

Division of Research
Graduate School of Business Administration
The University of Michigan

October 1979

An Examination of Role Conflict and
Role Ambiguity Under Varying Levels
of Environmental Uncertainty

Working Paper No. 194

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Contrary to the hypothesized relationships, results revealed that role conflict and ambiguity were greater in certain environments than in the uncertain environments studied. It is suggested that the structure and operating mechanisms of the firms may have played a greater part in determining levels of perceived role conflict and role ambiguity than role theorists originally believed.

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The recurring actions of an individual and how those actions interrelate with the behavior of others in a social situation have come to be known as role behavior. Over time, an individual's role behavior tends to stabilize and enhance the predictability of his or her behavior patterns and outcomes (Katz and Kahn, 1978). When collections of roles are combined to reflect the interdependencies among them, a social structure or system is in evidence, a relatively stable collective pattern of behaviors in which each individual plays his or her own part. In an organizational context, roles are arranged to facilitate the conversion of various inputs to outputs to be consumed by the firm's market.

The definition of behaviors appropriate to a particular organizational role intends to clarify the expectation an organization has of a role incumbent. Such definition in the form of a job description, for example, enhances the employee's ability to perform acceptably. But situations may occur which prove dysfunctional to role enactment; two such situations are role conflict and role ambiguity (Hamner & Tosi, 1974; Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964; Gross, Mason and McEachern, 1958).

Role conflict occurs when some required behaviors are incompatible with others or when required behaviors violate personal values; compliance with one expectation renders compliance with

another difficult . The felt intensity of role conflict is, in part, a function of the amount of pressure to change behavior placed on the role incumbent by the role senders, the number of individuals with whom the role incumbent interacts in the course of executing the role (Cummings & ElSalmi, 1970; Snoek, 1966), and the degree to which the conflict is seen as being desirable or tolerable (Kahn, et al., 1964; Getzels and Guba, 1954).

Role ambiguity exists when a role occupant is uncertain about what constitutes appropriate behavior for enactment of a role. Behavior patterns for the role have not been clearly communicated to the incumbent or members of the role set, so the individual does not know precisely what is expected.

Conditions which contribute to incidents of role conflict or ambiguity characterize organizational and subunit climates and, like climate, may vary within as well as across organizations. Kahn, et al., (1964) have suggested that the conditions which contribute to the amount of conflict and ambiguity evident in an organization include 1) organization complexity, 2) degree of organizational fluctuation, and 3) managerial philosophies and practices relating to the diffusion of information.

Organizational complexity--Additional support for the contention of Kahn, et al. (1964) that organizational complexity is related to role conflict and ambiguity is provided by the empirical findings of Snoek (1966) and the theoretical treatment of Merton (1957). Snoek investigated the relationship between

role conflict and diversity of role sets and found them to be positively related. Role conflict was more common in jobs requiring the individual to maintain a highly diversified set of role relationships. Merton (1957) also suggested that role diversity would lead to increased role conflict and ambiguity, pointing out that "those in the role set, and especially those occupying disparate social statuses may have differing expectations (moral and actuarial) of the behavior of the status-occupant" (Merton, 1957; p. 380).

Closely associated with the organizational complexity-conflict relationship is a concept which focuses on the location of a role in an organization's structure and its relationship with role characteristics. Kahn, et al., (1964) found that where a role was positioned in the organization was related to the degree of objective conflict to which the occupant was subjected.

"In general, positions contained deep within the organizational structure were relatively conflict-free; positions located near the skin or boundary of the organization were likely to be conflict-ridden; living near an intra-organizational boundary revealed many of the same effects but to a lesser degree" (Katz and Kahn, 1966, p. 192).

To the extent that roles located "deep within the organization" have less role diversity than those which are located "near the skin or boundary," one would expect the former to exhibit less role conflict and ambiguity than the latter.

Organizational Change--Lyons (1971), in his review of the literature, noted the suggestion of Kahn, et al., (1964) that role conflict and ambiguity tend to be increased by organizational change, including (1) growth which may require reorganization; (2) technological changes which may require changes in social structures, or in the methods by which tasks are performed (Rice, 1958, 1963; Emery and Trist, 1965; Trist and Bamforth, 1951); and (3) frequent personnel changes which produce ambiguities for the person transferred and also for his or her associates.

Roles which demand innovative problem solving are also characterized by objective conflict and subjective tension (Katz and Kahn, 1978). In those situations, actors perceive the time and effort expended on the routine activities of administrative paperwork to be in conflict with their "main purpose in performing the nonroutine activities."

