Jagdip Singh

Boundary Role Ambiguity: Facets, Determinants, and Impacts

The study of the organizational determinants of role ambiguity among sales and marketing professionals and its dysfunctional impact on job outcomes is an important area of research in marketing. Recently, researchers have identified several gaps in the literature in this area, including (1) substantial variability in results across studies and (2) lack of studies that conceptualize (and operationalize) role ambiguity as a multifaceted construct. As an initial step, the author uses a multifaceted conceptualization of role ambiguity to investigate a model that includes key organizational determinants and job outcomes. Using data from multiple samples of sales and marketing professionals, the author estimates, augments, and validates the hypothesized model. The results show that multifaceted role ambiguity (1) helps uncover *functional* facets of role ambiguity (e.g., family) that facilitate coping with other ambiguous facets, (2) unravels the *sensitivity* of role ambiguity facets to different organizational determinants, and (3) offers evidence of *differential potency* because the different role ambiguity facets exhibit different potency in predicting the various job outcomes. Several directions for enriching theory about the role ambiguity phenomenon are provided and implications for practitioners are discussed.

THE importance of understanding role ambiguity among marketing professionals operating at the *boundary* of an organization has been recognized by marketing scholars for some time (cf. early studies by Donnelly and Ivancevich 1975; Pruden and Reese 1972; Walker, Churchill, and Ford 1975). Since these early studies, marketers have produced an impressive body of research on role ambiguity's *organizational determinants* and its impact on *job outcomes* in a wide range of boundary-spanning roles (Behrman and Perreault 1984; Chonko, Howell, and Bellenger 1986; Ford, Walker, and Churchill 1975; Jackson and Schuler 1985; Lysonski 1985; Michaels, Day, and Joachinsthaler 1987; Teas, Wacker, and Hughes 1979). Because boundary spanners are highly vulnerable to role ambiguity, this research has important implications for researchers and practitioners in their efforts to optimize boundary spanners' job outcomes (e.g., performance) and upgrade their quality of life on the job (e.g., satisfaction).

Despite the quantity and significance of role ambiguity research, critical gaps are evident (Fisher and Gitelson 1983; King and King 1990). Though a complete discussion of these gaps is beyond the scope of this article, two gaps that appear germane to the literature in marketing are addressed here. First, in their meta-analysis, Jackson and Schuler (1985) found a significant portion of "unaccounted" variance in studies that used role ambiguity as an antecedent of several dependent variables (e.g., satisfaction, performance). Second, in their critique of role ambiguity literature, King and King (1990) assert that because most studies view role ambiguity as a global, unidimensional construct, they fail to capture the "breadth" of uncertainties faced by boundary spanners. This problem is serious because Jackson and Schuler report that more than 85% of all studies they reviewed had

Jagdip Singh is Associate Professor, Division of Marketing, Weatherhead School of Management, Case Western Reserve University, and is currently Visiting Professor, School of Economics, Erasmus University, Rotterdam, The Netherlands. The research was made possible by a grant from the Marketing Science Institute. The author thanks Sales and Marketing Executives International and participating MSI companies for their assistance in conducting the various surveys. The helpful comments of Gary Rhoads and three anonymous *JM* reviewers on drafts of the manuscript are appreciated.

assessed only *global* role ambiguity by using some variation of the unidimensional scale developed by Rizzo, House, and Lirtzman (1970).[1]

This article attempts to fill some of the gaps in our understanding of boundary role ambiguity. In particular, three aspects of the study set it apart from most previous research. First, boundary spanners' perceived ambiguity was analyzed in terms of several distinct facets of their role, and this *multifaceted* view was used to probe its organizational determinants and impacts on job outcomes. Second, the determinants and impacts of multifaceted role ambiguity were examined by hypothesizing, testing, and validating a theoretical model of role ambiguity that simultaneously models all interrelationships. Third, for empirically testing the role ambiguity model, relatively large samples of marketing-oriented boundary spanners (e.g., salespeople, customer service reps) were drawn from two disparate organizational settings. In particular, the data analyzed were obtained from 472 sales and marketing executives (SMEs) drawn from small to medium-sized firms and an industrial sample (IS) of 216 boundary spanners working in sales and customer service positions in a multinational *Fortune* 500 firm. This variability is useful because it (1) increases the likelihood that reported variance in role ambiguity reflects differences in objective organizational environments and is not just due to differences in boundary spanners' perceptions and (2) affords an opportunity to test and augment, if necessary, the hypothesized model by using one dataset (i.e., SME sample) and to *validate* the augmented model by using the second dataset (i.e., IS sample).

First, the related literature is discussed and the hypotheses for empirical investigation are developed. Then the research method, samples, research settings, measurements, and method of analysis are described. Finally, the results are reported and discussed.

Background and Research Hypotheses

Figure 1 is the hypothesized theoretical model used for understanding the interrelationships among organizational factors, job outcomes, and role ambiguity. This model draws from Kahn et al.'s (1964) seminal work on role ambiguity and is consistent with Walker, Churchill, and Ford's (1977) framework on the determinants of salesperson performance and satisfaction. Let us begin the discussion of Figure 1 with the notion of multifaceted boundary role ambiguity.

Boundary Role Ambiguity

Kahn and his coauthors posited that perceived role ambiguity occurs when a person feels that he or she lacks *salient* information needed to effectively enact his or her role. They viewed role ambiguity broadly by including uncertainty about role definition, expectations, responsibilities, tasks, and behaviors involved in one or more facets of the task environment. Notably, they recognized that perceived ambiguity is likely to vary with different facets of the role (e.g., ambiguity about customers, boss, family). Following Kahn and his associates, marketers and organizational psychologists have produced a rich and extensive literature on role ambiguity (Bedeian and Armenakis 1981; Behrman and Perreault 1984; Brief and Aldag 1976; Donnelly and Ivancevich 1975; House and Rizzo 1972; Michaels, Day, and Joachimsthaler 1987; Miles and Petty 1975; Organ and Greene 1974; Teas, Wacker, and Hughes 1979; Walker, Churchill, and Ford 1975), including two meta-analyses (Fisher and Gitelson 1983; Jackson and Schuler 1985) and several critical reviews (King and King 1990; Pearce 1981; Schuler 1977a).

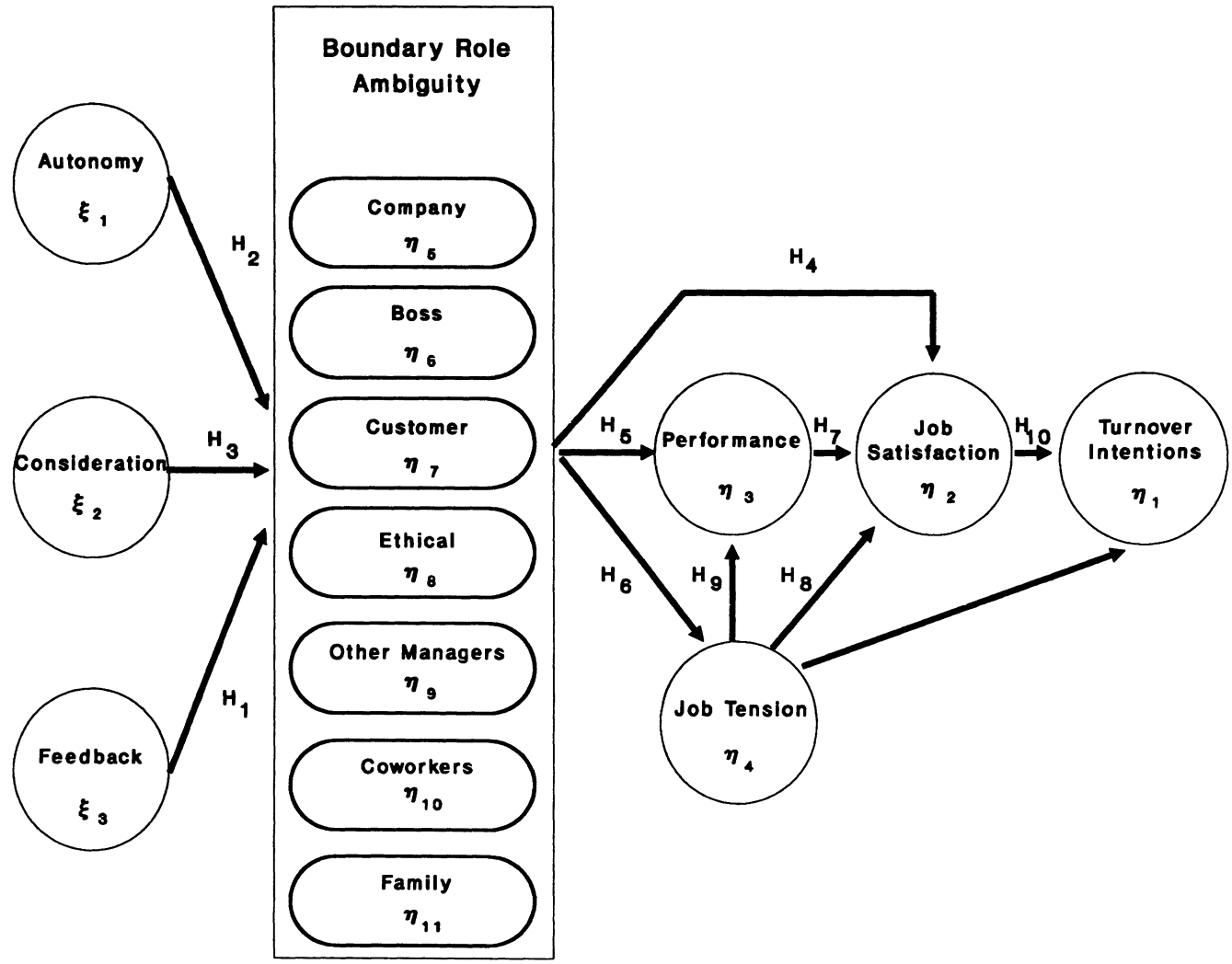
The significance of this literature stems from sound theorizing about and consistent empirical support for the relationships between role ambiguity and key job outcomes. Specifically, role ambiguity is thought to impede the opportunity to improve performance and obtain rewards, thus reducing job satisfaction. Additionally, role ambiguity leads (indirectly) to turnover because concerns about how to proceed with critical tasks lead to frustration, which enhances turnover intentions.

