cronbach's alpha] (Van Yperen & Snijders, 2000). The ratio of group-level variance to the total variance (e.g., group-level plus individual-level variance) is the intraclass correlation coefficient. This expresses the degree of resemblance between individual-level units belonging to the same group-level unit. For the customer data, this reflects the level of consensus among customers (e.g., *across encounter* effect). For the employee data, it reflects the tendency for the employee to see him or herself consistently across all interaction partners (e.g., *across encounter* effect). If there is considerable resemblance, aggregation to the group mean is allowed.

Also for the dependent variable, we decomposed variance in group-level and individual-level variance. This represents the (unexplained) variation of the outcome variable (i.e., customer or employee encounter satisfaction) at each level (individual and group). If there is considerable variation at the group-level, multilevel analysis is appropriate.

Social and task competence are, so-called, "mixed" variables—the measurements contain both the within salespeople effect (e.g., the *unique encounter* effect) and the between salespeople effect (e.g., the *across encounter* effect). With mixed variables, the analyst should test the assumption about the homogeneity of regression lines by introducing the random term of individual-level variables at the group-level (e.g., random-slope model). When these random coefficients are insignificant, the regression lines of individual-level parameters do not vary across groups. If the random coefficient is significant (e.g., heterogeneity), it should be tested whether the variety in the regression slopes is dependent on the group mean of the intercept. Therefore, covariance terms are specified between the random intercept term u_{0j} and the random terms of the individual-level variables u_{qj} at the group-level (Snijders & Bosker, 1999). Nonsignificance of covariance terms indicates that the relationship between the predictor variables and the outcome variable is not dependent on the group mean of the intercept.

The predictive power of the models can be compared by a likelihood ratio test (Byrk & Raudenbusch, 1992). We tested for multivariate significance of effects by computing the increase in model fit compared to the previous step. The increase in model fit is represented by a decrease in deviance, where deviance is defined as $-2 \ln$ (likelihood). The *difference* between the deviance statistics (Δ Deviance) has a χ^2-distribution (with the number of added predictors as degrees of freedom) under H_0 that the model does not predict significantly better than the previous model (starting with an intercept-only-model).

The fixed effects of single predictor variables are comparable to regression coefficients in ordinary regression analysis. These were tested by means of two-tailed t tests, the test statistic being the coefficient divided by its standard error (Snijders & Bosker, 1999).

Results

Correlations between the variables on both the individual and the group-level are presented in Table 2. Table 3 reflects the percentages of variance attributed to across encounter and unique encounter effects. The results indicate that for customer and employee encounter satisfaction a major portion may be attributed to between-group variance. This finding indicates that the multilevel approach is correct.

Table 4 presents the results of our multilevel analyses. Separate analyses were conducted for customer and employee encounter satisfaction. First, the control variables were included into the model (step 1). Secondly, the within-group deviation scores of social and task competence (as perceived by the customer and employee) were added to the model (step 2). Finally, the group means of social and task competence (as perceived by the customer and employee) were included (step 3). The Δ Deviance is significant (except for control variables) at each step and this indicates a good model fit.

Since H_6 is related to the testing of the other hypotheses, we first discuss the findings with respect to this hypothesis.

Uniqueness versus commonness in perceptions

Our results in Table 3 show a consensus among customers for their perceptions of employee performance, that is, for both task and social competence there is an *across encounter* effect. In interpersonal perception research, 10% of the variance at the group-level is considered an acceptable level to conclude that consensus exists among respondents (Kenny, 1996a). The largest part of variance is individual-level variance, however, indicating a *unique encounter* effect. Furthermore, it appears that the between-groups variance for employees' perceptions is considerable higher relative to customers' perceptions. For employee perceptions there is a *unique encounter* effect, although a substantial part of the variance reflects an *across encounter* effect. H_6 is accepted.

