

Though marketers have begun to use the role ambiguity construct in understanding the boundary role phenomenon, several researchers have noted that extant *measures* of role ambiguity are deficient because they do not represent the breadth (or multidimensionality) of the underlying construct. Building on previous work, the authors develop a *multidimensional, multifaceted, 45-item role ambiguity construct* (MULTIRAM) by delineating at a dimensional level the various role ambiguities perceived salient by marketing-oriented boundary spanners such as salespeople and customer service personnel. Using data from multiple samples, they provide evidence for reliability, stability, and convergent and discriminant validity for the seven facets of the MULTIRAM construct. Their analysis further reveals that Rizzo, House, and Lirtzman's global measure of role ambiguity *underidentifies* the role ambiguities faced by boundary spanners. Finally, the authors examine selected correlates and consequences of the MULTIRAM facets. The findings indicate that the MULTIRAM facets have nomological validity and depict differential relationships with the various correlates and consequences examined. Several implications for managers and researchers are discussed, and directions for future research are provided.

Boundary Role Ambiguity in Marketing-Oriented Positions: A Multidimensional, Multifaceted Operationalization

Marketers are interested in applying role theory to understand a wide range of psychological (e.g., job satisfaction) and behavioral (e.g., performance) dimensions of a boundary spanner's job (Behrman, Bigoness, and Perreault 1981; Ford, Walker, and Churchill 1975). In particular, researchers have found that role variables such as ambiguity, conflict, and inaccuracy offer a promising

avenue for studying myriad boundary-spanning roles of marketing personnel who operate at the periphery of the organization, including salespersons, customer service representatives, and industrial buyers. Despite this interest, several critiques of the research have surfaced recently (e.g., King and King 1990). Specifically, the critiques have questioned the nearly sole reliance on a limited set of measures (e.g., the scales of Rizzo, House, and Lirtzman 1970) of equivocal construct validity. For instance, King and King noted that, despite their widespread use, the Rizzo, House, and Lirtzman (RHL) measures have shortcomings because the scale items (1) lack clarity and precision, (2) ignore the multidimensionality of the underlying construct, (3) fail to represent the breadth of the role concepts, and (4) have poor discriminability. Interestingly, though marketers have been in the forefront in developing alternative measures of role conflict and ambiguity (cf. the pioneering work of Ford, Walker, and Churchill 1975), they still are preoccupied with either using global measures or aggregating the multidimensional scale to represent an overall measure.

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We address some of the preceding concerns for the *role ambiguity* construct. We study a single variable in depth rather than a wide range of role constructs because that approach is likely to yield a more thorough understanding of the focal concept. Several reasons dictated our choice of role ambiguity. First, role ambiguity is an important concept in role theory as well as in path-goal theory of leadership. To the extent that marketers are interested in path-goal theory, our study serves multiple constituencies. Second, of all role concepts, role ambiguity has received perhaps the most criticism. For instance, King and King (1990, p. 57) observe that conceptualization and operationalization "issues for role ambiguity [are] of greater concern." Third, in comparison with role conflict, role ambiguity is more amenable to managerial "intervention"—that is, implementing programs that diminish boundary role ambiguity is relatively less difficult. Fourth, studies involving role ambiguity have yielded inconsistent results. Because such inconsistencies may stem from "deficiencies in measurement" (King and King 1990), a focused study of the role ambiguity construct may provide clues to such contradictory findings.

The specific purpose of our study is to address some of the noted shortcomings of the current measures of role ambiguity by developing a *multifaceted, multidimensional role ambiguity* or MULTIRAM construct. We seek to delineate at a dimensional level the various components of role ambiguity perceived salient by boundary spanners in marketing-oriented positions. Hence, we do *not* attempt to develop a unidimensional role ambiguity construct. Rather, we aim to capture the breadth of the focal construct by examining its distinct and diverse dimensions. In doing so, we build on previous work by (1) further refining and enhancing the conceptual domain of role ambiguity, (2) developing the MULTIRAM scale to measure role ambiguity, and (3) providing evidence of the scale's psychometric properties. A notable feature of our study is that the MULTIRAM construct is developed and validated by using data from multiple boundary spanners (e.g., customer service representatives and salespeople) in different organizational contexts (e.g., medium- and large-sized firms). This variability, we believe, is useful in determining MULTIRAM's generalizability. We begin with a brief review of the literature.

BOUNDARY SPANNERS AND ROLE AMBIGUITY

Role theory provides a rich conceptual framework for explaining the importance of role ambiguity as an intervening variable between various job conditions and job outcomes (Kahn et al. 1964). Kahn and his coauthors defined the term "role ambiguity" in a broad sense by noting that (p. 73):

Role ambiguity is a direct function of the discrepancy between the information available to the person and that which is required for adequate performance of his role. Subjectively it is the difference between his actual state of knowledge and that