Unfortunately, most previous studies have ignored the conceptual thesis (cf. Kahn et al. 1964) and the empirical evidence about the multidimensionality of the role ambiguity construct (cf. Behrman, Bigoness, and Perreault 1981; Ford, Walker, and Churchill 1975). An exception is the study by Behrman and his coworkers, who used the INDSALES measure for the multiple sources of salespersons' role ambiguity (i.e., boss, company, customer, and family) to investigate its determinants and impacts. Though they investigated only two job outcomes (i.e., satisfaction and performance), they found an interesting pattern of *differential* relationships for the various sources of role ambiguity. This finding reinforces Miles' (1976) concern that sole reliance on a general measure of role ambiguity is likely to obscure the nature, determinants, and impacts of perceived role ambiguity. Hence, Behrman and his coauthors observe (p. 1259):

> Although [our] study attempts to be responsive to Miles' concern regarding a preoccupation with gen-

[1]Likewise, in the marketing literature, this preoccupation with using the Rizzo, House, and Lirtzman scale is demonstrated in several recent articles (Behrman and Perreault 1984; Johnston et al. 1990; Kohli 1989; Michaels et al. 1988). In other instances, researchers have tended to assess role ambiguity via a multidimensional scale (e.g., the INDSALES measure), but to aggregate across dimensions for investigating its determinants and impacts.

FIGURE 1
Theoretical Model of Boundary Role Ambiguity: Hypothesized Relationships Among Organizational Determinants, Role Ambiguity, and Job Outcomes



eral measures of role ambiguity, the conceptual model presented here certainly does not exhaust the number of role senders within a salesperson's role set. Future studies might seek to assess the impact of job ambiguity attributable to other role senders upon salesperson's outcomes. Still to be examined is the impact of different sources of job ambiguity upon job outcomes other than job satisfaction and performance.

More recently, Singh and Rhoads (1991a) have sought to refine and enhance the role ambiguity construct by developing the MULTIRAM scale that measures *seven* distinct facets of boundary role ambiguity (i.e., boss, company, customers, ethical, coworkers, other managers, and family). Singh and Rhoads show that each of the seven MULTIRAM facets is meaningful to boundary spanners and yields evidence of convergent, discriminant, and nomological validity. Therefore, using a multifaceted role ambiguity construct such as MULTIRAM to investigate several determinants (especially other than individual variables) and impacts (in addition to satisfaction and performance) is likely to make a contribution because it extends the work of Behrman and his associates and addresses concerns raised by Miles and by King and King. In this vein, the model in Figure 1 is proposed and empirically investigated. For the hypothesized relationships in Figure 1, note that the lack of previous research with multifaceted role ambiguity renders the task of specifying hypotheses at the facet level speculative at best and atheoretical at worst. Nevertheless, for cases in which insight is available from exceptional studies (e.g., Behrman, Bigoness, and Perreault 1981), hypotheses are posited at the facet level

as well. For all other cases, hypotheses are posed in terms of the role ambiguity construct, and the task of uncovering relationships at the facet level is left as an empirical question.

Organizational Determinants of Role Ambiguity

The study of relationships between organizational factors and role ambiguity is rooted in the job characteristics model of Hackman and Oldham (1976), the notions of "fit" or congruence between task, technology, and structure espoused by Schuler (1977b), and the path-goal theory of leadership posited by House (1971). In general, this line of research has been rewarding because several task-related (e.g., autonomy, feedback) and supervisory-related (e.g., consideration, initiation) variables have been found to affect role ambiguity significantly (Jackson and Schuler 1985). Marketers' interest in these relationships stems from the possibility of designing work environments (e.g., more feedback) and training bosses (e.g., more consideration) so as to influence the level of ambiguity boundary spanners perceive in their role, thereby reducing, if not eliminating, the dysfunctional effects of role ambiguity. In the study reported here, two task-related variables (feedback and autonomy) and one supervisory-related variable (consideration) are examined. Each of these variables has been found to be a significant determinant of role ambiguity (Jackson and Schuler 1985).

Feedback. Performance feedback provided to boundary spanners is thought to reduce perceived role ambiguity (Teas 1983; Teas, Wacker, and Hughes 1979), probably because performance feedback helps boundary spanners learn their roles (cf. Hackman and Oldham 1976). Studies in marketing (e.g., Teas 1983) and organizational psychology (e.g., Brief and Aldag 1976) provide consistent support for this hypothesis with correlations of the order of −.40. To the author's knowledge, none of the published studies examined the relationship between feedback and different facets of role ambiguity. However, because feedback operates through a learning mechanism (boundary spanners learn roles through consistent feedback), feedback is likely to have *localized* effects; that is, if the boss provides much of the feedback to the boundary spanner, the effects of feedback may be localized to boss and related facets (e.g., company, ethical) of role ambiguity. For other facets (e.g., customer), the effects may be minimal.

Autonomy. Autonomy is a key variable in Hackman and Oldham's job characteristics model and represents the degree to which the role allows freedom and discretion to the boundary spanner in planning and determining the procedures for accomplishing role requirements. Roles with greater autonomy are hypothesized to involve lower role ambiguity (Donnelly and Ivancevich 1975). The reason is that autonomy helps boundary spanners cope with the ambiguity surrounding their role and thus they perceive less ambiguity than they would in comparable roles that lack autonomy. Jackson and Schuler's meta-analysis reveals that this hypothesis is supported with average correlations of −.39. Though no study could be found that investigated autonomy as a determinant of multifacet role ambiguity, it seems likely that the more autonomous the role, the less the perceived ambiguity in different facets of the role. Moreover, because autonomy serves as a coping mechanism, it is likely to diminish perceptions of ambiguity *irrespective* of the facet(s) that presents ambiguous conditions. Such *broad* effects are in contrast to the localized effects expected for feedback.

Consideration. Consideration captures the *socioemotional* concern of the boss, the degree to which the boss creates a facilitative climate of psychological support, mutual trust, friendliness, and helpfulness (House 1971). Supervisor consideration is thought to influence perceived role ambiguity in two ways. First, the socioemotional support provided by the boss helps boundary spanners cope with the (objective) ambiguity inherent in their job so that they actually *perceive* less role ambiguity. This influence is supported by social support literature (Thoits 1986). Second, in addition to providing a supportive environment, consideration is thought to help clarify roles (Podsakoff et al. 1984). Podsakoff and his coauthors suggest that this occurs because consideration is generally shown by bosses *after* the employee performs well (i.e., on a contingent basis); hence, consideration acts to clarify what is expected by rewarding employees for desired behaviors. Consistent with these hypotheses, studies have found a significant negative relationship between consideration and role ambiguity (Kohli 1989; Michaels, Day, and Joachimsthaler 1987; Teas 1983). Likewise, Jackson and Schuler (1985) found that, across 25 studies, the average correlation between consideration and role ambiguity was −.44. Because consideration is provided by the boss, its effects are likely to be *localized* to boss and related facets of role ambiguity; however, no previous study has examined the relationship between consideration and multifaceted role ambiguity.

On the basis of the preceding discussion, the following hypotheses are posed for the relationship between organizational factors and the various facets of role ambiguity.

H_1: Boundary spanners who receive more feedback about their role performance are likely to perceive less ambiguity in their role. More specifically, feedback effects are expected to be localized to role ambiguity

facets that are directly involved in the feedback mechanism (e.g., boss).

H_2: The greater the role occupant's autonomy in meeting role requirements, the lower his or her perceived role ambiguity. In particular, autonomy is expected to significantly affect each and all facets of role ambiguity (i.e., broad effects).

H_3: Boundary spanners who receive more consideration from their bosses are likely to perceive less ambiguity in their role. Furthermore, the effects of consideration are likely to be localized to boss and related facets of role ambiguity.

Role Ambiguity's Impact on Job Outcomes

In their meta-analysis, Jackson and Schuler (1985) found consistent and significant evidence that perceived role ambiguity has a dysfunctional impact on various job outcomes (e.g., satisfaction, tension, performance). The conceptual basis of these empirical findings is Kahn and his associates' theory of role stress. Marketers are interested in understanding the dysfunctional effects of role ambiguity as a basis for designing intervention programs to alleviate negative outcomes such as turnover and to upgrade the performance of boundary spanners.

Job satisfaction. In their model of the determinants of salesforce performance, Walker, Churchill, and Ford (1977) posited that role ambiguity has a direct negative impact on job satisfaction. Overall, empirical findings have supported this hypothesis (Behrman and Perreault 1984; Churchill, Ford, and Walker 1976; Lysonski, Singer, and Wilemon 1989). In fact, Jackson and Schuler found that job satisfaction was used most frequently as a direct consequence of role ambiguity, with correlations of the order of $-.46$. Using a multifacet measure for role ambiguity, Behrman, Bigoness, and Perreault (1981) found that the "manager" facet had a strong relationship with satisfaction (correlation = $-.44$), whereas other facets (e.g., "customer" and "family") had much weaker correlations ($\leq -.30$). This finding suggests that ambiguity *inside*, not *outside*, the company is dysfunctional for boundary spanners' job satisfaction. Other studies in marketing have not analyzed these relationships for the individual role ambiguity facets.