If organizational complexity and rapid organizational change, as defined here, are more characteristic of firms operating in organic, uncertain environments than in stable environments, one could propose that organizations operating in environments which are identifiable by their relatively dynamic characteristics will have, inherent in their roles, greater degrees of role conflict and ambiguity than those organizations operating in environments which are characterized by their high degree of stability.

Managerial Philosophies and Practices--Managerial philosophies and practices constitute another family of variables which may be related to the degree of role conflict and role ambiguity to be found in an organization (Kahn, et al., 1964).

The rationale of the classical approach to organization design has been to control out the variability in the individual-specific predispositions brought to the tasks and replace them with highly prescribed behavior patterns. The result of such a rigid climate would be to reduce role conflict and ambiguity.

Paloli (1967), in an experimental study, differentiated organizations into "regulated" and "natural" types. Regulated organizations were those which had a high degree of specialization among members, high concern for rules and regulations, high amount of work pressure, a high number of formal work levels, high clarity of goals, control based upon authority and power rather than expertise and a low amount of individual freedom for members. This profile approximates the rigid climates which contingency theory suggests would be appropriate under conditions of environmental stability. The opposite characteristics describe the profile of Paloli's "natural" organizations, appropriate to conditions of environmental volatility.

Organizational Variations--According to contingency theories of organization (Galbraith, 1977; Tosi and Carroll, 1976; Lynch, 1973; Lawrence and Lorsch, 1966), as the market and technological environments of an organization become more uncertain, the need for adaptive structures within the organization and the skill

necessary for monitoring the significant external changes increase. Integrative, adaptive, and boundary-spanning activities to coordinate the total organizational effort become more influential. As the external environment becomes increasingly unpredictable, it would be reasonable to expect employees to experience more role ambiguity and conflict, especially among those individuals who must deal directly with the uncertainties of the environment at the organizational boundaries.

Individuals whose roles include a significant amount of interaction with members of the organization's external environment in addition to the contacts within the structure have added potential sources of variance to their sets of role behavior expectations (Kahn et al., 1964). It is conceivable that the variety of demands placed upon an individual from within his organization which produce conflict have common organizational objectives at their base. But when demands emanate from points external to the structure, it is much more likely that the intent of those behavioral requests is less than consistent with demands originating from within the structure itself (Manton, 1975). It is thus feasible that role conflict which is based on the inter vs. intra-organizational expectations cannot be significantly reduced (Walker, Churchill and Ford, 1975). Indeed, it may well serve to define the function of boundary spanning activities in terms of the role player's need to resolve the inherent conflict of environmental demands and resources availability with organizational needs and capacities (Katz and Kahn, 1978).

Contingency theories of organization structure suggest, in some cases explicitly (e.g. Tosi and Carroll, 1976), that the number, duration and significance of contacts made with points external to an organization's boundaries is inversely related to the degree of stability in relevant external environments. As environmental certainty decreases, the monitoring and adjustment activities exhibited by an organization increase. Further, organizations which are successful in dealing with environmental uncertainty should display greater attentiveness and reaction to environmental change, and thus, through greater external contact, experience higher levels of role conflict and ambiguity than organizations in similar environments who are less than successful.

We would expect, then, that organizations experiencing significant amounts of change in their relevant environments would report greater incidents of role conflict and ambiguity because of the higher frequency and significance of interaction with their environments, than organizations operating under more stable situations.

HYPOTHESES

An empirical base of contingency theorists' projections regarding levels of role conflict and ambiguity in various organizational types has yet to be built. The purpose of this study was to begin establishing such a base through examination of the following hypotheses: organizations operating in dynamic environments will report significantly ($P \leq .10$) higher levels (H_1) and tolerance (H_2) of role conflict and role ambiguity (H_3H_4) than will organizations operating under environmental stability.

METHODOLOGY

Sample

Two industries, one volatile and one stable, were chosen on the basis of responses to the Lawrence and Lorsch environmental demands questionnaire and indices of the volatility of firm and industry earnings. The materials evaluation industry represented volatile environments and automotive parts and accessories industry represented the stable end of the environmental predictability continuum. Of the 167 questionnaires distributed to employees of the three firms in materials evaluation, 150 (89.8%) were returned and useable, while 131 (58.2%) of the 225 distributed to two firms in automotive supply were used in the study.