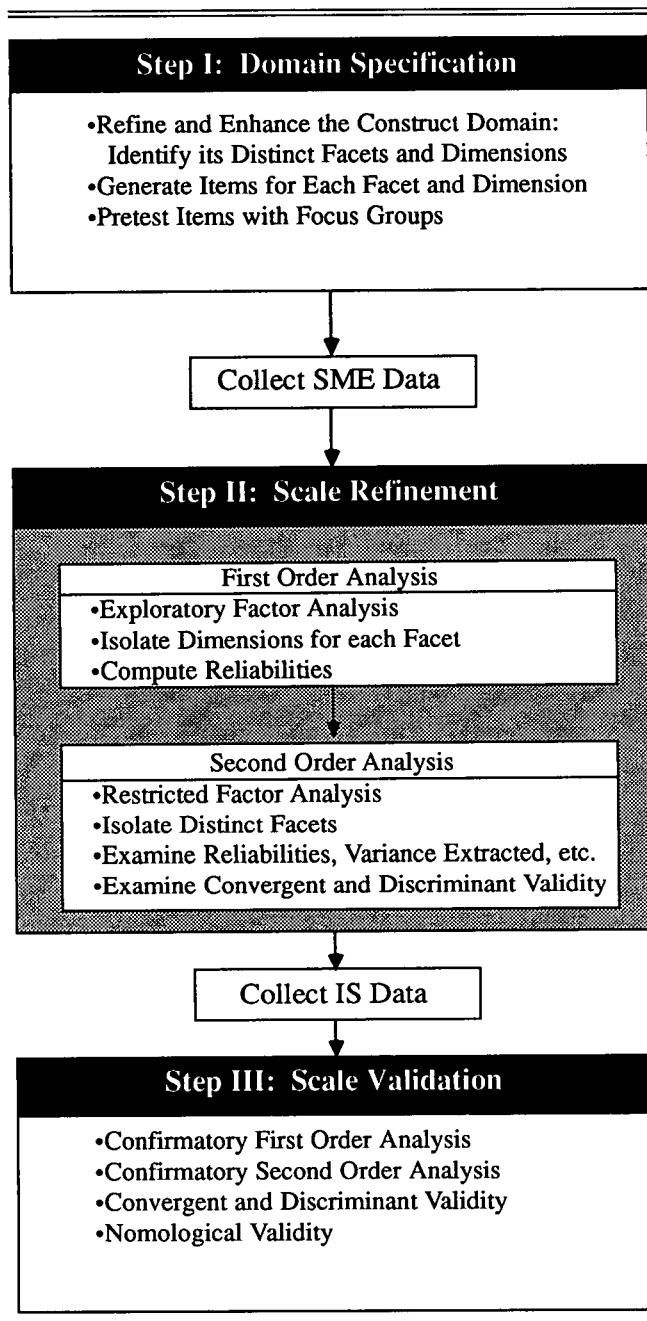
which provides adequate satisfaction of his personal needs and values.

Recently, King and King (1990) elaborated on this conceptual definition by observing that four *forms* of ambiguity are likely to be critical in understanding the uncertainty in a role—ambiguity about (1) one's scope of responsibilities, (2) the role behaviors necessary to fulfill one's responsibilities, (3) role senders' expectations for various role behaviors, and (4) the consequences of one's actions on the attainment of one's goals and the wellbeing of oneself, the role set, and the organization.

Kahn and his coauthors noted that some individuals are more likely to experience role ambiguity when they (1) cross boundaries, (2) produce innovative solutions to nonroutine problems, and (3) experience diverse role expectations and demands from inside and outside the organization. These individuals, called "boundary spanners," are persons who operate at the periphery of an organization (e.g., salespeople, industrial buyers, customer service representatives). Furthermore, the authors noted that role ambiguity leads to stress because concerns about how to proceed with critical tasks lead to frustration, which in turn results in tension. In addition, role ambiguity is thought to impede the ability to improve performance and obtain rewards, thus reducing job satisfaction.

Though theoretical bases for role ambiguity have been well explicated, few researchers have attempted to measure the breadth of role ambiguity as defined by Kahn and his coauthors and elaborated by King and King (1990). According to Jackson and Schuler (1985), 85% of all role research studies use the 6-to-12-item scale of Rizzo, House, and Lirtzman (RHL). This instrument captures unidimensional ambiguity perceptions about the overall or global ambiguity associated with one's role. Despite its widespread use, researchers are uncertain whether RHL's measure can possibly capture the breadth of role ambiguity reflected in the complex domain of boundary-spanning roles. Unfortunately, few alternative multidimensional measures of role ambiguity have been developed and examined for reliability and validity. A noted exception is found in marketing. Specifically, Ford, Walker, and Churchill (1975) and Chonko, Howell, and Bellenger (1986) have explored the various facets of role ambiguity—company, sales manager, customer, and family. Their efforts have provided insight into the ambiguities experienced by industrial salespeople, but little is known about the psychometric properties of the instruments. Thus, whether boundary spanners can discriminate *empirically* among what researchers see as *conceptually* distinct facets of role ambiguity is unknown. Likewise, in the face of inconsistent findings, researchers surmise that current role ambiguity measures may be unfit for use in boundary-spanning contexts (King and King 1990). To address these gaps, we sought to refine and enhance the role ambiguity construct by a three-step approach, summarized in Figure 1. We discuss each step in turn.

Figure 1
METHOD OF ANALYSIS USED FOR DEVELOPING THE
ROLE AMBIGUITY (MULTIRAM) CONSTRUCT



**STEP I
DOMAIN SPECIFICATION: INITIAL
DEVELOPMENT AND PRETESTING**

The cooperation of an office equipment supplier was sought for this phase of the study. In all, six focus groups consisting of six to eight persons each (two with sales-

people and four with customer service representatives) were conducted during regular business hours. Each group was informed that the aim was to understand (1) the various ambiguities they perceived to be salient in performing their role and (2) how such ambiguities affect their job conditions and performance. In addition, face-to-face discussions were conducted individually with some salespeople and managerial personnel. The focus group discussions were tape-recorded; however, all participants were promised confidentiality.