Job performance. Theoretically, high levels of role ambiguity are hypothesized to result in lower performance because, when boundary spanners lack knowledge about the most effective role behaviors, their efforts are prone to be "inefficient, misdirected or insufficient" (Jackson and Schuler 1985, p. 43). Consistent with this supposition, Walker and his coauthors posited that role ambiguity has a direct, negative influence on salesperson performance. Empirically, however, the relationship between role ambiguity and performance is weak. Though some studies have demonstrated a negative relationship (Behrman and Perreault 1984), other studies indicate a weak or no relationship (Brief and Aldag 1976). A potential reason for these mixed findings could be that most previous studies have used a global measure for role ambiguity. Thus, when Behrman and his associates used multifaceted role ambiguity, they found that ambiguity about manager, family, and customer facets was significantly related to performance (correlations $\geq -.17$), but company ambiguity was not. Hence, inclusion of company ambiguity in the overall measure of role ambiguity is likely to have diluted its effect on performance.

Job tension. Job tension is an affective state of an individual characterized by perceived negative consequences (e.g., anxiety, frustration) of his or her job. Perceived role ambiguity is thought to be related positively and directly to job-related tension because lack of salient information about role performance results in anxiety and frustration, which in turn lead to job tension (House and Rizzo 1972). Consistent with this expectation, several researchers in marketing have hypothesized role ambiguity as a direct antecedent of job tension (Churchill, Ford, and Walker 1990, Lysonski 1985). Noting that House and Rizzo's measure of job tension has "face validity because [it measures] psychological and psychosomatic symptoms often associated with the concept of tension," Jackson and Schuler (1985, p. 40) found correlations of the order of .20 for this measure. Similar results are evident in the marketing literature (e.g., Lysonski and Johnson 1983).

Hence, the following hypotheses are posed for the relationship between the various facets of role ambiguity and job outcomes.

H_4: Boundary spanners who perceive more ambiguity in their role are likely to be less satisfied with their job. Ambiguity about facets internal to the company (e.g., company, boss) are likely to have a stronger effect on satisfaction than facets external to the company (e.g., customers).

H_5: The greater the role ambiguity, the lower the boundary spanner's performance. Ambiguity about facets external to the company (e.g., customers) are likely to have a stronger impact on performance than facets internal to the company (e.g., company, boss).

H_6: Boundary spanners who perceive more ambiguity in their role are likely to be more tense (e.g., experience anxiety, frustration) on the job.

Interrelationships Among Job Outcomes

Job satisfaction. In addition to role ambiguity, performance and job tension are hypothesized to directly influence job satisfaction. The effect of performance on satisfaction was initially proposed by Walker and his coauthors in their model of salesperson performance. Some studies have posited a satisfaction $\rightarrow$ performance relationship. In the marketing literature, Bagozzi (1980) examined this issue both theoretically

and empirically and found compelling evidence in favor of the performance → job satisfaction relationship and less convincing evidence for the job satisfaction → performance effects. Additional empirical support for the performance → job satisfaction relationship is provided by Behrman and Perreault (1984), Dubinsky and Hartley (1986), and Lusch and Serpkenci (1990), among others. For the relationship between job tension and job satisfaction, the literature is clear and compelling. Both cognitive and motivational explanations are posited for predicting that job tension relates negatively to satisfaction (Donnelly and Ivancevich 1975; Rizzo, House, and Lirtzman 1970). When persistent, job tension results in feelings of anxiety, frustration, and futility that in turn produce dissatisfaction with the job. Empirical evidence of this relationship is provided by Lusch and Serpkenci and in the meta-analysis by Jackson and Schuler.

Performance. Job tension is posited to influence boundary spanners' performance directly and negatively. In their model of salesperson performance, Walker and his associates observe that mental anxiety (job tension) interferes in an individual's performance on the job. Likewise, Lusch and Serpkenci posit that job tension reduces an individual's effectiveness (performance) and find support for the job tension → performance relationship in a study of retail store managers. Additional evidence of this relationship is forthcoming from the meta-analysis of Jackson and Schuler, though the job tension → performance relationship is often weaker than the job tension → satisfaction effect (cf. Lusch and Serpkenci 1990).

Turnover intentions. Boundary spanners' intentions to change jobs are hypothesized to be affected negatively and directly by job satisfaction (Mobley et al. 1979); if boundary spanners perceive that their jobs are dissatisfying, they are likely to seek alternative job situations. Support for this relationship is extensive in marketing (Lucas et al. 1987; Sager, Futrell, and Varadarajan 1989) and organizational psychology (Mobley et al. 1979). In fact, Sager and his coauthors observe (p. 316) that "job satisfaction has served as a benchmark variable in the study of turnover." Consistent with this benchmark status, performance, job tension, and role ambiguity are thought to influence turnover intentions only *indirectly* through their effect on job satisfaction.

Consequently, the following hypotheses are posited for examining the interrelationships among the job outcomes.

H_7: The higher the perceived performance on the job, the greater the boundary spanner's satisfaction with the job.

H_8: The greater the perceived tension on the job, the lower the boundary spanner's satisfaction with the job.

H_9: The greater the perceived tension on the job, the lower the boundary spanner's performance on the job.

H_{10}: The more satisfied the boundary spanner on the job, the less positive his or her intentions to quit the job.

Method

Samples and Research Settings

A sampling plan was designed that allowed for multiple samples of sales and marketing professionals from systematically different organizational environments. This systematic variability is desirable because it affords opportunity to examine the validity of the underlying model. Specifically, two independent samples were chosen; one consisted of sales and marketing executives of small to medium-size businesses (hereafter the SME sample), and the other was drawn from marketing and customer service personnel in two departments of a multinational *Fortune* 500 industrial supplier firm (hereafter the IS sample). Whereas the SME sample is across firms, the IS sample is across departments/regions within a single firm. This sampling design yields comparable variability in focal measures for the two samples;[2] however, the sampling differences (i.e., across/within firms) are recognized to result in important contextual differences in the environments in which SME and IS boundary spanners operate.[3]

SME sample. The sample was selected from U.S.-based members of the Association of Sales and Marketing Executives (SME). The SME has been in existence for more than 50 years and has more than 10,000 members, most of whom occupy sales and marketing positions in relatively small to medium-size businesses. In all, 2000 members were selected for participation in the study. To control for the geographic location of the members, initially all SME members were classified by the state of residence. Then four states were selected at random (Minnesota, North Carolina, Ohio, and Texas) and equal numbers of members (i.e., 500) were sampled from each of the selected states. About 150 (7.5%) selected members could not be contacted for participation because they had either moved or were no longer with the company. Hence, the effective sample was 1850.

Data collection was conducted through a mail questionnaire. Each selected member was sent a pre-

[2]For instance, the standard deviations of role ambiguity measures range from .54 to .85 for the SME sample, and from .60 to .87 for the IS sample.

[3]These contextual differences include factors such as (1) SME boundary spanners operate in *different*, whereas IS spanners face *similar*, firm characteristics (e.g., formalization, culture, centralization) and (2) SME boundary spanners interact with a *wide* range, whereas IS spanners interact with a *limited* set, of customers. Implications of these differences for the study findings are discussed subsequently.

notification card, two questionnaire packets, and a reminder card. Each questionnaire packet included four items: (1) letter from the researchers describing the purpose of the study, (2) letter from the SME president endorsing the study, (3) the questionnaire itself, and (4) a return postage-paid envelope. Because role stress issues are relatively sensitive topics, all respondents were promised anonymity to ensure that they would provide frank and candid responses. However, anonymity precluded analysis of nonrespondents.[4]

In all, 518 responses were received for a response rate of 28%. However, 46 responses were incomplete and thus not usable, resulting in 472 usable responses for a usable rate of 25.5%. Response rates of this magnitude are not uncommon with samples of sales and marketing professionals. For instance, Hunt, Wood, and Chonko (1989) obtained a response rate of 25.1% in a survey of the members of the American Marketing Association, an association similar to the SME. Discussion with SME officials revealed that the profile of the responding sample (Table 1) is representative of their member base. About 72% of the respondents are male with a median age of 41 to 45 years. Most of the sample has had some college education (more than 90%) and median experience in their present job is four to five years. More than 60% of the sample earns a yearly income of $50,000 or more.

IS sample. The sample was drawn from two divisions of a U.S.-based *Fortune* 500 industrial manufacturer. This company has been in existence for more than 70 years and markets its products in the United States and international markets. The boundary spanners sampled were (1) marketing and sales personnel who were mainly responsible for meeting division's sales objectives and (2) customer service staff who were responsible for providing technical, installation, and other necessary services. In contrast to SMEs, however, the IS sample represents boundary spanners in a large, diversified, multinational industrial corporation.

From the two divisions, 520 personnel were selected for participation in the study. Consistent with the SME study, each selected individual was sent a prenotification card, two questionnaire packets, and a reminder card. To encourage participation, a letter from the CEO was included in each packet. To ensure frank and candid responses, all respondents were promised anonymity and were asked to return the survey directly to the researchers. Careful analysis of nonrespondents was thus precluded (see footnote 4).

In all, 254 responses were received for a response rate of 48.8%. Elimination of 38 questionnaires because of incomplete responses left 216 usable responses for a usable rate of 41.5%. The sponsoring company indicated that such response rates are consistent with their prior experience with employee surveys. The responding sample (see Table 1) is about 69% male with a median age of 36 to 40 years. Most have a college degree (about 85%) and more than 21% have been to graduate school. Though the respondents listed significant professional experience (median = 6

TABLE 1
Respondent Profile for the SME and IS Samples

	SME Sample (%)	IS Sample (%)
Gender		
Male	72	69
Female	28	31
Professional Experience (years)		
≤2	3	11
3–5	11	20
6–10	24	22
11–15	19	17
16–20	15	10
21–25	11	7
≥26	17	10
Experience With Current Employer (years)		
≤1	10	19
2	11	15
3	10	17
4–5	16	22
6–10	21	15
≥11	32	12
Education		
High school	9	15
College degree	61	64
Graduate school	14	8
Master's or higher	16	13
Age (years)		
≤ 30	10	17
31–35	14	15
36–40	18	18
41–45	16	16
46–50	14	10
51–55	13	12
56–60	9	4
≥61	6	2
Income		
≤$19,999	3	1
$20,000–29,999	10	23
$30,000–39,999	14	15
$40,000–49,999	14	19
$50,000–74,999	34	36
≥$75,000	27	6

[4]Planned wave analysis of the data to ascertain the presence of nonresponse bias (Armstrong and Overton 1976) could not be executed because of post office–related problems. Specifically, though the university's permit number was used for return mail, the post office did not stamp most of the return envelopes. Hence the *mailing date* could not be determined. Efforts to ascertain the *delivery date* were undermined by the post office procedure of holding mail in their premises until there is "sufficient quantity to make a delivery."

to 10 years), their experience in the present job is not as extensive (median = 3 years). For income, a bimodal distribution is evident at income levels of $20,000–$29,999 and $50,000–$74,999.