Measures

Levels of perceived role conflict and role ambiguity were measured on the Rizzo, House, Lirtzman (1970) scale. Subjects were asked to respond to statements on a seven point scale ranging from very false (1) to very true (7). Internal reliabilities in this administration of the role conflict and role ambiguity subscales were .76 and .84, respectively. To measure individual's perceptions of the desirability of role conflict and ambiguity, subjects were asked to report how they felt about the particular aspects of their job identified in the standard Rizzo, et al. items (1970). Reliabilities of these subscales were .86 and .77.

RESULTS

The results of t-tests of significant difference between two sample means performed for each of the four hypotheses tested in the study are as follows:

- H₁: Role conflict was greater in stable than dynamic environments ($p < .05$, two-tailed), a result opposite to the direction hypothesized (see Table 1).
- H₂: Tolerance of role conflict tended to be greater for individuals in dynamic as compared to stable environments as hypothesized, although this difference was not statistically significant (see Table 2).
- H₃: Role ambiguity was lower in dynamic than stable environments ($p < .001$), which was opposite to the direction hypothesized (see Table 3).
- H₄: Tolerance of role ambiguity tended to be greater for individuals in dynamic than stable environments, which was opposite to the direction hypothesized, although this difference was not statistically significant (see Table 4).

 Insert Tables 1,2,3, & 4 about here

TABLE 1. Role Conflict: Differences Between
Stable and Volatile Environments

Environment	\bar{X}	σ	n	t	Sig. of t
Stable	3.76	1.75	131	1.96	.05
Volatile	3.34	1.80	150		

TABLE 2. Role Conflict Desirability: Differences
Between Stable and Volatile Environments

Environment	\bar{X}	σ	n	t	Sig. of t
Stable	3.20	1.70	131	.38	n.s.
Volatile	3.25	1.75	150		

TABLE 3. Role Ambiguity: Differences Between
Stable and Volatile Environments

Environment	\bar{X}	σ	n	t	Sig. of t
Stable	* 4.69	1.58	131	3.85	.001
Volatile	* 5.19	1.60	150		

* High scores indicate less role ambiguity (e.g., higher role clarity)

TABLE 4. Ambiguity Desirability: Differences Between
Stable and Volatile Environments

Environment	\bar{X}	σ	n	t	Sig. of t
Stable	*4.96	1.80	131	.51	n.s.
Volatile	*5.07	1.76	150		

*High scores indicate lower desirability of role ambiguity

DISCUSSION

Roles are the point of interface between the individual and the organization, providing individuals with behavioral prescriptions for their position, and mapping the interrelationships of the various roles which, when combined, constitute the total organization. Roles, thereby, provide a link between individual and organization. In formal organizations, the types of behavior individuals exhibit in the enactment of their role are more a function of the organizational setting than of the individual's personality (Katz and Kahn, 1978). When studying role behavior, then, we must identify the context in which the role is being played. This research has attempted to accomplish this by identifying two diverse organizational environments, stable and volatile, selecting organizations from within these environments, and closely examining the variations in role conflict and role ambiguity between these environments. The attempt to empirically verify the tenets of established role theory brought statistically significant results in directions opposite to expectations in two of the four hypotheses and non-significant differences in the remaining pair of hypothesized relationships. Role conflict and ambiguity were reported to be more prevalent in stable than in volatile environments, while differences in the tolerance for role conflict and ambiguity across the environments were not significant.

There are several potential explanations for these findings, including differences in what Greiner (see Lorsch, 1970) has called "basic structure" and "operating mechanisms" as well as differences in the proportions of boundary spanning roles, organizational performance, and organizational size. Discussion of each follows in the context of the dependent variables.

Role Conflict

Basic structure--this characteristic of organizational design focuses on such issues as how the work of the organization will be allocated among positions, groups, departments, etc., and how the necessary coordination for attaining organizational objectives will be achieved. This basic structure is communicated to role occupants through such formal documents as organization charts, job descriptions, and policy and procedure statements.

In stable environments, organizations develop structures which are relatively rigid. Such organizations tend to control their operations through the application of policies and procedures formalized through the organization's repeated experience with similar situations in its past (Galbraith, 1977). Methods of operation are laid out and well defined in operations manuals and job descriptions, frequently leaving employees little room to use their own discretion in decision situations. Individuals are requested or required to follow the formal precedents laid down in organizational policies rather than generating their own solution in a decision situation. When employees feel there is a better way to resolve a problem than to follow the decision

dictated by the organization, they will experience role conflict; tension resulting from a desire to follow two mutually exclusive courses of action.