Table 2
Study variables correlations

Variables	Customer perceptions					Employee perceptions			
	Task competence (ind-level)	Social competence (ind-level)	Task competence (group-level)	Social competence (group-level)	Customer encounter satisfaction	Task competence (ind-level)	Social competence (ind-level)	Task competence (group level)	Social competence (group level)
Customer perceptions									
Task competence (individual-level)	—								
Social competence (individual-level)	.50[a]	—							
Task competence (group-level)	.00	.00	—						
Social competence (group-level)	.00	.00	.64[a]	—					
Customer encounter satisfaction	.46[a]	.34[a]	.44[a]	.44[a]	—				
Employee perceptions									
Task competence (individual-level)	.10[a]	.10[a]	.00	.00	.03	—			
Social competence (individual-level)	.21[a]	.20[a]	.00	.00	.21[a]	.47[a]	—		
Task competence (group-level)	.00	.00	−.01	.02	−.04	.00	.00		
Social competence (group-level)	.00	.00	.07	.20[a]	.04	.00	.00	.61[a]	
Employee encounter satisfaction	.18[a]	.07	.20[a]	.20[a]	.20[a]	.33[a]	.30[a]	.49[a]	.45[a]

[a] $p < .05$.

Customer encounter satisfaction

Table 4 shows that employee's social and task competence, as perceived by the customer, are significant in explaining variance in customer encounter satisfaction. This supports H[1]. Task and social competence have a significant main effect for both the within-group deviation score and the group mean. Consequently, for both variables, there is an *across encounter* as well as a *unique encounter* effect in explaining customer satisfaction. This supports H[7].

With respect to the influence of employee's task and social competence as perceived by the employee on customer satisfaction, the results only indicate a partner effect for social competence at the individual-level. This partly supports H[3]. Finally, the findings of the control variables age, gender, education, and purchase show only a significant impact of the customer age at the individual-level.

In addition, we tested for each individual-level variable to determine whether the inclusion of the variance term of its group-level random parameter led to a significant improvement in model fit (e.g., random slopes; Snijders & Bosker, 1999). For most predictors the introduction of these

Table 3
Percentages of variance attributed to across-encounter and unique-encounter effects

Variable	Group-level/across encounter effect	Individual-level/unique encounter effect	Intraclass Correlation[a]
Customer perceptions			
Task competence	10%	76% (14)	.11
Social competence	14%	80% (6)	.15
Encounter satisfaction	22%	65% (13)	.25
Employee perceptions			
Task competence	45%	47% (8)	.48
Social competence	54%	43% (3)	.56
Encounter satisfaction	39%	52% (9)	.43

Note. Values between parentheses: percentage of the individual-level variance attributed to measurement error, which is defined as $[1 - \alpha]$ (Van Yperen & Snijders, 2000).

[a] ICC-coefficients are corrected for unreliability.

Table 4
Results of the multi-level analyses

	Customer encounter satisfaction	Employee encounter satisfaction
	Coefficient (SE)[a]	Coefficient (SE)[a]
Step 1 (control variables)		
Intercept	−1.50 (1.0)	1.21 (.91)
Control variables customer		
Age (individual)	.14 (.07)[c]	—
Gender (individual)	−.07 (.10)	—
Education (individual)	−.04 (.07)	—
Actual Purchase (individual)	−.13 (.11)	—
Age (group)	−.01 (.14)	
Gender (group)	−.07 (.29)	
Education (group)	.07 (.19)	
Purchase (group)	−.02 (.33)	
Control variables employee		
Age (group)	—	−.01 (.01)
Experience (group)	—	−.01 (.01)
Gender (group)	—	−.02 (.15)
Increase in model fit[e]	$\chi^2(12) = 19.3$	$\chi^2(3) = 1.2$
Step 2 (Individual/unique)[b]		
Customer perceptions		
Task competence	.44 (.06)[d]	.12 (.04)[d]
Social competence	.19 (.06)[d]	−.09 (.06)
Employee perceptions		
Task competence	−.11 (.07)	.36 (.08)[d]
Social competence	.17 (.08)[c]	.26 (.08)[d]
Increase in model fit[e]	$\chi^2(8) = 116.7^f$	$\chi^2(8) = 97.9^f$
Step 3 (Group/across)		
Customer perceptions		
Task competence	.68 (.16)[d]	−.21 (.17)
Social competence	.63 (.15)[d]	.30 (.15)[c]
Employee perceptions		
Task competence	.01 (.09)	.54 (.11)[d]
Social competence	−.08 (.09)	.25 (.10)[c]
Increase in model fit[e]	$\chi^2(4) = 57.7^f$	$\chi^2(4) = 50.5^f$