Measurements

Table 2 describes the measures used in the study, as well as the number of items, reliability, and basic statistics for each measure. The specific scale items are provided in the Appendix.

Boundary role ambiguity. The MULTIRAM scale was used to measure boundary role ambiguity (Singh and Rhoads 1991a). This 45-item scale measures seven facets of salient role uncertainties experienced by boundary spanners; it includes perceived ambiguity about (1) company/top management (9 items), (2) boss (9 items), (3) customers (8 items), (4) ethical conduct (6 items), (5) other managers (4 items), (6) coworkers (5 items), and (7) family (4 items). Previous studies have demonstrated that MULTIRAM has several advantages in comparison with other measures (cf. Singh and Rhoads 1991a,b). First, the MULTIRAM is a multidimensional scale designed to capture the breadth of uncertainties faced by boundary spanners. Second, its *facets* have sound psychometric properties (reliability; discriminant, convergent, and nomological validity). Third, the MULTIRAM facets are relevant for sales and marketing professionals because the scale development involved mostly salespeople and customer service representatives. In the present study, Table 2 shows that, for each MULTIRAM facet, (1) the composite reliability exceeds .70, indicating that the facets have significant systematic variance, and (2) the standard deviations are large, suggesting that the scale is successful in capturing differences in perceived role ambiguity.

Organizational factors. All organizational factors

TABLE 2
Measurement Characteristics for Variables From SME Study: Description, Number of Items, Reliability, Means, and Standard Deviations[a]

Measure	Scale Description	Number of Items	Reliability[b]	Mean	Standard Deviation
Boundary Role Ambiguity					
Company	5-point "very certain–very uncertain" Likert scale	9	.77	2.28	.72
Supervisor	5-point "very certain–very uncertain" Likert scale	9	.87	2.41	.85
Customer	5-point "very certain–very uncertain" Likert scale	8	.81	1.71	.54
Ethical	5-point "very certain–very uncertain" Likert scale	6	.68	1.98	.78
Other managers	5-point "very certain–very uncertain" Likert scale	4	.83	2.32	.79
Coworker	5-point "very certain–very uncertain" Likert scale	5	.85	2.06	.68
Family	5-point "very certain–very uncertain" Likert scale	4	.86	1.98	.73
Organizational Factors					
Feedback	5-point "strongly disagree–strongly agree" Likert scale	4	.88	3.26	.99
Autonomy	5-point "strongly disagree–strongly agree" Likert scale	4	.84	4.07	.87
Consideration	5-point "strongly disagree–strongly agree" Likert scale	5	.89	3.22	.96
Job Outcomes					
Satisfaction	5-point "extremely dissatisfied-extremely satisfied" Likert scale	26	.93	3.78	.61
Performance	5-point "bottom 10%–top 10%" Likert scale	6	.76	4.49	.44
Tension	5-point "never–always" Likert scale	8	.85	1.79	.60
Turnover intentions	5-point "strongly disagree–strongly agree" Likert scale	3	.93	2.17	1.23

[a]For clarity, only statistics from SME data are presented. The statistics from IS data are comparable to corresponding statistics from SME data.
[b]Composite reliability of the individual constructs (cf. Nunnally 1978, p. 246–249).

were assessed by multiple-item scales that were available in the literature. The *feedback* variable was operationalized as the degree to which a boundary spanner receives information from his or her boss and the job itself, which reveals how well he or she is performing. It parallels the notion of "feedback from agents" and "feedback from the job itself" advanced by Hackman and Oldham (1976) in their Job Diagnostic Survey (JDS). The specific scale used had four items and was drawn from the adaptation of the JDS feedback scale by Teas and his associates (Teas 1983; Teas, Wacker, and Hughes 1979). The estimated alpha reliability for this scale was .88, indicating that the measure has acceptable reliability (Nunnally 1978).

Like the feedback scale, the *autonomy* measure was drawn from Hackman and Oldham's Job Diagnostic Survey. The specific scale used had four items that assess the degree to which a job provides freedom, independence, and opportunity for personal initiative in carrying out the various job activities. This scale has been used previously in marketing (e.g., Teas 1983). The estimated alpha reliability for this measure was .84, suggesting the presence of significant systematic variance.

The *consideration* variable was operationalized as a 5-item scale adapted from House and Dessler (1974) by Teas (1981). This scale measures the degree to which the boss provides psychological support. This specific measure is shown to have discriminant validity when related to other constructs such as initiation of structure and participation, and has been used often in previous marketing studies (cf. Kohli 1989; Michaels, Day, and Joachimsthaler 1987; Teas 1983). The estimated reliability of this measure was .89.

Job outcomes. The *job satisfaction* variable was operationalized as a 26-item multidimensional scale adapted from Churchill, Ford, and Walker (1976). It assesses boundary spanners' satisfaction with seven aspects of their job: pay, opportunities for advancement, recognition, company policies, boss, fellow workers, and customers. This measure has been used by several researchers in marketing (Behrman and Perreault 1984; Fry et al. 1986) and has been found to have acceptable reliability and validity. Though the satisfaction dimensions could have been used individually, to do so would have made the analysis cumbersome and unwieldy given the complexity of the MULTIRAM scale. The alternative approach was to move the analysis to a higher order level; that is, to analyze the relationship between the individual MULTIRAM facets and the second-order construct of job satisfaction. This second-order construct was operationalized as a linear combination of its dimensions. The reliability of this linear composite was estimated to be .93 (cf. Nunnally 1978, p. 246–249).

A self-rated 6-item measure of *job performance* drawn from Dubinsky and Mattson (1979) was used. Each boundary spanner was asked to evaluate himself/herself in comparison with coworkers on a 5-point scale (ranging from "bottom 10%" to "top 10%") on six different dimensions. On the basis of their meta-analysis, Churchill et al. (1985) have noted that such self-rated performance measures are *not* necessarily biased. Likewise, Heneman (1974) has reported that self-reported performance measures have less restriction of range and less error than several purportedly objective measures. This scale has acceptable reliability ($\alpha = .76$).

The *job tension* construct was assessed by an 8-item measure based on that of House and Rizzo (1972). This measure has a 5-point scale ranging from "never" to "always" to assess how often boundary spanners have experienced symptoms of job-related tension. Within the marketing literature, Lysonski and Johnson (1983) and Fry et al. (1986) report use of this measure. In both studies, this job tension measure had acceptable reliability and validity. Consistent with these findings, a Cronbach's alpha of .85 was obtained, indicating that the job tension measure captures significant systematic variance.

Finally, *turnover intentions* was assessed by a 3-item measure drawn from Donnelly and Ivancevich (1975). Self-reported responses were obtained on a 5-point "strongly agree–strongly disagree" Likert scale for items related to boundary spanners' thoughts about quitting the organization. This measure has been used often in previous research, including studies by Johnston et al. (1990) and Lysonski and Johnson (1983). In addition, it has been shown to be a consistent predictor of *actual* turnover in several studies (cf. Sager, Futrell, and Varadarajan 1989). The Cronbach's alpha for this measure was .93.

Analysis Strategy

The hypothesized model of Figure 1 was analyzed by the method of latent variable structural equations (LVSE) modeling. This approach has several advantages. First, the estimated coefficients reflect relationships among underlying theoretical constructs rather than among observed variables or some linear combination of such variables. In this sense the coefficients are "adjusted" for measurement error particular to a given study. Second, this approach allows for "restricted" models that include systematic constraints on relationships among theoretical constructs and between observable variables and theoretical constructs. A key implication of such restrictions is that models can be tested that include only relationships that are hypothesized *a priori*. Third, the approach provides a systematic basis for evaluating the "fit" of the hypothesized model to data. This evaluation of the good-

ness-of-fit statistics is based on a chi square statistic as well as several incremental fit indices (Bentler and Bonnet 1980) that show the relative improvement of the hypothesized model over a null model.

More significantly, the LVSE approach facilitates model validation with multiple samples. Initially, the "fit" of the hypothesized model to SME data was to be investigated. On the basis of the results, the model would then be augmented, if necessary, to include additional relationships suggested by data. This augmentation would be based on statistical, parsimony, and substantive criteria and in accord with procedures for specification searches outlined by MacCallum (1986). Once a reasonable model for SME data was obtained, it would be validated with IS data. The notion of validity does not imply that structural coefficients are expected to be identical for SME and IS data. Rather, the sufficient condition for the validity of the underlying model is that the augmented model (based on SME data) provide a reasonably good fit to IS data. This condition is consistent with MacCallum's (p. 119) recommendations for examining the validity of augmented models:

> Even under optimal conditions, [researchers] should attempt to cross-validate their final [augmented] model by fitting it to an independent sample. . . . Only with a well-designed initial study, a carefully conducted search, and positive cross-validation results can a researcher begin to argue for the validity of a model that has resulted from a specification search.