The analysis of focus group/individual discussions indicated that enhancement of the conceptual domain of role ambiguity was warranted. In particular, our analysis confirmed previous findings that boundary spanners' role ambiguity about their (1) company and top management (e.g., policies and procedures), (2) boss (e.g., performance evaluation, support), (3) customers (e.g., service), and (4) family (e.g., time spent on job) is salient and likely to be critical in their performance. Furthermore, this analysis revealed additional facets of role ambiguity—specifically, about (5) managers in other (than their own) departments, (6) coworkers, and (7) ethical conduct on the job (e.g., in interacting with customers). These additional facets are consistent with research findings suggesting that boundary spanners interact with other departments and, in some situations, with their coworkers in performing effectively on the job. Likewise, ethical issues are known to be critical in boundary role positions and are likely to be problematic because no "certain and sure" guidelines are available (in most companies) for such situations (Bellizzi and Hite 1989).

In addition, the focus group revealed that at least some of the role ambiguity facets are likely to be complex in and of themselves. For instance, several different comments were categorized under company policies and top management ambiguity, ranging from promotional criteria to handling of nonroutine activities on the job. Likewise, the boss facet included multifold remarks ranging from the support provided to meeting demands. This complexity has two major implications. First, it suggests that, at least for some facets, a large set of items is needed to capture the richness inherent in each facet. Second, it suggests that, to circumscribe the MULTIRAM construct properly, it is important to include an *intermediate* conceptual level (which we refer to as "facets") between the global definition of role ambiguity and its various dimensions. For instance, ambiguity associated with the company is viewed properly as a facet of the global role ambiguity construct; however, this facet itself may be composed of several dimensions. Therefore, we use the following operational definition.

Perceived role ambiguity is a *multidimensional, multifaceted* evaluation about the lack of *salient* information needed to perform a role effectively. Specifically, this evaluation may include ambiguity about role definition, expectations, responsibilities, tasks, and behaviors in one or more facets of the task environment. These facets, in turn, reflect one or more members of the boundary spanner's role set (e.g.,

customer, boss) and/or activities required to perform a role (e.g., ethical conduct). Finally, each facet may itself be viewed as a multidimensional evaluation of the ambiguity about that facet.

Following King and King, in this definition we view role ambiguity as the salient uncertainties faced by boundary spanners in performing their role and embrace the entire domain of role ambiguity as defined by its various forms. In addition, we build on previous research of Ford, Walker, and Churchill (1975) and Chonko, Howell, and Bellenger (1986) by *refining* (i.e., by considering the global, facet, and dimensional levels) and *enhancing* (i.e., by considering additional facets) previous definitions of role ambiguity. Operationally, we used the qualitative data from focus groups to generate items for the MULTIRAM construct. In all, 55 items were developed. We refined the items by administering them to two groups of personnel (one group composed of salespeople and the other of customer service representatives) and obtaining feedback. On the basis of this feedback, we deleted five redundant items and further refined some items. The items retained for further analysis were (1) company/top management, 14 items, (2) boss, 9 items, (3) customers, 8 items, (4) family, 4 items, (5) other managers, 4 items, (6) coworkers, 5 items, and (7) ethical conduct, 6 items. These items served as input to step II analysis.

STEP II

SCALE REFINEMENT: SALES AND MARKETING EXECUTIVES (SME) STUDY

Sample

The sample was selected from U.S.-based members of the Association of Sales and Marketing Executives (SMEs). SMEs occupy sales and marketing positions in relatively small to medium-sized firms. In all, 2000 members in four states (Minnesota, North Carolina, Ohio, and Texas) were selected at random. About 150 selected members (7.5%) had either moved or were no longer with the company. Hence, the effective sample was 1850. Each selected member was sent a prenotification card, two questionnaire packets, and a reminder card. In all, 518 responses were obtained for a response rate of 28%; 472 were usable (usable response rate = 25.5%).

Analysis Strategy

In a meta-analysis, Churchill and Peter (1984, p. 370) suggest that the conventional scale development process is likely to favor selection of "items [which] are so similar [to each other] that they underidentify constructs." Consequently, we used a scale refinement process (see Figure 1) that placed emphasis on retaining the "richness" or breadth of the focal construct through use of first-order and second-order analysis. In the first-order analysis, we *separately* analyzed each of the seven MULTIRAM facets by means of exploratory factor anal-

ysis (EFA), which helped ascertain the dimensionality and factor structure for each of the seven facets. Once acceptable dimensions were obtained, second-order analysis was performed. It involved examining whether the seven facets obtained in step I provided an acceptable model for the intercorrelations among the dimensions derived from first-order analysis. Recall that the second-order factors are at an intermediate conceptual level between the global construct and its many distinct dimensions. Hence, the second-order factors are useful for further analysis because they retain some of the breadth of the underlying construct under a relatively parsimonious structure. Restricted factor analysis (RFA) via LISREL 7 (Jöreskog and Sörbom 1988) was used to execute the second-order analysis. As RFA allows systematic constraints on the relationships between the dimensions and intermediate facets, it is possible to specify that a particular dimension is a unique "measure" of a specific facet (i.e., cross-loadings are zero). The use of LISREL 7 has another important advantage—it provides a systematic basis for evaluating the "goodness" of the various models investigated. Such evaluations were based on and implemented in accord with the work of Bagozzi and Yi (1988).

First-Order Results

The Appendix lists the items selected for each dimension and each facet on the basis of first-order analysis and summarizes the results by providing the dominant loading for each item and Cronbach's α for each dimension. In addition, the composite reliabilities and variance extracted for each facet are provided. The initial EFA for the 14 company items indicated that two items were inconsistent with the remaining items and three additional items cross-loaded on two or more factors. The EFA was rerun after deletion of those items. The scree plot for the nine company items indicated a clear break after the third value, suggesting the presence of three distinct factors that explain more than 74% of the total variance. Upon oblique rotation, a clear factor structure was obtained. Specifically, all items had a dominant loading (i.e., $\geq \pm .30$) on a single factor and cross-loadings were mostly significant with their differences from the dominant loading $\geq .10$ in absolute value. The three dimensions were labeled "flexibility," "work," and "promotion." The flexibility dimension (two items) taps a boundary spanner's ambiguity about the amount of flexibility he or she has in performing various role activities. The ambiguity about the quantity and the priority of the various tasks that must be performed is captured by the work dimension (four items). The promotion dimension (three items) reflects a boundary spanner's ambiguity about the requirements for promotion. In addition, the flexibility, work, and promotion dimensions have acceptable levels of reliability, with Cronbach's α estimated as .70, .84, and .75, respectively. Finally, the intercorrelations among the three dimensions are between .58 and .49, suggesting that the dimensions are probably distinct.