Parenthetical numbers are standard errors.
[a] unstandardized coefficients;
[b] within-group deviation score X_{ij}-$X_{\cdot j}$;
[c] $p<.05$ (*two-tailed*);
[d] $p<.01$ (*two-tailed*);
[e] The *difference* between the deviance statistics (Δ Deviance) has a χ^2-distribution (with the number of added predictors as degrees of freedom) under H_0 that the model does not predict significantly better than the previous model;
[f] $p<.01$.

variance terms did not lead to that result. Hence, the regression coefficients of these predictors can be perceived as equal across groups (e.g., employees). Only the inclusion of the group-level variance term of customer age resulted in a significant increase in model fit ($\chi^2(df.) = 6.31(1); p < .05$). This means that the individual-level effect of customer age on customer encounter satisfaction significantly differs among groups (e.g., employees).

Finally, we tested to determine whether this variance across groups is dependent on the group mean of the intercept. The inclusion of the covariance term did not result in

a significantly better model fit. Apparently, the direction of the regression line of customer age is not related to the average degree of customer encounter satisfaction of a given group.

Employee encounter satisfaction

Table 4 shows a significant positive impact of task and social competence on employee encounter satisfaction, which supports H_2. Task competence has a significant main effect for both the within-group deviation score and the group mean, indicating an *across encounter* as well as a *unique encounter* effect in explaining customer satisfaction. Social competence also has an individual as well as a group-level effect, though the deviation score and the group mean have about the same regression coefficient, so social competence has a *unique encounter* effect without evidence for an independent *across encounter* effect. This partly supports H_7.

With respect to the influence of employee's task and social competence as perceived by the customer on employee satisfaction, the results indicate a partner effect for task competence at the individual-level and for social competence at the group-level. This supports H_4. The findings of the control variables age, gender and experience show no significant impact on employee encounter satisfaction.

Incorporating the variance terms of the group-level random parameters for all individual-level variables yielded a significant increase in model fit for employee perceived task competence ($\chi^2(df.) = 5.66(1); p < .05$) and employee perceived social competence ($\chi^2(df.) = 6.52(1); p < .05$). These findings indicate that the *unique encounter* effect of employee perceived task and social competence on his or her encounter satisfaction significantly varies between groups (i.e., employee). The inclusion of covariance terms did not improve the model fit. Hence, the direction of the regression lines of both employee perceived task and employee perceived social competence is not dependent on the average level of employee encounter satisfaction of a given group.

Agreement in perceptions between customers and employees

The significant correlations in Table 2 between customer's and employee's perceptions of the employee's social competence at both levels indicate self-other agreement between the customer and the employee with respect to the employee's performance. Also, the small but significant, correlation between customer and employee's perceptions of the employee's task competence at the individual-level indicates self-other agreement between the customer and the employee. This supports H_5.

Table 5
Summary of results

	Customer Satisfaction				Employee Satisfaction			
	Customer Perceptions		Employee Perceptions		Employee perceptions		Customer perceptions	
	Task[a]	Social[a]	Task[a]	Social[a]	Task[a]	Social[a]	Task[a]	Social[a]
Across	.28	.28			.41	.20[b]		.16
Unique	.36	.14		.10	.26	.17	.12	

Note. The numbers are standardized coefficients of the significant effects;
[a] Task = Task competence and Social = Social competence;
[b] This effect is not independent of the unique encounter effect.