Indeed, if positive cross-validation results are obtained, comparison of corresponding structural coefficients for SME and IS data provides insights into the variability of modeled relationships due to differences in organizational contexts. For this reason, covariance matrices were analyzed and unstandardized structural coefficients were used for drawing substantive conclusions. However, because measurement scales used were thought to have arbitrary variances and means, the SME and IS data were transformed by a three-step procedure suggested by Jöreskog (1971): (1) pool SME and IS data, (2) standardize all measures for the pooled data ($\mu = 0$, $\sigma = 1$), and (3) recover the SME and IS data for separate analysis.

The specific LVSE model estimated is shown in Figure 2, where ovals represent latent constructs, boxes refer to observable variables, arrows connecting boxes and circles are measurement relations, and arrows connecting circles are structural relations. For readability, error terms representing random and specific error for each observable indicant are omitted. In addition, the seven facets of boundary role ambiguity are shown in one block so that arrows going into (or out of) the block actually represent arrows going into (or out of) each facet within the block. The model was estimated by the procedure of maximum likelihood (ML) followed by reweighted generalized least squares (ERLS) by means of the EQS software (Bentler 1989). The ERLS procedure is advantageous because the estimates obtained are less biased than ML estimates in the case of non-normal data (Sharma, Durvasula, and Dillon 1989). In fact, after extensive simulation studies, Sharma and his coauthors recommended that, "when in doubt [about data normality], one should use ERLS" because "the performance of ERLS is equivalent to ML for normal data and superior to that of other estimation techniques for non-normal data" (p. 220).

Results

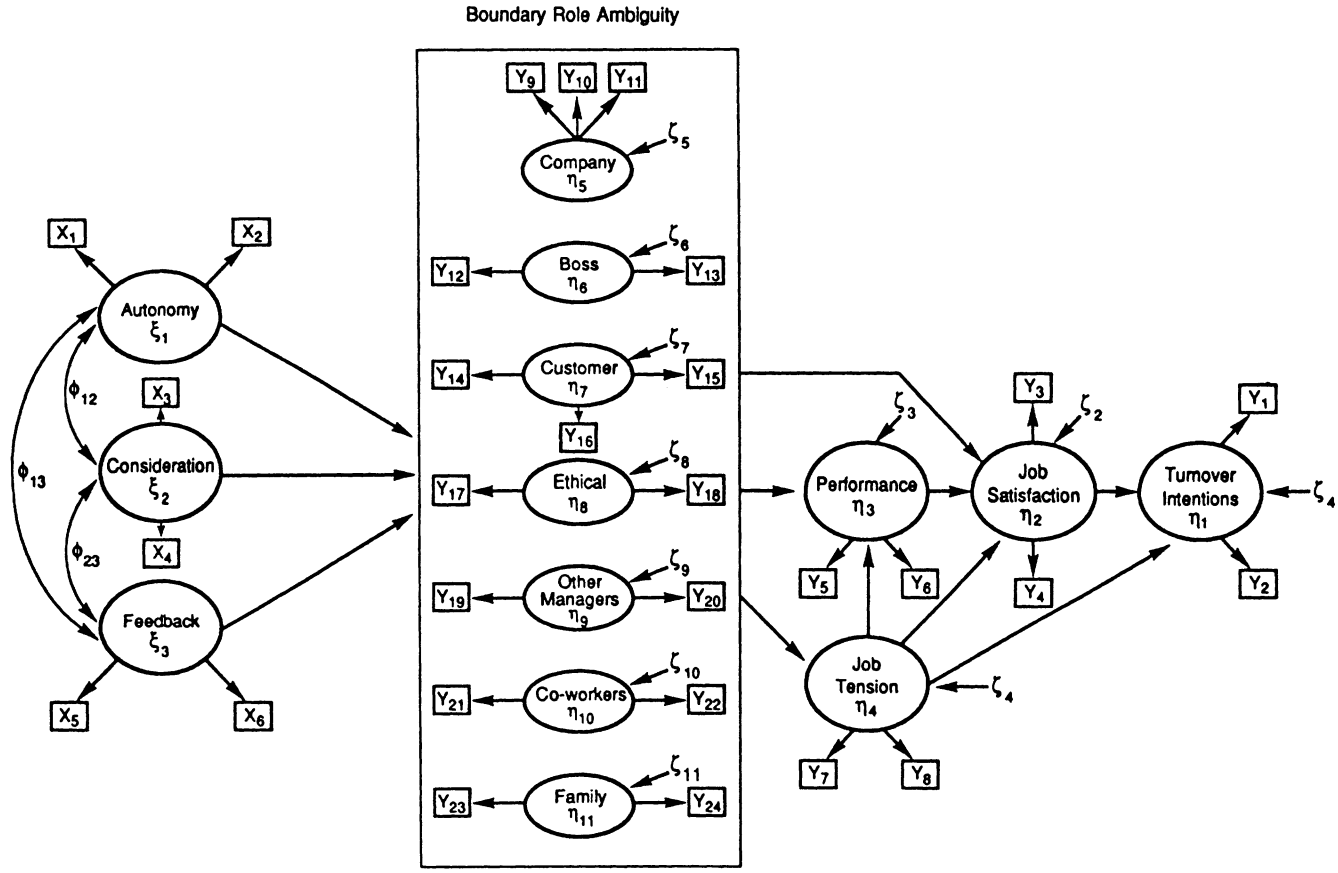
Model Testing With SME Data

Overall model fit and augmentation. Initially, the hypothesized model (Figure 2) was estimated for SME data and the following fit statistics were obtained: $\chi^2 = 712$, d.f. = 358, normed fit index (NFI) = .96, non-normed fit index (NNFI) = .97, comparative fit index (CFI)[5] = .98, and average off diagonal standardized residual (AOSR) = .04. Because the chi square statistic is significant at $p = .01$, the covariances reproduced by the hypothesized model differ nontrivially from observed covariances. Consequently, on statistical grounds, the null hypothesis for the adequateness of the hypothesized model is rejected. However, this test is sensitive to sample size such that for "large" sample sizes (typically > 200) it is prone to inflate type I errors, and such errors increase with increasing sample size (Bagozzi and Yi 1988). For this reason, and in the context of the "large" size of the SME sample (N = 472), emphasis was placed on other indicators of goodness of fit.

The examination of various fit indices suggests that the hypothesized model is a substantial improvement over a *null* model. The reason is that (1) NFI, NNFI, and CFI are nontrivially greater than zero, suggesting that the hypothesized model captures a significant portion of the systematic covariation in the data, and (2) all fit indices exceed .90, the cutoff value suggested by Bentler and Bonett (1980) for adequate fit. In addition, 95% of the residuals are within ±.1, and the AOSR is less than .05, indicating that the speci-

[5]The NFI is computed as $(1 - Q_k/Q_o)$ where Q_k and Q_o are the values for the fitting function for the specified (e.g., Figure 2) and null model, respectively. The NFI ranges from 0 to 1. The NNFI adjusts the NFI by the degrees of freedom. The CFI is computed as $(1 - \tau_k/\tau_o)$ where $\tau_k = \max\{(nQ_k - d_k), 0\}$ and $\tau_o = \max\{(nQ_o - d_o), (nQ_k - d_k), 0\}$ where Q_k and Q_o are defined as before, and d_k and d_o are the degrees of freedom for the corresponding models. Like the NNFI and NFI, the CFI also ranges from 0 to 1. However, the CFI avoids the underestimation of fit sometimes noted for NFI and is more precise in describing comparative fit than the NNFI (Bentler 1989, p. 116).

FIGURE 2
Empirical Model of Boundary Role Ambiguity: Estimated and Validated Interrelationships Among Organizational Determinants, Role Ambiguity, and Job Outcomes



fied model is a reasonably good fit to the data (Bagozzi and Yi 1988).

Nevertheless, an attempt was made to augment the *structural* model in order to investigate further improvements in the "fit" of the model in Figure 2. For this purpose, the Lagrange multiplier (LM) test was used because it tests for the plausibility of specified restrictions in the model (Bentler 1989, p. 125–128). This test yields a χ^2_d, the change in chi square by "freeing" a specific path between two constructs, which can be evaluated statistically at one degree of freedom. The LM test reveals that the "fit" of the model is improved significantly by "freeing" the path between job tension and turnover ($\chi^2_d = 18$, d.f. = 1, $p < .001$). Some theoretical support for this direct relationship is available from Walker, Churchill, and Ford's model of salesperson performance wherein mental anxiety (or job tension) is posited as a direct antecedent of employee turnover. Likewise, the literature on job stress and burnout documents job tension as a significant variable that affects an employee's turnover intentions (Golembiewski, Munzenrider, and Stevenson 1986). Because of this theoretical support, the hypothesized model was augmented by inclusion of a direct path between job tension and turnover intentions. This path is shown by a dotted line in Figure 2.

Reestimation of the augmented model with EQS software produced the following statistics: $\chi^2 = 694$, d.f. = 357, NFI = .96, NNFI = .98, CFI = .98, and AOSR = .037 (see Table 4). As noted previously, the augmented model is a significant improvement over the hypothesized model ($\chi^2_d = 18$, d.f. = 1). As the LM test did not reveal any substantial improvements by "freeing" other restricted paths in the structural model, the augmented model was retained for analysis and validation.