Conversely, if one is not constrained to follow the organization's established precedents, and, instead is left free to either 1) make a decision independently and simply inform others who will be affected by the decision, or 2) to collect information about a situation and to recommend a course of action to other individuals or groups in the organization, the probability that role conflict will be experienced is relatively low. Lack of reliance on precedents for a decision is indicative of uncertain environments, in which a decision situation is seldom similar to any encountered in the past, rendering the accumulation and use of historical data as a reliable information source for the present or future impossible to predict (Galbraith, 1977).

Inasmuch as firms operating in stable environments develop more formalized controls governing employees' coping behavior than do firms in dynamic environments, role conflict will be greater in the former than in the latter.

Operating mechanisms--These characteristics of organizational structure constitute the day to day means by which managers control procedures, information systems, reward and appraisal systems and even spatial arrangements as well as budgets and work schedules. In this context, we find another possible explanation for the study's results which report role conflict to

be greater in stable environments than in uncertain environments.

Organizations which have developed mechanistic structures in response to stable environmental conditions are likely to develop sequential interdependencies, rigid control standards, and a heavy reliance on staff functions in their operations, which may have the effect of increasing opportunities for role conflict.

If subunits of the organization are held to clearing decisions through "normal channels," referring decisions upward in the hierarchy or obtaining approval from staff, extra departmental or extra organizational sources, the increased number of contacts required open up opportunities for role conflict. Organizations whose subunits of individual members deal with decision situations autonomously would not experience such difficulties, nor be placed in a position so open to role conflict.

As was the case with basic structure discussed above, when operating mechanisms become less rigid and controlling, an individual's level of autonomy in a decision situation increases and the probability that role conflict will be experienced decreases. This infers that levels of role conflict could be higher in organizations in which decisions are subject to others' approval (i.e., in mechanistic firms), than in organizations which allow autonomy and individual discretion in decision situations (i.e., organic firms). The differences observed in reported levels of role conflict might, then, be more directly a function of the organization structure than of

variations in external environments.

Proportion of boundary spanning roles--If boundary spanning roles in stable environments reported greater role conflict than roles deep within organizations operating in dynamic environments (which is feasible according to Thompson's concept of buffering the organization's core), then the mean level of role conflict in a sample drawn from a stable environment could be expected to be greater than that from a dynamic environment if the proportion of boundary spanning respondents representing the stable environment is greater than that from the dynamic environment (Thompson, 1967).

In this study the proportions were not significantly different and when role conflict was compared between environments for boundary spanning roles and non-spanning roles separately, role conflict was revealed to be greater for both roles in the stable environment. Consequently this variable does not appear to explain the findings of this study.

Performance effectiveness--Contingency theory focuses upon the efficacy of various mechanisms (both basic structure and operating mechanisms) which serve the organization in coping with its environment. The implication of this approach is that if organizations deviate from the appropriate mix of mechanisms and environment, the consequences are lower levels of organizational performance. To test the theory, one should consider the impact of deviations from the prescriptions of

the theory on organizational performance. If for example, the firms in a stable environment have greater role conflict than those in a dynamic setting this would not be inconsistent with current theory, provided firms in either environment or both were relatively low performing firms in their industry. If however, they were high performers the results would suggest that the current state of theory is deficient.

In this study five firms were examined. One low and one high performer in the stable environment and one low and two high performers in the dynamic environment. Performance levels were determined by objective (profit, dollar sales, market shares) and subjective measures (rank ordering of industry firms by area experts). When firm performance was not controlled for, role conflict was greater in the stable environment. When the effects of firm performance were controlled for, the same findings were still in evidence. The higher performing firm in the stable environment reported higher levels of role conflict than its counterparts in the dynamic environment. It is to be noted, however, that these high levels of performance in the stable and dynamic environments are not known to be the optimum levels attainable. It is conceivable that if these firms were to adjust their structural arrangements so as to reduce role conflict further in the case of the stable environment and permit higher levels of conflict in the firms in the dynamic environments, the performance levels of all firms might have been even higher. Consideration of actual firm performance also fails to reconcile the findings of this study with the current

state of role theory, although it is conceivable that potential firm performance might bring reconciliation. Given each firm's standing in the industry and the performance information used to categorize performance as high or low, this does not seem a promising alternative.

Organizational size--Role conflict can be expected to increase as the size of the organization increases, due to increased departmentalization, levels of supervision, administrative intensity, and other impacts of size on organizational complexity (Kahn, et al., 1964; Hall, 1972). Consequently, the results of this study could be explained by differences in organizational size, if the firms in the dynamic environment were significantly smaller than those in the stable environment.