Discussion

Our purpose in this research was to explore the customer-employee encounter in three ways; from both perspectives, considering employees' and customers' perceptions simultaneously and taking the different drivers of evaluations (uniqueness vs. commonness) into account. Our main findings are:

- Unique as well as common perceptions of customers and employees are important influencers of their satisfaction.
- Customer satisfaction is partly determined by employee perceptions and employee satisfaction partly by customer perceptions (e.g., partner effects).

A detailed overview of our main findings is given in Table 5. We discuss the findings for customers and employees separately.

Uniqueness versus commonness in customer perceptions

Our results show that social and task competences are perceived similarly from customer to customer for each employee, while differing among employees. This suggests that both aspects of performance may be considered as relatively enduring and consistent characteristics that an employee (inevitably) brings to every encounter. This is in line with earlier research that suggests that task competence is an attribute of the contact employee (Crosby, Evans & Cowles, 1990; Weitz, Sujan & Sujan, 1985) and that some salespersons may possess social skills or traits (e.g., positive, warm, outgoing personalities) that others may not or to a lesser extent (Beatty, Mayer, Coleman, Reynolds & Lee, 1996).

At the same time, a substantial part of customers' perceptions of both social and task competence reflect uniqueness related to their specific encounter with the employee. This can be caused by characteristics of the customer, like his or her personality or mood. Also, employees may treat customers differently based on the notion of adaptive selling or the employee's personal preferences. Furthermore, it can be concluded that customer satisfaction is influenced by the unique as well as the shared perceptions of task and social competence. We also found that older customers are more satisfied. This influence of customer age on satisfaction is stronger for some employees than for others.

Uniqueness versus commonness in employee perceptions

Our results indicate that each employee is consistent in his or her perceptions of performance across several interaction partners (i.e., customers). This is in line with research that states that people make consistent self-judgments across interactions (Felson, 1992). The effect also suggests that differences exist between employees in these perceptions. Generalized self-efficacy beliefs may explain this (Bandura 1986; Van Yperen 1998). In addition to this perceptual explanation, there may be a behavioral rationale as well. An employee may behave more competently across all encounters with customers compared to other employees.

Employees' perceptions also reflect uniqueness; they perceive their performance differently for each encounter. This latter may be caused by external sources like the employee's mood, the feedback of the manager, the customer or a colleague. It also may be that the employee performs differently in every encounter. It is well known that when people interact with different people one at a time their behavior really differs from partner to partner and people are aware of that (Reno & Kenny, 1992).

Furthermore, it can be concluded that employee satisfaction is influenced by the unique and consistent perceptions of task competence, and by the unique perceptions of social competence. Interestingly, our results indicate that for some employees these unique experiences are more important in creating satisfaction than for others.

Partner effects and customer satisfaction

If the employee perceives him or herself as social competent in interaction with a particular customer, this has a positive influence on customer satisfaction. This effect may reflect a truly dyadic influence process, that is, the employee may let the customer know, verbally or nonverbally, that

s/he perceives that s/he socially connects to the customer and this results in a favorable judgment on the part of the customer. This implies that the customer cares about the employee; if s/he feels good, I am happy.

The influence is only related to the unique experiences of the employee in a particular interaction. It might be that it is the uniqueness of his or her perception that creates a need to express this to the customer. It is well known from the interpersonal perception literature that perceptions are 'telegraphed' during interaction, verbally, by body language or intonation (e.g., DePaulo & Rosenthal, 1982). The employee's perception of his or her task competence does not influence customer satisfaction. S/he may perceive task competence as *a normal thing to do* and consequently feels no need to communicate it. It also might be that the employee does communicate his or her task competence perceptions, but that a customer does not pick up the signal or is not influenced by it.