Measurement model. The estimated measurement parameters for the augmented model are reported in Table 3. All observable indicants have statistically significant (i.e., all t-values exceed 2),and substantially large loadings on their corresponding latent factors. For instance, the observable indicants from the

TABLE 3
Estimated Parameters for the Measurement Model: Results From SME and IS Samples Analyzed by EQS[a]

Parameter	EQS Estimated Values[b] SME Sample (N = 472)	IS Sample (N = 216)
Job Outcomes		
Turnover intentions		
$\lambda_{1,1}$	.88[c]	.72[c]
$\lambda_{1,2}$	.86 (15.5)	.98 (5.31)
Satisfaction		
$\lambda_{2,3}$	.78[c]	.70[c]
$\lambda_{2,4}$	.90 (15.2)	.89 (9.91)
Performance		
$\lambda_{3,5}$	.82[c]	.75[c]
$\lambda_{3,6}$	.78 (9.05)	.83 (5.27)
Job tension		
$\lambda_{4,7}$	.87[c]	.91[c]
$\lambda_{4,8}$	.86 (16.4)	.91 (14.57)
Boundary Role Ambiguity		
Company		
$\lambda_{5,9}$	.72[c]	.76[c]
$\lambda_{5,10}$	.69 (11.1)	.67 (8.70)
$\lambda_{5,11}$	.73 (11.9)	.59 (7.64)
Supervisor		
$\lambda_{6,12}$	.85[c]	.86[c]
$\lambda_{6,13}$	.87 (18.2)	.82 (14.2)
Customer		
$\lambda_{7,14}$	.77[c]	.69[c]
$\lambda_{7,15}$	.83 (13.7)	.83 (9.46)
$\lambda_{7,16}$	.69 (11.5)	.68 (8.16)
Ethical		
$\lambda_{8,17}$	.30 (5.43)	.40 (5.99)
$\lambda_{8,18}$	.99[c]	.99[c]
Other managers		
$\lambda_{9,19}$	.91[c]	.95[c]
$\lambda_{9,20}$	.90 (19.3)	.81 (10.1)
Coworkers		
$\lambda_{10,21}$	.92[c]	.84[c]
$\lambda_{10,22}$	.87 (18.1)	.91 (12.2)
Family		
$\lambda_{11,23}$	.88[c]	.84[c]
$\lambda_{11,24}$	.93 (13.1)	.91 (6.08)
Organizational Factors		
Autonomy		
$\lambda_{1,1}$	.53[c]	.58[c]
$\lambda_{1,2}$	.55 (9.77)	.58 (8.30)
Feedback		
$\lambda_{2,3}$	.92[c]	.94[c]
$\lambda_{2,4}$	.95 (23.1)	.95 (23.0)
Consideration		
$\lambda_{3,5}$	.91[c]	.94[c]
$\lambda_{3,6}$	.90 (20.1)	.92 (20.0)

[a]The estimates were obtained by separately analyzing the SME and IS samples.
[b]Standardized coefficient with t-value in parentheses.
[c]The corresponding parameter was set to 1.00 (unstandardized) to fix the scale of measurement.

job satisfaction measure load .78 and .90 on its underlying factor. In accord with the LVSE approach, the cross-loadings for these observable indicants on other factors have been restricted to zero. A similar pattern for large and significant loadings in the presence of zero cross-loadings is evident for the various constructs of the study. Combined with the previous evidence for acceptable reliability of measures (see Table 2), the findings in Table 3 suggest that the individual measures are sound and that underlying latent constructs are well specified.

Structural model. The estimated structural parameters for the augmented model are reported in Tables 4 and 5. For clarity, only path coefficients that are statistically significant at $p = .05$ (i.e., corresponding z-value > 1.645 for one-tailed test) are shown; paths that were constrained to zero, consistent with the hypothesized model, are identified accordingly.

In terms of organizational determinants of boundary role ambiguity, note in Table 5 that feedback has a significant negative effect on every facet of role ambiguity. The effects range from $-.15$ for the customer facet to $-.35$ for the boss facet. This finding partially supports H_1 in that feedback reduces perceived role ambiguity (as expected); however, the effects are *not* localized to a few facets. Likewise, supporting H_2, autonomy has large, significant, and negative path coefficients for each of the seven role ambiguity facets, ranging from -1.07 for coworker to $-.64$ for boss ambiguity. Hence, greater autonomy for boundary spanners invariably results in broad effects of lower perceptions of role ambiguity. Finally, Table 5 reveals that, consistent with H_3, consideration negatively affects only a few localized facets of role ambiguity. In particular, boss consideration helps significantly to reduce boundary spanners' perceptions of boss, company, and ethical ambiguity. Surprisingly, consideration from the boss appears to *increase* other-manager ambiguity, though the effect is weak. For all other facets, the effect of consideration is nonsignificant.

As shown in Table 4, role ambiguity negatively influences boundary spanners' satisfaction with the job, in accord with H_4. Furthermore, this influence is limited to two facets *internal* to an organization, namely company and boss ambiguity. However, in contradiction to H_4, family ambiguity has a positive effect on job satisfaction, though the magnitude of this positive effect is small in relation to the negative effects of company and boss ambiguity. In contrast, the performance of boundary spanners appears to be affected negatively and strongly by an *external* facet of role ambiguity (i.e., customer facet, path $= -.58$). For all other facets, the effect on performance is nonsignificant. This finding supports H_5. In terms of job ten-

TABLE 4
Estimated Parameters for the Structural Model: Results for Job Outcomes as Dependent Variables From SME and IS Samples[a]

Independent Variable	EQS Estimated Values for Different Job Outcomes[b]							
	SME Sample (N = 472)				IS Sample (N = 216)			
	Turnover	Satisfaction	Performance	Tension	Turnover	Satisfaction	Performance	Tension
Interrelationships Among Job Outcomes								
Turnover	—[c]	—[c]	—[c]	—[c]	—[c]	—[c]	—[c]	—[c]
Satisfaction	−.54 (6.27)	—[c]	—[c]	—[c]	−.23 (2.44)	—[c]	—[c]	—[c]
Performance	—[c]	—[d]	—[c]	—[c]	—[c]	—[d]	—[c]	—[c]
Job tension	.37 (5.03)	−.16 (1.80)	−.44 (3.84)	—[c]	.20 (2.78)	−.11 (1.85)	—[d]	—[c]
Role Ambiguity's Impact on Job Outcomes								
Company	—[c]	−.43 (1.69)	—[d]	1.19 (3.42)	—[c]	—[d]	−.42 (1.84)	—[d]
Boss/ supervisor	—[c]	−.46 (3.81)	—[d]	—[d]	—[c]	−.50 (4.93)	—[d]	.55 (4.51)
Customer	—[c]	—[d]	−.58 (4.03)	—[d]	—[c]	—[d]	−.26 (1.82)	—[d]
Ethical	—[c]	—[d]	—[d]	—[d]	—[c]	—[d]	—[d]	—[d]
Other managers	—[c]	—[d]	—[d]	—[d]	—[c]	—[d]	−.18 (2.10)	—[d]
Coworkers	—[c]	—[d]	—[d]	.20 (2.05)	—[c]	—[d]	.29 (2.41)	—[d]
Family	—[c]	.15 (2.97)	—[d]	—[d]	—[c]	—[d]	—[d]	—[d]
Coefficient of Determination								
R^2	.59	.69	.39	.54	.26	.70	.33	.40
Goodness-of-Fit Statistics								
χ^2	694.1				670.9			
d.f.	357				357			
Normed fit index	.96				.93			
Non-normed fit index	.98				.96			
Comparative fit index	.98				.96			
Average off-diagonal residual	.037				.04			

[a]The estimates were obtained by separately analyzing the SME and IS samples.
[b]Unstandardized coefficient with z-value in parentheses.
[c]The corresponding parameter was set to zero in accord with the hypothesized model.
[d]Though this parameter was estimated, it was nonsignificant at p = .05.

sion, Table 5 reveals that, consistent with H_6, boundary spanners' perceptions of role ambiguity have a positive and significant effect on job tension. These effects, however, are significant only for company (1.19) and coworker (.20) facets.

The estimated interrelationships among job outcomes are reported in Table 4. Though the relationship between performance and job satisfaction is nonsignificant, job tension has a significant negative effect on job satisfaction (−.16). This finding supports H_8 but not H_7. Furthermore, consistent with H_9, job tension influences boundary spanners' performance significantly and negatively (−.44). In terms of turnover intentions, SMEs' satisfaction with the job appears to have a significant influence on their intentions to leave the firm (−.54). This finding supports H_{10}. Finally, SMEs' turnover intentions are also positively affected by tension on the job (.37), as noted in the augmented model.

Model Validation With IS Data

Overall model fit. To assess the validity of the underlying model, the augmented model from the SME sample was fitted to the IS data, yielding the following fit statistics: χ^2 = 670.9, d.f. = 357, NFI = .93, NNFI = .96, CFI = .96, and AOSR = .04 (see Table 4). These fit statistics indicate that the augmented model is consistent with IS data because (1) NFI, NNFI, and CFI are all greater than .90, the cutoff value specified by Bentler and Bonett (1980) for adequate fits, (2)

TABLE 5
Estimated Parameters for the Structural Model: Results for Role Ambiguity as Dependent Variable From SME and IS Samples[a]

Independent Variable	EQS-Estimated Values for Role Ambiguity Facets[b]						
	Company	Boss	Customer	Ethical	Other Managers	Coworkers	Family
SME Sample Results (N = 472): Organizational Determinants of Ambiguity							
Feedback	−.21 (5.27)	−.35 (8.38)	−.15 (3.18)	−.24 (4.74)	−.26 (5.10)	−.22 (4.10)	−.17 (3.20)
Autonomy	−.82 (11.1)	−.64 (10.2)	−.90 (11.1)	−.89 (11.5)	−1.00 (13.3)	−1.07 (13.2)	−.66 (7.41)
Consideration	−.17 (4.08)	−.34 (7.85)	—[d]	−.11 (2.20)	.10 (1.99)	—[d]	—[d]
Coefficient of Determination							
R^2	.89	.79	.65	.48	.68	.65	.30
IS Sample Results (N = 216): Organizational Determinants of Ambiguity							
Feedback	—[d]	−.40 (5.15)	—[d]	—[d]	—[d]	—[d]	—[d]
Autonomy	−1.15 (7.44)	−.49 (5.28)	−1.27 (7.23)	−1.24 (7.22)	−1.09 (6.32)	−1.18 (6.99)	−.62 (3.52)
Consideration	−.25 (1.94)	−.27 (3.55)	−.25 (1.88)	—[d]	.42 (2.81)	—[d]	.25 (1.81)
Coefficient of Determination							
R^2	.82	.91	.78	.48	.38	.56	.13

[a]The estimates were obtained by separately analyzing the SME and IS samples.
[b]Unstandardized coefficient with z-value in parentheses.
[c]The corresponding parameter was set to zero in accord with the hypothesized model.
[d]Though this parameter was estimated, it was nonsignificant at p = .05.

residuals are small, more than 90% of them being within ±.10, (3) the average off-diagonal standardized residual is less than .05, and (4) though the chi square is significant, it is probably adversely affected by the "large" size of the IS sample. Moreover, the fit statistics obtained by fitting the augmented model to IS data compare favorably with those resulting from SME data (see Table 4). Taken together, these findings indicate that the augmented model is valid and adequate for the purposes of understanding the hypothesized relationships.