The EFA for the nine boss items indicated the presence of two distinct factors, which were labeled "support" and "demands" dimensions. The support dimension (four items) appears to measure ambiguity about the support one is likely to receive from the boss. In contrast, the demands dimension (five items) captures the ambiguity about the boss's expectations for various role tasks. The intercorrelation between the two dimensions is .76, indicating that the two dimensions are closely related but *not* redundant. Cronbach's α for each dimension is .86.

The EFA results for the eight customer items showed a clear break after the third eigenvalue, suggesting the presence of three factors that explain more than 75% of the total variance. The three factors were labeled "interaction," "objection," and "presentation." The interaction dimension (three items) appears to measure boundary spanners' ambiguity about how to interact with various customers, whereas the objection dimension (three items) taps their ambiguity about how to address customers' objections. Finally, the presentation dimension (two items) seems to capture boundary spanners' ambiguity about the product benefits and/or company strengths that they should present to the customers. The intercorrelations among the three dimensions range from .69 to .57, supporting the view that these dimensions are likely to be nonredundant. Furthermore, Cronbach's α for the interaction, objection, and presentation dimensions is .78, .81, and .81, respectively.

Next, we examined the EFA results for the six ethical items. For these items, the "break-in-eigenvalues" criterion indicated the presence of two factors. The first factor appears to represent an external dimension—that is, boundary spanners' ambiguity about ethical situations that arise in their role transactions with partners outside the company. In contrast, the internal dimension appears to capture the corresponding ambiguity in relation to role partners inside the company. The intercorrelation between the two dimensions is only .44, indicating that these dimensions are largely distinct. Both dimensions have acceptable reliability, with Cronbach's α of .90 (external) and .83 (internal).

For the remaining three facets (i.e., other managers, coworkers, and family), the EFA for each facet indicated the presence of a single dominant factor. This single factor explained more than 67% of the total variance for each of the three facets. Without exception, the item loadings were high and significant on the single factor extracted. Consistent with this finding, Cronbach's α for these facets is significant and large, ranging from .87 to .88. The implication is that, at least on the basis of the operational items used here, the other managers, coworkers, and family facets cannot be reduced further into dimensions and hence are probably unidimensional.

Second-Order Results

Recall that this analysis involves restricted factor analysis (RFA) of the dimensions obtained in the first-order

analysis. Consistent with this approach, a restricted model was posited such that the items belonging to individual dimensions of the company, boss, customer, and ethical facets were summed and used as indicators of their respective facets. This approach of using first-order dimensions (e.g., flexibility, work, etc.) as "indicators" of a second-order factor (e.g., company) rather than a simultaneous estimation of first- and second-order factors appears justified because of the sample size requirements and the sheer size of the problem (i.e., 45×45 matrix). Moreover, because at least two indicators are needed to model measurement error for the individual facets, the items for the remaining three facets (i.e., other managers, coworkers, and family) were split systematically into two groups of equal size wherever possible. The second-order model is restricted in the sense that indicators are posited to be measures of one and *only* one facet of role ambiguity.

The RFA produced the following statistics: $\chi^2 = 186.6$, d.f. = 83, GFI = .99, AGFI = .99, and RMR = .029. Additionally, the normed fit index (NFI) was .99. Consistent with Bagozzi and Yi's criteria, these statistics suggest that the hypothesized second-order model with seven facets is a reasonably good representation of the SME data. Nevertheless, residuals were examined to evaluate the "goodness" of the hypothesized model. Of the 120 observed intercorrelations (all of which are significant at $p = .01$), 99% of the fitted residuals are less than .10 (in absolute value), and more than 95% of them are smaller than .05 in absolute value. This finding suggests that the seven facets are able to reproduce most of the observed intercorrelations among the role ambiguity dimensions. Hence, it appears that the *a priori* hypothesized seven facets are central aspects of the MULTIRAM construct and the measures of the individual facets are relatively "clean" and reliable.

Additional evidence in support of the preceding results is forthcoming from the data. First, all loadings are significant at $p = .05$ (i.e., T -value > 2.0). Second, note in the Appendix that each facet has a composite reliability of .70 or higher, with the exception of the ethical dimension for which the reliability is borderline. Third, the intercorrelations among the facets reveal that none of them is redundant. In general, the facet intercorrelations range from .85 to .32, with an average of .58. Fourth, the variance extracted by each facet (Appendix) exceeds .50, indicating that each facet has acceptable validity (Bagozzi and Yi 1988).