Partner effects and employee satisfaction

The results show that the customer's perceptions of employee's task as well as social competence influence the employee's satisfaction. The effect of task competence is related to customer's unique perceptions. Again, it might be that the employee thinks that task competence is standard and s/he is only influenced by a unique task experience of the customer. Regards social competence, it seems that the employee is influenced when several customers see him or her as social competent. This clearly suggests that salespersons are aware of the importance to relate to every customer during each interaction (e.g., Bitner, Booms & Mohr, 1994).

A unique partner effect with respect to social competence might have been reasonable to expect. This would imply that the employee was influenced by unique feelings of the customer with respect to their social connection and mutual understanding. However, this does not seem to be the case. It may be that employees have become so indoctrinated in the customer relationship management standards that all customers become *significant others* in that respect. The influence of the perception of significant others on a person's perceptions has been well documented (e.g., Snodgrass, 1992).

Agreement in perceptions between customers and employees

We conclude that the customer and employee agree in their perceptions of employee performance, especially with respect to the social competence of the employee. The correlations are moderate, which is in line with other research at this level of acquaintance (Park & Judd, 1989; Paulhus and Bruce, 1992). In addition, the moderate effect might be explained by the fact that others often use different cues than the self uses in evaluations. Customers' perceptions are largely limited to observable behavior during the

encounter. Self-ratings may be based on information like the past and company standards of performance, and less on observable behaviors (Kenny, 1996a).

Conclusion

Overall, we conclude that the interaction between the customer and the employee is a true interpersonal system subject to a number of important nuances in mutual perceptions. Whether the customer and employee are satisfied is determined not only by what they see of themselves, but also by the perceptions of those with whom they are interacting. Therefore, it is important for firms to focus not only on the management of customer perceptions, but also on the management of employee perceptions of their own performance.

In addition, the unique experience of the customer and the employee during the interaction is important in creating satisfaction for both parties. This indicates that an understanding of the unique fit between the customer and the employee may further enhance satisfaction. Therefore, it may be worthwhile to consider a policy in which customers are related to specific employees by introducing what might be called *interaction routing* based on proven fit congruence between employee and customer. Management may want to provide customers with the possibility to preregister a profile on-line, or to call for an appointment, so (returning) customers can be easily matched with their preferred employee and to avoid problems like wait time. This can already be witnessed in many business-to-business settings and account management principles. It seems that both, the customer and the employee, may well benefit from such an approach.

Furthermore, we conclude that the influence of employee performance is not only unique, but also reflects a stable form of employee behavior. This suggests that hiring and training policies for employees focusing on task and social competence profiles could be valuable for the sake of customer and employee satisfaction, contributing thereby to sales and employee success.

Research implications and limitations

Several limitations to our research project have to be recognized and point to future research issues. The first concern relates to the method of data collection. A study incorporating multiple sample groups and performing one-to-one measures is complex to execute and has a number of potential causes for biases. Customers and contact employees completed the questionnaires in the store, immediately after an interaction. This might cause feelings of unease with customers, because they have to evaluate the person they have just spoken to and who is still in the store. Furthermore, by measuring after a particular encounter, we implicitly assume that this is a reliable sample of how the

contact employees are generally perceived by the customer and by themselves in an encounter. However, the employee may act differently because the customers are evaluating them. In addition, a consequence of our design was that employees had to fill out the same questionnaire several times, which can be boring. To minimize this bias, we divided our study over several weeks. Overall, these issues indicate that future research should investigate if another approach of data collection, like participant observation or an experiment, could produce the same results.

Secondly, our focus on a single industry may raise concerns about limited external validity. Constraining the study to a single industry eliminates problems associated with the effects of industry differences (e.g., Hartline & Ferrell, 1996), but future research will have to reveal whether the results are generalizable to other retail settings.