Measurement model. The estimated measurement parameters for IS data reported in Table 3 offer further evidence supporting the validity of the augmented model. Notably, all estimated loadings are large and statistically significant (i.e., all t-values exceed 2). In addition, the loadings estimated for IS data compare favorably with those estimated for SME data. For instance, the two job satisfaction measures load .70 and .89 in IS data and .78 and .90 in SME data. This pattern is evident for all constructs estimated in the augmented model. Thus, it appears safe to conclude that measurements of the various constructs are reliable (cf. Table 2), meaningful, and stable across samples (cf. Table 3).

Structural model. Tables 4 and 5 provide the estimated structural coefficients for the augmented model from IS data. As in the case of SME data, only significant paths are shown (i.e., z-value > 1.645, $p < .05$). Examination of significant paths in Tables 4 and 5 reveals not only the interrelationships operating in the IS sample, but also key differences between SME and IS samples. Note that, though the same underlying model was posited to be relevant for both samples, important differences were expected in their structural coefficients because of likely disparities in the organizational environments of SME and IS respondents (e.g., size, formalization).

Consider first the organizational determinants of boundary role ambiguity (see Table 5). In IS data, feedback provision has a significant, negative, and localized effect on boss ambiguity (−.40, $p < .001$). For all other role ambiguity facets, the effect of feedback is nonsignificant. Though this finding supports H_1, it contrasts with results from SME data showing feedback to have *broad* effects. For autonomy, the results show that autonomous roles invariably and significantly reduce perceived ambiguity in all facets of one's role. These effects are strong, ranging from −1.27 for customer ambiguity to −.49 for boss ambiguity. This finding supports H_2 and is very consistent with the results obtained for SME data. The results for consideration are mixed, however. Though boss consideration reduces IS boundary spanners' perceptions of company (−.25), boss (−.27), and customer (−.25) ambiguity, it appears to *amplify* other-manager (.42) and family (.25) ambiguity. These results parallel somewhat the findings from SME data showing consideration to reduce company, boss and ethical ambiguity but to increase other-manager ambiguity. Hence, H_3 is partially supported.

In terms of role ambiguity's impact on job outcomes, Table 4 reveals that *only* boss ambiguity has a significant negative effect on job satisfaction (−.50). Unlike that of the SME sample, job satisfaction of IS

boundary spanners is not adversely affected by company ambiguity.[6] Nevertheless, because "boss" pertains to an *internal* facet of ambiguity, H_4 is supported. In contrast, the performance of IS boundary spanners appears to deteriorate with increasing company (−.42), customer (−.26), and other-manager (−.18) ambiguity. Interestingly, coworker ambiguity appears to affect performance *positively* (.29). For all other facets, the impact is nonsignificant. This finding contrasts with the SME result where only customer ambiguity had a significant influence. Because external facets (e.g., customer) were hypothesized to influence job performance, the support for H_5 is partial in IS data. For job tension, *only* boss ambiguity has a significant positive influence (.55). This result contrasts with findings from SME data showing company and coworker ambiguity to increase job tension significantly. Consequently, though H_6 is supported in IS data, the effects are limited to the boss facet.

Table 4 also provides the estimated interrelationships among job outcomes for IS data. For job satisfaction, Table 4 indicates that though the relationship between performance and satisfaction is nonsignificant, job tension has a significant negative effect on job satisfaction of IS boundary spanners (−.11). This finding closely parallels SME results showing that only job tension had a significant negative effect on satisfaction (−.16). Thus, there appears to be strong support for H_8 but not for H_7. However, in sharp contrast to SME results, job tension does not significantly influence the performance of IS boundary spanners. H_9 therefore is not supported. For turnover intentions, Table 4 reveals that both satisfaction (as in H_{10}) and job tension (as augmented on the basis of SME data) have a significant effect. Though increasing job satisfaction reduces turnover intentions (−.23), increasing job tension has an independent positive influence on turnover intentions of IS boundary spanners (.20). These effects are in the direction expected and mimic the results from SME sample.

Discussion

Few researchers have used a *multifaceted* conceptualization of role ambiguity to identify its organizational determinants and study its impact on critical job outcomes (for an exception, see Behrman, Bigoness, and Perreault 1981). Has this disposition to rely on convenient but probably inadequate measures restricted our *substantive* understanding of the determinants and impacts of role ambiguity? Would we have obtained richer *substantive* insights if a multifaceted view of role ambiguity had been used? The study results provide clear and compelling answers to these questions. Specifically, these answers stem from three pieces of evidence: (1) different organizational factors have *differential* effects on role ambiguity facets, ranging from a localized to an across-the-board influence, (2) the various role ambiguity facets relate to behavioral (e.g., performance) and psychological (e.g., satisfaction) job outcomes in predictably *disparate* ways, and (3) role ambiguity is *not* always dysfunctional; rather, certain facets of role ambiguity, under some conditions, appear to help boundary spanners cope with ambiguity in other facets of their role. Taken together, these findings underscore and validate Miles' prediction that significant substantive payoffs will result if researchers forsake global role ambiguity for conceptualizations that are necessarily multidimensional and/or multifaceted. In light of the preceding contributions, the results are discussed next. Following this, implications of the work are drawn for researchers and managers.

Differential Effects of Organizational Determinants

Each of the organizational determinants examined was found to influence one or more role ambiguity facets significantly. More important, the findings reveal that the potency of different organizational factors differs in terms of *across-the-board* or *localized* effects. For instance, in both SME and IS samples, greater autonomy helps boundary spanners to cope with unique demands of their role and alleviates ambiguity in virtually all facets of their role; such effects are likened to *across-the-board* influence. In contrast, the influence of consideration appears to be more *localized*: increasing consideration from the boss is very potent in reducing boundary spanners' company and boss ambiguity but less influential in other facets of role ambiguity, at least in SME data.

The preceding differences probably reflect the nature of the underlying process that relates organizational factors to role ambiguity. Consider the localized effects of consideration. A plausible explanation for these effects is that the degree of socioemotional support provided by the boss does *not* act as a coping mechanism. Rather, it appears to conform to the contingent process posited by Podsakoff et al. (1984) whereby consideration is often shown *after* the boundary spanner performs well. Because boundary spanners' behaviors toward the boss and work are readily apparent to the boss, consideration is more likely to influence boss and company facets of role ambiguity. In contrast, the across-the-board effects for autonomy appear to suggest that a coping mechanism is operative; greater autonomy appears to assist boundary

[6] A plausible reason for this finding may be that the SME sample (being across firms) provides more variability in company ambiguity than the IS sample (being within a firm). In fact, for company ambiguity, $\sigma_{SME} = .72$ whereas $\sigma_{IS} = .66$. The author thanks an anonymous *JM* reviewer for this suggestion.

spanners in coping with the ambiguous demands and expectations of their role. Though these "explanations" are initial steps toward theorizing about the role ambiguity phenomenon, only a multifaceted view of role ambiguity affords a penetrating look into the underlying process. Global conceptualizations are incapable of such illumination.

Interestingly, however, the influence of feedback is localized to boss ambiguity in IS data but is across the board in SME sample. This finding suggests that the etiology of role ambiguity is rather complex; role ambiguity is a function not only of the organizational factors impinging on the boundary spanner, but also of the organizational setting in which those factors operate. In a similar vein, though consideration from the boss helps in reducing boss, company, and customer ambiguity, it actually *increases* other-manager ambiguity in both the SME and IS samples. A plausible explanation for this unexpected, counterintuitive finding is that increased consideration from the boss draws the boundary spanner closer to the boss but away from the other manager. This shift possibly leaves the boundary spanner ambiguous about the expectations of the other manager. Though more research is needed to understand these anomalous findings fully, the results offer new avenues for understanding the sources and formation of role ambiguity perceptions.

Disparities in Role Ambiguity's Impact on Job Outcomes

The results for H_4 though H_6 further underscore the substantive payoffs from multifaceted role ambiguity. More specifically, the expectation for disparities in underlying relationships is confirmed. For instance, though *company* and *boss* facets are significant in predicting boundary spanners' job satisfaction, *customer* uncertainty is more critical in determining job performance, at least in the SME sample. In other words, boundary spanners' perception of *satisfaction* with their job depends largely on *internal* role members whereas their ability to *perform* effectively depends on *external* role members (cf. Behrman, Bigoness, and Perreault 1981).

The findings appear to refine Behrman and his associates' results. In particular, important differences are observed between SME and IS boundary spanners in the impact of role ambiguity on job performance. Though the performance of SME boundary spanners is influenced mainly by customer (*external*) ambiguity, the performance of IS respondents is affected by a range of *internal* and *external* facets including company, customer, and other-manager ambiguity. To the extent that differences in the samples are attributable to organizational size, it is plausible that, in large, formalized organizations, boundary spanners must depend on several role members inside the organization, in addition to the customer, in order to perform effectively on the job.[7] Consequently, role ambiguity may be of greater concern and more potent in large than in small or medium-size organizations.