Finally, the convergent and discriminant validity of the individual facets is supported when the facets are correlated with Rizzo, House, and Lirtzman's (1970) measure of role ambiguity and role conflict (see first two rows in Table 1). The table shows that for SME data, the correlations of role ambiguity facets with RHL's role ambiguity measure are consistently higher than their corresponding correlations with role conflict. For instance, the company facet correlates .69 with RHL's role ambiguity, but only .50 with role conflict. This finding is

Table 1
 CONVERGENT, DISCRIMINANT, AND NOMOLOGICAL VALIDITY OF THE MULTIRAM FACETS: RESULTS FROM
 CORRELATIONAL ANALYSIS OF RHL'S ROLE VARIABLES AND SELECTED CORRELATES AND CONSEQUENCES OF
 ROLE AMBIGUITY

	MULTIRAM facets						
	Company	Boss	Customer	Ethical	Other managers	Coworkers	Family
<i>Convergent and discriminant validity: Rizzo, House, and Lirtzman's (1970) role variables</i>							
First-order correlations from SME data							
Role ambiguity ^a	.69***	.69***	.45***	.35***	.41***	.42***	.22***
Role conflict ^a	.50***	.49***	.31***	.23***	.36***	.26***	.10*
First-order correlations from IS data							
Role ambiguity ^a	.61***	.63***	.34***	.22***	.46***	.42***	.18**
Role conflict ^a	.43***	.31***	.32***	.15*	.14*	.30***	.10
<i>Nomological validity: correlates^b</i>							
Experience ^a	-.17***	-.08*	-.14**	-.05	-.12**	-.08*	-.10*
Education ^a	.08*	.03	.06	-.05	-.01	-.00	-.04
Sex ^c	.13**	.09	.06	.10*	.07	.10*	-.02
Locus of control ^a	.22***	.22***	.15**	.11*	.27***	.25***	.13**
<i>Nomological validity: consequences^b</i>							
Job satisfaction ^a	-.60***	-.64***	-.42***	-.30***	-.41***	-.39***	-.23***
Job performance ^a	-.34***	-.25***	-.43***	-.27***	-.28***	-.27***	-.21***
Job tension ^a	.51***	.50***	.34***	.29***	.37***	.31***	.19***
Turnover intentions ^a	.52***	.50***	.25***	.31***	.27***	.22***	.10*

^aAll values for this variable are Pearson product moment correlations.

^bAll values are from SME data only. Because of space limitations, results from IS data are not reported.

^cAll values for this variable are point biserial correlations.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

indicative of the discriminant validity of the role ambiguity facets. In addition, the role ambiguity facets have large, positive, and significant correlations with RHL's role ambiguity measure. This finding is indicative of the convergent validity of the ambiguity facets. However, the results indicate that RHL's measure of role ambiguity is likely to *underidentify* the role ambiguities faced by boundary role personnel because it appears to be aligned more closely with the company and boss facets. With the other five facets, RHL's measure shares less than 21% of the individual variance (range: customer 20.2% to family 4.8%).

STEP III

SCALE VALIDATION: INDUSTRIAL SAMPLE (IS) STUDY

Because the facets uncovered in the preceding analysis may have capitalized on chance (as the RFA is based on first-order exploratory analysis), a followup study with an industrial sample was conducted in step III to obtain confirmatory evidence.

Sample

The sample was drawn from two divisions of a U.S.-based *Fortune* 500 industrial manufacturer. The bound-

ary 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. From the two divisions, 520 personnel were selected for participation. Usable responses from 216 individuals were obtained for a usable response rate of 41.5%. In contrast to the SME sample, however, the industrial sample represents boundary spanners in a large, diversified, multinational, industrial corporation. This difference in job contexts is likely to afford a more rigorous and insightful analysis of the MULTIRAM construct.

Analysis Strategy

To examine MULTIRAM's validity, we conducted three confirmatory analyses. Initially, first-order analysis was performed via confirmatory factor analysis (CFA) by hypothesizing *a priori* the dimensions expected separately for *each* facet. These hypotheses were based on SME data results; for instance, for the company facet, three dimensions were posited with a loading pattern in accord with that in the Appendix. In addition, the pattern was constrained so that each item loaded on one and *only* one dimension, with cross-loadings set to zero. Next, the

second-order factors obtained from SME data were subjected to validation analysis, which involved performing CFA by positing *a priori* seven distinct facets with cross-loadings constrained to zero. Both analysis were executed by using LISREL 7. Finally, the reliability, variance extracted, and discriminant and convergent validity for each of the facets obtained from IS data were examined. This analysis was analogous to that used for SME data.

First-Order Validation

The CFA results for each of the facets reveal that the fit of the data to the *a priori* hypothesized dimensions ranges from reasonably good (i.e., boss facet $\chi^2 = 75.4$, d.f. = 26, GFI = .93, AGFI = .88, RMR = .04, NFI = .94) to very good (i.e., family facet $\chi^2 = .95$, d.f. = 2, GFI = .99, AGFI = .99, RMR = .01, NFI = .99). Such a conclusion appears justified because (1) the GFI and the NFI exceed .90 for all models, indicating that most of the intercorrelations are "explained," (2) the AGFI, though known to be a more conservative indicator (cf. Bagozzi and Yi 1988, p. 79), approaches or exceeds .90—the cutoff value suggested for "good" models—and (3) the RMR is .05 or less for all models, indicating that residuals are mostly small and insignificant. In addition, all loadings are large and significant (at $p \leq .01$), and the various parameter estimates (e.g., error variances, latent correlations) are within their logical bounds. Hence, the hypothesized dimensions based on SME data (see Appendix) appear to be valid and meaningful underlying latent variables that faithfully reproduce the intercorrelations among the MULTIRAM items. These dimensions were then subjected to second-order validation.