Thirdly, further work in partner effects is also required since these effects are perhaps the quintessential indicators of interpersonal processes (Kenny & Cook, 1999). Little research is done with respect to these effects in the marketing context. Although the influence of employee perceptions has received attention (e.g., Schneider & Bowen, 1985), the surface has been barely scratched at the encounter level. Future research may lastly wish to consider which processes are operating behind the influence of partner effects.

Lastly, research that examines the linkage between customer characteristics and their influence on evaluations of employee performance and satisfaction may prove valuable. We measured their unique perceptions and consensus among several customers, but not the tendency of customers to see several employees in the same way. Yet, such effects may provide important information with respect to the influence of stereotypes (Kenny, 1996a).

Notes

1. We would like to acknowledge the encouragement of former editor Louis P. Bucklin to explore this direction of analysis.
2. Control variables in the customer model are included at the individual-level and at the group-level. Control variables in the employee model could only be introduced at the group-level; the employee defines the group-level and consequently the employee control variables are group-level variables by definition in our model.
3. To test whether within- and between-groups regressions are different, the significance of the group mean $X_{.j}$ is tested, while controlling for the effect of the original variable, X_{ij}. If this coefficient is significant, then it is convenient to replace X_{ij} by the within-group deviation score, defined as $X_{ij} - X_{.j}$. This deviation score, together with the group mean can be used to test if the within-group or between-groups regressions are 0 (Snijders & Bosker, 1999).

References

Albright, L., Malloy, T., Dong, W., Kenny, D. A., Fang, X., Winquist, L., & Yu, D. D. (1997). Cross-cultural consensus in personality judgments. *Journal of Personality and Social Psychology, 72* (3), 558–569.

Albright, L., Kenny, D. A., & Malloy, T. (1988). Consensus in personality judgments at zero acquaintance. *Journal of Personality and Social Psychology, 55* (2), 387–395.

Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Barnes, B. (1995). *The elements of social theory.* London: UCL Press.

Beatty, S. E., Mayer, M., Coleman, J. E., Reynolds. K. E. & Lee, J. (1996). Customer-sales associate retail relationships. *Journal of Retailing, 72* (2), 223–247.

Bettencourt, L. & Brown, S. (1997). Contact employees: relationship among workplace fairness, job satisfaction and prosocial service behaviors. *Journal of Retailing, 73* (1), 39–61.

Bitner, M. J., Booms, B. H. & Tetreault, M. S. (1990). The service encounter: diagnosing favorable and unfavorable incidents. *Journal of Marketing, 54* (1), 71–84.

Bitner, M. J., Booms, B. H. & Mohr, L. A. (1994). ritical service encounters: the employee's viewpoint. *Journal of Marketing, 58* (1), 95–106.

Borkenau, P. & Liebler, A. (1992). Trait inferences: sources of validity at zero acquaintance. *Journal of Personality and Social Psychology, 62* (4), 645–657.

Brown, S. W. & Swartz, T. A. (1989). A gap analysis of professional service quality. *Journal of Marketing, 53* (1), 92–98.

Bryk, A. S. & Raudenbush, S. W. (1992). *Hierarchical linear models: applications and data analysis methods.* Newbury Park, CA: Sage Publications.

Bui Khanh-Van T., Peplau, L. A. & Hill, C. T. (1996). Testing the Rusbult model of relationship commitment and stability in a 15-year study of heterosexual couples. *Personality and Social Psychology Bulletin, 22* (10), 1244–1257.

Cappella, J. N. (1997). Behavioral and judged coordination in adult informal social interactions: vocal and kinetic indicators. *Journal of Personality and Social Psychology, 72* (2), 119–131.

Crosby, L. A., Evans, K. R. & Cowles, D. (1990). Relationship quality in services selling: an interpersonal influence perspective. *Journal of Marketing, 54* (1), 68–81.

Czepiel, J. A. (1990). Managing Relationships with Customers: a Differentiation Philosophy of Marketing. In: D. E. Bowen, R. B. Chase & T. G. Cummings (Eds), *Service management effectiveness.* San Francisco, CA: Jossey-Bass.