Furthermore, the study extends this notion of differential potency to job tension. For instance, *internal* facets of role ambiguity are significant predictors of boundary spanners' job tension. None of the external facets are significant in SME or IS data. Notably, in the SME sample, *company* and *coworker* facets are significant, but only the *boss* facet is critical for the IS sample. Evidently, working with the customer does *not* induce tension among boundary spanners; instead, tension stems mainly from uncertainty about facets within the organization, possibly because internal ambiguity is thought to be controllable whereas external ambiguity may be perceived as uncontrollable. Such findings of consistent disparities in the impact of role ambiguity facets on various job outcomes hold considerable promise because they afford opportunities for researchers and practitioners (to be discussed). Clearly, global conceptualizations obfuscate such insights, but a multifaceted view unravels the discriminating impact of role ambiguity.

Interestingly, the turnover intentions of SME and IS boundary spanners are mainly influenced by psychological (i.e., satisfaction, job tension) rather than behavioral (i.e., performance) outcomes. Though performance was hypothesized to affect turnover intentions, that hypothesis is not supported. In contrast, the effects of satisfaction and tension are significant in both samples. Because the role ambiguity model is effective in explaining satisfaction (R^2 = .69 and .70 in SME and IS data) and job tension (R^2 = .54 and .40 in SME and IS data), the role ambiguity facets appear to have a significant *indirect* influence on turnover intentions. In particular, because only the internal facets are found to affect satisfaction and tension, it follows that the turnover intentions of boundary spanners are mostly influenced by internal, *not external*, facets of role ambiguity.

In summary, boundary spanners' job outcomes are *not* easily influenced by manipulating *any* facet of their role ambiguity (as a global conceptualization might suggest). Rather, it is evident that psychological outcomes (e.g., satisfaction, job tension) are dominated by internal ambiguity, whereas behavioral outcomes (e.g., performance) are mostly influenced by external (e.g., customer) ambiguity. The sole exception is that,

[7]Likewise, an alternative explanation of these differences is sampling differences (within and across firms). However, note that for the IS sample both internal and external facets are significant, whereas for the SME sample only the external facet is significant. Because the SME sample is less likely than the IS sample to be affected by restriction of range due to sampling, these findings cannot be easily attributable to sampling differences.

for IS data, performance is affected by both external and internal facets. These findings are fertile ground for theorizing about the role ambiguity phenomenon.

Functional Role Ambiguity

The study results uncover the positive and functional aspects of some role ambiguity facets. For instance, the presence of family ambiguity about boundary spanners' roles is *not* dysfunctional for job satisfaction of SME boundary spanners; rather, it presumably helps to mitigate the negative influence of company and boss ambiguity on job satisfaction. In this sense, family ambiguity is *functional*. Likewise, in the case of job performance of IS boundary spanners, the presence of coworker ambiguity is functional; it helps alleviate the dysfunctional effects of company, customer, and other-manager ambiguity. These results parallel Behrman and his associates' evidence of the *positive* influence of family ambiguity on salespersons' job performance and confirm Hickson's (1966) speculation that some forms of ambiguity are desirable because they facilitate coping, tension reduction, and innovation.

Concluding Notes and Managerial Implications

Before implications are drawn for managers, certain limitations of the study should be noted. Not unlike those of other cross-sectional studies, the results are subject to method artifacts and do not necessarily yield evidence of causal effects. Though the use of multiple samples from different organizational contexts is likely to have reduced the impact of method artifacts, it admittedly results in less control over background variables. Finally, less than ideal response rates for the SME and IS samples are likely to have introduced systematic bias. Additional studies based on a multifaceted view of role ambiguity are needed to understand fully the underlying processes and the limitations of this study.

The study findings substantiate conventional wisdom that role ambiguity among sales and marketing professionals is mostly dysfunctional for key job outcomes, and enhance current thinking by unraveling the intricate relationships that tie different role ambiguity facets to different determinants and impacts. Knowledge of these intricate relationships yields numerous opportunities for practitioners to manage role ambiguity among their employees. Some of the key implications of the study follow.

- A major finding is that boundary spanners' *perceptions* of role ambiguity vary dramatically with variations in organizational factors; thus, though it may be difficult to reduce (objective) ambiguity in boundary-spanning roles, it is certainly feasible to *design jobs* so as to help boundary spanners cope with role ambiguity. This designing involves provision of consideration, feedback, and autonomy. Increasing consideration, feedback, and/or autonomy invariably facilitates coping, but managers also can implement programs that target specific facets of role ambiguity. Consideration provision appears to effectively target boss and company-related ambiguity; consequently, training bosses to be more considerate toward their employees is likely to facilitate coping with boss and company facets of role ambiguity. Such target-specific strategies could be very effective because the study reveals company and boss ambiguity to be crucial determinants of job satisfaction and job tension. Nevertheless, managers can also create an environment that facilitates *across-the-board* coping, such as by designing jobs with greater autonomy for boundary spanners.
- Contrary to conventional wisdom, the study reveals that role ambiguity is *not always* dysfunctional; instead, under some conditions, ambiguity in one facet of the role helps one to cope with other ambiguous facets. However, the specific facets that are functional appear to vary among different organizational environments (e.g., family ambiguity for job satisfaction in SME sample). Thus, given their specific organizational environment and boundary spanner characteristics, managers must carefully delineate facets of role ambiguity that are likely to be functional. More significantly, it is evident that managers must critically evaluate, if not resist, programs that *uniformly* reduce ambiguity in all facets of boundary-spanning roles.
- The study suggests that managers may find it rewarding to implement *tailored training* programs. Specifically, managers can tailor their training programs so as to target specific facets of role ambiguity and achieve specific output goals. For instance, it is evident that boundary spanners' performance is largely dependent on customer ambiguity. Consequently, if managers want to improve performance of their employees, they could target the customer facet and implement training programs that are tailored for reducing and/or coping with ambiguity in interactions with customers. Such tailored programs are potentially not only more *efficient* (i.e., because of their focus), but also likely to be more *effective* (i.e., because of their link to specific outcomes) than currently available methods of reducing global ambiguity. However, because results might vary across different contexts, it is imperative that managers conduct benchmark studies within their specific environments and then design/implement appropriate training programs tailored to their context and need.

Because of the nature and complexity of boundary-spanning roles, it is probably futile and perhaps *counterproductive* to expend resources on programs that eliminate role ambiguity. In contrast, managers

may find it rewarding to put their efforts behind programs that reduce and/or help boundary spanners cope with ambiguity in *specific facets of their role*. Managers are urged to examine closely the implications of the study findings. These findings are hoped to provide the necessary impetus for more efficient and effective programs that facilitate improved performance and psychological well-being of sales and marketing professionals operating at the boundary of the firm.

Appendix
Scale Items Used for the Measures

Measure Type	Measure/Items[a]
Organizational factors	Feedback
	I receive enough information from my boss about my job performance.
	I receive enough feedback from my boss on how well I'm doing.
	There is enough opportunity in my job to find out how I'm doing.
	I know how well I am performing on my job.
	Autonomy
	My job denies me any chance to use personal initiative or discretion in carrying out the work.[b]
	My job gives me considerable opportunity for independence and freedom in my work.
	My job has enough opportunity for independent thought and action.
	I have enough freedom to do what I want on my job.
	Consideration
	My boss is friendly and approachable.
	My boss helps make my job more pleasant.
	My boss does little things to make my work satisfying.
	My boss treats all the workers as his equal.
	My boss looks out for the personal welfare of group members.
Job outcomes	Job satisfaction
	With the extent to which I am fairly paid for what I contribute, I feel . . .
	With the amount of compensation I receive, I feel . . .
	With the kind of benefit plans (vacation, retirement, so on) that go with my job, I feel . . .
	With the opportunity for acquiring higher skills, I feel . . .
	With the opportunity in my job to achieve excellence in my work, I feel . . .
	With the chance of future promotion I have in my job, I feel . . .
	With the working conditions (office space, location, so on) at my job, I feel . . .
	With the nature of work I do in my job, I feel . . .
	With the kind of company policies and practices that govern my job, I feel . . .
	With the amount of recognition and respect that I receive for my work, I feel . . .
	With the respect I receive for my work, I feel . . .
	With the extent to which I am recognized for my work, I feel . . .
	With the degree to which my work is perceived to be important to the company, I feel . . .
	With the technical competence of my immediate boss, I feel . . .
	With the considerate and sympathetic nature of my immediate boss, I feel . . .
	With my boss's ability to lead me and my colleagues, I feel . . .
	With the way my boss helps me achieve my goals, I feel . . .
	With the attitude of my fellow workers toward me, I feel . . .
	With the supportive attitude of my colleagues at work, I feel . . .
	With the opportunity I have in my job to work with people I like, I feel . . .
	With the attitude of my customers toward me, I feel . . .
	With the kind of customers I have, I feel . . .
	With the amount of respect I receive from my customers, I feel . . .
	With the support my family gives me, I feel . . .
	With the amount of consideration my family gives me while on my job, I feel . . .
	With the attitude of my family towards my job, I feel . . .
Job outcomes	Job performance
	How would you rate yourself in terms of the *quantity* of work (e.g., sales) you achieve?
	How do you rate yourself in terms of your *ability* to reach your goals?
	How do you rate yourself in terms of the *potential* you have for reaching the *top 10%* in performance among coworkers in your company?
	How do you rate yourself in terms of *quality* of your performance in regard to customer relations?

How do you rate yourself in terms of *quality* of your performance in regard to management of time, planning ability, and management of expenses?
How do you rate yourself in terms of *quality* of your performance in regard to knowledge of your products, company, competitors' products, and customer needs?

Job tension
I feel a lot of anxiety
I have feelings of low self esteem
I have lower job involvement
I have noticed a loss in my creativity
I am sometimes more accident prone
I tend to be absent from work more often
I feel a loss of responsibility
My performance is lower

Turnover intentions
It is likely that I will actively look for a new job next year
I often think about quitting
I will probably look for a new job next year

[a]The descriptions for the specific scales used (i.e., number of categories and the labels used) for each of the measures are provided in Table 3.
[b]This item was reverse scored.

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