Second-Order Validation

The CFA analysis for the *a priori* model of seven MULTIRAM facets yields a χ^2 of 158.71 (d.f. = 83, $p < .001$), indicating that there are statistical differences between the reproduced and the observed intercorrelations. Because problems with the chi square statistic are well known (Bagozzi and Yi 1988), other indicators for the goodness of fit are given greater prominence. When other indicators are examined, the hypothesized structure appears to be a reasonably good fit to the IS data. In particular, the GFI exceeds .90 and the AGFI is .89. Consistent with this finding, the RMR is only .046, implying that the residual intercorrelations are generally small. In addition, all hypothesized loadings are significant at $p = .01$ and the solution does not yield any evidence for specification errors (e.g., negative variances), suggesting that the *a priori* posited structure (i.e., based on SME data) results in a well-specified and reasonable empirical model. Further evidence in support of this model was obtained by examining the reliability, variance extracted, and convergent and discriminant validity of the individual MULTIRAM facets.

Reliability and Validity Analysis

The results of reliability and validity analysis reveal that the seven MULTIRAM facets are relatively distinct, have acceptable reliability, and individually extract significant variance ($\geq .50$). Specifically, the intercorrelations range from .24 to .89, with an average of .50. These findings suggest that none of the facets is redundant. In addition, the composite reliability for each facet exceeds .70, indicating that the first-order dimensions reliably measure the hypothesized facets. The only exception is the ethical facet, for which the reliability is .66. Likewise, the variance extracted for each facet meets the "50% or more" criterion (cf. Bagozzi and Yi 1988), implying that the MULTIRAM facets are meaningful and valid.

Table 1 (see third and fourth rows) provides additional evidence for the discriminant and convergent validity of the MULTIRAM facets. First, note that each of the seven facets has a higher correlation with RHL's measure of role ambiguity than it has with role conflict. This finding is indicative of the discriminant validity of the facets. Second, for each facet, the correlation with RHL's role ambiguity is positive and statistically significant (at $p = .01$). This finding is suggestive of the convergent validity of the MULTIRAM facets. Consistent with SME data, RHL's measure of role ambiguity is aligned more closely with company and boss facets of role ambiguity than with the other five facets. In this sense, RHL's role ambiguity measure is likely to underidentify the role ambiguities faced by boundary role personnel.

Summary and Discussion

In sum, the evidence reported here appears sufficient to indicate that the 45-item MULTIRAM scale measures seven facets and 13 dimensions of role ambiguity that are theoretically meaningful, empirically distinct, stable across subpopulations, and adequate to tap the breadth of role ambiguity in boundary spanners, hence warranting additional research attention. Though our results appear promising, additional construct validation research to refine the measurement properties of MULTIRAM items may be needed. First, the reliability and stability of the MULTIRAM facets and dimensions should be examined in other subpopulations of boundary spanners and in cross-cultural situations. Second, there is a need to understand the discriminability of individual items and the extent to which the breadth of the role ambiguity construct is measured (also referred to as "bandwidth") by applying latent trait theory methods to the MULTIRAM scale.

In comparison with the role ambiguity scale of Rizzo, House, and Lirtzman, the 45-item MULTIRAM scale involves significant additional costs in practical use because of (1) more items and hence more time/cost for administration, response, and data coding, (2) more complexity of underlying structure and hence more time/cost for data analysis and interpretation, and (3) high opportunity costs for a fixed length of questionnaire.

However, our results suggest that the payoffs from this increased complexity include a deeper and more complete measurement of the role ambiguities faced by boundary spanners. Consequently, use of the MULTIRAM scale is likely to result in better descriptive understanding of the ambiguities inherent in a boundary person's role (e.g., useful for diagnostic analysis). What is less clear at this stage is whether this increased descriptive understanding translates into greater *substantive* understanding by providing greater insights into the consequences and correlates of role ambiguity in boundary spanners. Such payoffs in substantive understanding appear critical in shifting the cost/benefit equation in favor of the more complex MULTIRAM scale. Though a detailed analysis of the MULTIRAM's potential for substantive payoffs is beyond the scope of our study (however, see authors' footnote), we provide some insight into MULTIRAM's ability to enhance substantive understanding via nomological validity analysis.

NOMOLOGICAL VALIDITY ANALYSIS

We investigated four correlates (i.e., experience, education, sex, and locus of control) and four consequences (i.e., satisfaction, performance, job tension, and turnover intentions) of role ambiguity to assess MULTIRAM's nomological validity. Previous meta-analyses have revealed that the selected variables are related significantly to role ambiguity (Jackson and Schuler 1985). We discuss the hypothesized relationships and the results obtained from correlational analysis but, to conserve space, we report only results from SME data.

Experience

With increasing professional experience, ambiguity about what various role members expect and how tasks must be performed is likely to decline. Presumably, experience helps a role incumbent to become more efficient in obtaining information as well as to accumulate a greater quantity of information from the job environment. We assessed experience as the total number of years of professional experience.

Education

Overall, a positive but weak relationship between education level and role ambiguity has been reported. A plausible explanation is that role incumbents with higher levels of education generally occupy higher positions in the organization hierarchy and, at higher organizational levels, role ambiguity is likely to be high. We assessed education by using a 5-category scale: (1) high school, (2) 1 to 3 years of college, (3) college degree, (4) graduate school, and (5) master's or higher degree.

Sex

Female salespersons have been found to perceive significantly higher role ambiguity than their male colleagues. A plausible reason for this finding is that female

salespeople may be less willing to ask for help and to ask questions because of the fear of being perceived as incompetent. Such fear might interfere in their ability to obtain additional information that helps clarify their roles.

Locus of Control

Researchers have found that because "internals" tend to be better informed about their role and task environment than "externals," they should experience less role ambiguity. We used a 12-item measure based on Rotter's (1966) work to examine this relationship.

Job Satisfaction

Previous studies show significant negative relationship between job satisfaction and role ambiguity, with correlations of the order of $-.46$. We used a 26-item multidimensional scale for job satisfaction (pay, policies, recognition, boss, coworkers, customers, and family; composite reliability = $.93$) to assess this relationship.