DePaulo, B. M. & Rosenthal, R. (1982). Measuring the Development of Sensitivity to Nonverbal Communication. In: C. E. Izard (Ed). *Measuring emotions in infants and children.* New York: Cambridge University Press.

DePaulo, B. M. (1992). Nonverbal behavior and self-presentation. *Psychological Bulletin, 111* (2), 203–243.

Felson, R. (1992). Coming to see ourselves: social sources of self-appraisal. *Advances in Group Processes, 9* (2), 185–205.

Goffman, E. (1959). *The presentation of self in everyday life.* New York: Doubleday.

Goldstein, H., Rasbach, J., Plewis, I., Draper, D. Browne, W., Yang, M., Woodhouse, G. & Healey, M. (1998). *A user's guide to MlwiN.* University of London, Multilevel Models Project Institute of Education.

Goodwin, C. & Gremler, D. (1996). Friendship over the Encounter: how Social Aspects of Service Encounters Influence Customer Service Loyalty. In: T. A. Swartz, D. E. Bowen & S. W. Brown (Eds), *Advances in services marketing and management.* Greenwich, CT: JAI Press.

Grayson, K. & Shulman, D. (2000). Impression Management in Services Marketing. In: T. A. Swartz & D. Iacobucci (Eds), *Handbook of services marketing and management.* California: Sage Publications.

Grembler, D. & Gwinner, K. (2000). Customer-employee rapport in service relationships. *Journal of Service Research, 3* (1), 82–104.

Gupta, S. & Vajic, M. (2000). The Contextual and Dialectical Nature of Experiences. In: J. A. Fitzsimmons & M. J. Fitzsimmons (Eds), *New service development: creating memorable experiences.* California: Sage Publications.

Hatfield, E., Cacioppo, J. & Rapson, R. L. (1993). Emotional contagion. *Current Developments in Psychological Science, 2* (1), 96–99.

Hartline, M. & Ferrell, O. C. (1996). The management of customer-contact service employees. *Journal of Marketing, 60* (1), 62–70.

Hofmann, D. (1997). An overview of the logic and rationale of hierarchical linear models. *Journal of Management, 23* (6), 723–744.

de Jonge, J., van Breukelen, G., Landeweerd, J. & Nijhuis, F. (1999). Comparing group and individual level assessments of job characteristics in testing the job demand-control model: a multi-level approach. *Human Relations, 52* (1), 95–122.

Jöreskog K. & Sörbom, D. (1993). *LISREL 8: a guide to the program and applications.* Chicago: SPSS.

Kenny, D., Horner, C., Kashy, D. & Chu, L. (1992). Consensus at zero acquaintance: replication, behavioral cues, and stability. *Journal of Personality and Social Psychology, 62* (1), 88–97.

Kenny, D. (1996a). *Interpersonal perception. a social relations analysis.* New York: The Guilford Press.

Kenny, D. (1996b). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships, 13* (2), 279–294.

Kenny, D., Kashy, D. & Bolger, N. (1998). Data Analysis in Social Psychology. In: D. Gilbert, S. Fiske & G. Lindzey (Eds.), *The handbook of social psychology.* New York: McGraw-Hill.

Kenny, D. & Cook, W. (1999). Partner effects in relationship research: conceptual issues, analytic difficulties, and illustrations. *Personal Relationships, 6* (4), 433–448.

Levesque, M. (1997). Meta-accuracy among acquainted individuals: a social relations analysis of interpersonal perception and metaperception. *Journal of Personality and Social Psychology, 72* (1), 66–74.

Mead, N. A. (1986). Listening and Speaking Skills Assessment. In: R. A. Berk (Ed.), *Performance assessment: methods and applications.* MD: Johns Hopkins University Press.

Mead, George H. (1934). *Mind, self, and society.* Chicago: University of Chicago Press.