Job Performance

High role ambiguity is hypothesized to result in lower performance because, when boundary spanners lack knowledge about the most effective role behaviors, their efforts are likely to be "inefficient, misdirected, or insufficient" (Jackson and Schuler 1985, p. 43). Empirical support for this hypothesis is weak, with correlations of the order of $-.24$. We used a self-rating, 6-item measure of job performance ($\alpha = .76$) to examine this relationship.

Job Tension

Role ambiguity is hypothesized to be related positively to job tension because lack of salient information needed to perform a role results in frustration, and frustration leads to tension. We used a 7-item measure (typical items were "I feel a lot of anxiety" and "I have feelings of low self esteem") wherein boundary spanners were asked how often (5-point scale) they had experienced the stated symptoms ($\alpha = .81$).

Turnover Intentions

Turnover intentions are hypothesized to be related positively to role ambiguity because boundary spanners are likely to find ambiguous roles less rewarding and dysfunctional, and hence are prone to seek alternative, less ambiguous, situations. Empirical results yield correlations of the order of $.30$. We used a 3-item measure of turnover intentions (typical item was "I often think about quitting") ($\alpha = .93$).

RESULTS

Table 1 shows the correlations between the MULTIRAM facets and the correlates and consequences. In terms of the correlates, note that all of the significant correlations are in the hypothesized direction. Specifici-

cally, (1) role ambiguity decreases with increasing professional experience, (2) female boundary spanners perceive higher role ambiguity than their male counterparts, and (3) "externals" experience greater role ambiguity than "internals" in boundary-spanning roles. For the cases of education, the correlations are mostly weak and insignificant. However, the only significant correlation for education (with the company facet) is in the hypothesized direction as well; more educated boundary spanners perceive greater company role ambiguity. In addition, Table 1 reveals that the MULTIRAM facets have relatively stronger correlations with the locus of control correlate. Finally, the different MULTIRAM facets appear to vary significantly in their relationships with different correlates. For instance, the other managers and coworker facets correlate strongly with locus of control, whereas the company and customer facets appear to be influenced more by professional experience. This evidence for differential relationships is important because it suggests that the seven MULTIRAM facets are distinct and measure inherently different ambiguities facing a boundary spanner.

The results from correlational analysis of consequences further support the nomological validity of the MULTIRAM facets. First, it is noteworthy that, without exception, all correlations between MULTIRAM facets and examined consequences are significant and in the hypothesized direction. Higher role ambiguity uniformly resulted in significantly and substantially (1) lower job satisfaction, (2) decreased job performance, (3) increased job tension, and (4) greater chances of turnover. Second, consistent with Jackson and Schuler's findings for role ambiguity, the MULTIRAM facets have relatively stronger relationships with the job satisfaction measure. Third, consistent with the findings obtained for correlates, the results for the consequences yield additional evidence of differential relationships for the MULTIRAM facets. Note, for instance, that whereas job satisfaction is affected relatively strongly by company and boss role ambiguity (i.e., in comparison with other facets), job performance is influenced more strongly by customer ambiguity.

Summary and Discussion

The motivation for the study of the correlates and consequences is to ascertain the nomological validity of the MULTIRAM scale. Hence, the preceding results should be viewed neither as a hypothesis for, nor a test of, a "model" of role ambiguity with its antecedents and consequences. Rather, on the basis of previous research, we judiciously selected a limited set of correlates and consequences for the sole purpose of assessing MULTIRAM's nomological validity. The results of our study support nomological validity of the MULTIRAM facets and indicate that the use of the MULTIRAM facets is likely to enhance our *descriptive* understanding of the ambiguities faced by boundary spanners in marketing-oriented positions. Moreover, delineating role ambiguity

to its facet level can possibly contribute to *substantive* advancements in the area because of the MULTIRAM facets' differential potency. We now outline several implications for researchers and practitioners, and offer some guidelines for use of the MULTIRAM scale.

IMPLICATIONS

Our study addresses some recent concerns about the conceptualization and operationalization of role ambiguity. Specifically, we enhance previous work in the area by identifying additional facets of role ambiguity. In particular, we find theoretical and empirical support for three facets (i.e., other managers, coworkers, and ethical conduct) in addition to the four reported by Ford and his associates (i.e., company, boss, customer, and family). Furthermore, we offer a refinement of previous definitions by considering the global, facet (i.e., second-order), and dimensional (i.e., first-order) levels of evaluation. Our empirical results suggest that boundary spanners invoke conceptually meaningful and empirically distinct evaluations at *each* level of the MULTIRAM construct.

Additionally, our results have meaningful implications for practitioners and researchers. In terms of practice, managers of boundary spanners (e.g., sales managers) are likely to find the MULTIRAM instrument a useful tool for diagnosing the role ambiguities faced by their subordinates. Diagnostic information is accessible at the dimensional as well as the facet level such that managers can more precisely pinpoint areas of concern and implement remedial actions. For example, if a salesforce is not performing well because of task ambiguity, use of the MULTIRAM scale might help the manager to ascertain that the customer facet (for example) yields high role ambiguity and, within the customer facet, the presentation dimension (for example) is perceived by the salesforce as exceptionally uncertain. Armed with this diagnostic information, the manager can implement programs (e.g., training) that help reduce customer presentation ambiguity. Furthermore, managers can use the MULTIRAM scale to determine whether different salespeople (e.g., at different career stages) face different role ambiguities that impede their performance. This differential information then can be used by managers to tailor their intervention strategies (e.g., training) to individual boundary spanners. In addition, managers can deploy the MULTIRAM scale as a control mechanism. Specifically, for each MULTIRAM dimension and/or facet, managers can develop norms and tolerable limits based on their particular organizational environment and goals. Then, the MULTIRAM scale can be administered at regular intervals to track perceived role ambiguities. Specific managerial actions can be mandated when role ambiguity exceeds preset tolerance limits.

In terms of research, our results have major implications. Specifically, in future theoretical work, it appears more useful to supplant global measures of role ambiguity (e.g., the Rizzo, House, and Lirtzman measure)

with one or more facets of the MULTIRAM scale. The reason is that the global measure, at best, underidentifies the role ambiguities faced by the boundary spanner and, at worst, is redundant with the MULTIRAM scale. Furthermore, researchers can exercise considerable flexibility in using the MULTIRAM scale. For instance, when the purpose of research is to focus on role ambiguities internal to the organization, researchers may find it preferable *not* to measure the customer and family facets. Likewise, if researchers want to use a global measure of role ambiguity for the purposes of testing a nomological set of relationships and/or theory building, they may find it advantageous to develop a composite measure by summing over the seven facets of role ambiguity. Such a

composite may be a weighted average, giving more emphasis to facets the researcher deems fit. This approach, we believe, is superior to recourse to a global measure of role ambiguity that yields a composite from a severely restrictive measurement of role ambiguities with an unknown weight structure. Thus, we concur with Ford and his coworkers and King and King in prescribing that there is little justification for the continued use of such global measures. Our results for the selected correlates and consequences amplify the benefits of this prescription. Because these benefits promise significant substantive progress, we encourage marketing researchers to use the MULTIRAM scale in their study of boundary-spanning roles.

APPENDIX

THE MULTIRAM SCALE:^a ITEMS, FACTOR LOADINGS, RELIABILITY AND VARIANCE EXTRACTED FROM SME STUDY

Loading ^b	Facet ^c	Dimension ^d	Item description
1.02	Company ($\rho = .77$; $\rho_{vc} = .53$)	Flexibility ($\alpha = .70$)	How much freedom of action I am expected to have
.38			How I am expected to handle nonroutine activities on the job
.82		Work ($\alpha = .84$)	The sheer amount of work I am expected to do
.67			Which tasks I should give priority
.97			How much work I am expected to do
.53			How I should handle my free time on the job
.92		Promotion ($\alpha = .75$)	What I can do to get promoted
.60			How vulnerable to job termination I am
.98			What is the critical factor in getting promoted
.89	Boss ($\rho = .87$; $\rho_{vc} = .77$)	Support ($\alpha = .86$)	To what extent my boss is open to hearing my point of view
.78			How satisfied my boss is with me
.59		Demands ($\alpha = .86$)	How far my boss will go to back me up
.41			The method my boss will use to evaluate my performance
.64			How my boss expects me to allocate my time among different aspects of my job
.55			How to meet the demands of my boss
.49			How I should respond to my boss's criticism
.83			What aspects of my job are most important to my boss
.70			The level of professionalism my boss expects of me
.87	Customer ($\rho = .81$; $\rho_{vc} = .59$)	Interaction ($\alpha = .78$)	How I am expected to interact with my customers
.65			How much service I should provide my customers
.48		Objection ($\alpha = .81$)	How I should behave (with customers) while on the job
.62			How I am expected to handle my customers' objections
.82			How I am expected to handle unusual problems and situations
.56			How I am expected to deal with customers' criticism
.54		Presentation ($\alpha = .81$)	Which specific company strengths I should present to customers
1.03			Which specific product benefits I am expected to highlight for customers
.91	Ethical ($\rho = .68$; $\rho_{vc} = .55$)	External ($\alpha = .90$)	If I am expected to lie a little to win customer confidence
.86			If I am expected to hide my company's foul-ups from my customers
.85		Internal ($\alpha = .83$)	How I should handle ethical issues in my job
.88			How top management expects me to handle ethical situations in my job
.68			What I am expected to do if I find others are behaving unethically
.53			The ethical conduct my boss expects of me
.80	Other managers ($\rho = .83$; $\rho_{vc} = .71$)	— ($\alpha = .88$)	How managers in other departments expect me to interact with them
.75			What managers in other departments think about the job I perform
.80			How I should respond to questions/criticism of managers from other departments
.82			How much information I should provide managers from other departments

APPENDIX—(Continued)

Loading ^b	Facet ^c	Dimension ^d	Item description
.74	Coworkers ($\rho = .85$; $\rho_{vc} = .74$)	— $\alpha = .87$	How my coworkers expect me to behave while on the job
.83			How much information my coworkers expect me to convey to my boss
.84			What my coworkers expect me to do for them
.77			The extent to which my coworkers expect me to share job-related information with them
.64			The kind of attitude my coworkers expect me to have toward the company
.83	Family ($\rho = .86$; $\rho_{vc} = .75$)	— ($\alpha = .88$)	About how much time my family feels I should spend on the job
.82			To what extent my family expects me to share my job-related problems
.81			How my family feels about my job
.79			What my family thinks about the ambiguity (e.g., nonroutine job, no fixed hours of work) in my job

^aAll scale items were assessed by using a 5-point Likert scale with the category labels 1 = very certain, 2 = certain, 3 = neutral, 4 = uncertain, 5 = very uncertain.

^bThe factor analysis results were obtained by the maximum likelihood method with oblique rotation utilizing the FACTOR routine in SPSS*. Because of space limitations, only the dominant loading is shown.

^cThe estimated composite reliability (ρ) and the variance extracted (ρ_{vc}) from restricted factor analysis of MULTIRAM facets (i.e., second-order analysis) is in parentheses.

^dThe estimated Cronbach's alpha reliability for each dimension is in parentheses.

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