Oliver, R. L. (1997). *Satisfaction, a behavioral perspective on the consumer.* New York: McGraw-Hill.

Park, D. & Judd, C. (1989). Agreement on initial impressions: differences due to perceivers, trait dimensions, and target behaviors. *Journal of Personality and Social Psychology, 56* (3), 493–505.

Paulhus, D. & Bruce, M. (1992). The effect of acquaintanceship on the validity of personality impressions: a longitudinal study. *Journal of Personality and Social Psychology, 63* (5), 816–824.

Pine, J. & Gilmore, J. (1999). *The experience economy.* Boston, MA: Harvard Business School Press.

Price, L., Arnould, E. & Tierney, P. (1995a). Going to extremes: managing service encounters and assessing provider performance. *Journal of Marketing, 59* (1), 83–97.

Price, L., Arnould, E. & Deibler, S. (1995b). Consumers' emotional responses to service encounters: the influence of the service provider. *International Journal of Service Industry Management, 6* (1), 34–63.

Rafaeli, A. (1993). Dress and Behavior of Customer Contact Employees: a Framework for Analysis. In: T. Swartz, D. Bowen & S. W. Brown (Eds.), *Advances in services marketing and management.* Greenwich, CT: JAI Press.

Ramsey, R. O. & Sohi, R. S. (1997). Listening to your customers: the impact of perceived salesperson listening behavior on relationship outcomes. *Journal of the Academy of Marketing Science, 25* (2), 127–137.

Raudenbush, S. W. (1993). Hierarchical Linear Models and Experimental Design. In: L. K. Edwards (Ed.), *Applied analysis of variance in behavioral science.* New York: Marcel Dekker.

Reno, R. & Kenny, D. A. (1992). Effects of self-consciousness and social anxiety on self-disclosure among unacquainted individuals: an application of the social relations model. *Journal of Personality, 60* (1), 79–94.

Schlesinger, L. A. & Zornitsky, J. (1991). Job satisfaction, service capability, and customer satisfaction: an examination of linkages and management implications. *Human Resource Planning, 14* (2), 141–149.

Schneider, B. (1980). The service organization: climate is crucial. *Organizational Dynamics, 9* (autumn), 52–65.

Schneider, B. & Bowen, D. E. (1985). Employee and customer perceptions of service in banks: Replication and extension. *Journal of Applied Psychology, 70* (3), 423–433.

Services Marketing Newsletter. (1989). Recent study shows gap between customers and service employees on customer service perceptions. 5 (1).

Shrauger, S. & Schoeneman, T. (1979). Symbolic interactionist view of self-concept: through the looking glass darkly. *Psychological Bulletin, 86* (4), 549–573.

Snijders, T. & Bosker, R. (1999). *Multilevel analysis. an introduction to basic and advanced multilevel modeling.* London: Sage Publications.

Snodgrass, S. (1985). Further effects of role versus gender on interpersonal sensitivity. *Journal of Personality and Social Psychology, 62* (2), 154–158.

Spiro, R. & Weitz, B. A. (1990). Adaptive selling: conceptualization, measurement and nomological validity. *Journal of Marketing Research, 27* (1), 61–69.

Weitz, B. A., Sujan, H. & Sujan, M. (1986). Knowledge, motivation, and adaptive behavior: a framework for improving selling effectiveness. *Journal of Marketing, 4* (2), 174–193.

Winsted, K. F. (1997). The service encounter in two cultures: a behavioral perspective. *Journal of Retailing, 73* (3), 337–360.

van Yperen, N. (1998). Informational support, equity, and burn-out: the moderating effect of self-efficacy. *Journal of Occupational and Organizational Psychology, 71* (1), 29–33.

van Yperen, N. & Snijders, T. (2000). A multilevel analysis of the demands-control model: is stress at work determined by factors at the group level or the individual level? *Journal of Occupational Health Psychology, 5* (2), 182–190.