Examination of the sizes of the firms in this study show this may have been the case. In absolute terms, the three firms in the dynamic environment were much smaller (as measured by the number of employees; 104, 43, and 21) than the two firms in the stable environment (12,300 and 15,000 employees respectively). Although the data were collected from multiple plant locations in the cases of these larger firms, in each case the plant establishment size was much larger than even the largest of the firms selected from dynamic environments. It must also be noted, however, that the sizes of the firms used in the study were not at significant variance from the norm in either industry. Average firm size in the volatile industry chosen was 46 employees. The three firms included in the study are not at odds with this average. It is interesting to note, however, that the

smallest of the organizations in the sample was also, by all measures, the industry leader.

It is very likely that differences in organizational size could explain at least some of the variance in role conflict observed in firms in this study. Yet whether it could explain fully the finding that role conflict was greater in a stable than dynamic environment cannot be determined from the data included in this study. This question must be addressed in further research.

Tolerance for Role Conflict

The difference in measured levels of tolerance for role conflict between dynamic and stable environments was not significant in the samples used in this study. This suggests that, contrary to the hypothesis tested, individual differences in such tolerance are not systematically related to the characteristics of the organizational environments examined here.

One explanation for this finding rests in the nature of the individual difference measure used in the study. The tolerance measure which was employed tapped the respondents' values regarding the desirability of role conflict in their organizations. A distinction can be made, however, between desirability and legitimacy. Role conflict has generally been found to be undesirable across situations but at the same time it may be perceived to be legitimate in some situations

and not legitimate in others. Woodward found that the principle of unity of command was followed in large batch technology firms but not in job-shops and continuous-process technology organizations. Role conflict was more prevalent but also more legitimate in the latter cases. Burns and Stalker also noted a greater incidence of role conflict in organic than in mechanistic climates. While it was unnerving, and, therefore, undesirable to those involved in either climate, it was nevertheless considered a legitimate phenomenon in the organic climates since, on balance, it was functional in attaining organizational goals. The legitimacy of role conflict is, then, conceptually independent of its desirability. The measure of tolerance for role conflict used in this study focused on the desirability aspect, and yielded non-significant differences when tested for variance across organizational environment. If the measure had been designed to reflect respondents' perceptions of the legitimacy of role conflict as well as its desirability, we might have observed individuals in dynamic environments reporting role conflict as legitimate, yet undesirable, while their stable environmental counterparts deemed it non-legitimate for their environmental situation, and undesirable as well.

Role Ambiguity

Role theorists have proposed that the amount of role ambiguity experienced in an organization should vary inversely with the degree of stability in the organization's environments, because decreased stability implies greater reliance

on external sources of information for the definition of internal operations, and, thus pressures the firm to maintain a significant amount of contact with the external environments of the organization and, thereby increases the probability that individuals in the firm will experience role ambiguity (Katz and Kahn, 1978; Tosi and Carroll, 1976). Stable environments allow a firm the luxury of establishing reasonably reliable long and short range forecasts, routinizing procedures, strictly defining jobs, and the like. Although this proposition has considerable intuitive appeal, it does not hold true in this study. Here, role ambiguity was significantly higher among individuals in organizations existing in stable environments than among individuals in firms operating under dynamic conditions.

Arguments similar to those made for the findings in the area of role conflict might also hold for role ambiguity. Since the behaviors of individuals in the dynamic organizations are guided primarily by their own prescriptions and not by strict or preplanned guidelines set by the organization, ambiguity in the execution of their job occurs only when they are at a point between identifying information necessary to complete a decision and the completion of the data collection and assimilation process. Again, since individuals are relatively independent, the elapsed time may be very short, not allowing the individual to fully experience ambiguity.

If an organization is composed of relatively few structural levels, the opportunity for internal communications to be distorted is reduced because the information is passed through

fewer individuals, requiring little additional clarification or verification from those attempting to use the information. One effect of this is to reduce role ambiguity. Such a phenomenon might explain the results of this study. The lower role ambiguity found among individuals in dynamic as compared to stable environments might be due to the fact that dynamic organizations had considerably fewer hierarchical levels (3 levels) than those in the stable environment (7 levels). As noted in the above discussion on role conflict, the fact that the dynamic firms were much smaller than those in the stable environment also confounds the relationship between role ambiguity and environment. It is conceivable that the size effect on role ambiguity has swamped the environmental effect directly as well as indirectly by impacting on the hierarchical structure of the firms studied. As in the case of role conflict, it appears role ambiguity may have been affected more heavily by the size differences in organizations than their coping mechanisms with environmental characteristics. This is reminiscent of the findings of the Aston studies which concluded that organizational size was a moderator of the impact of technology on organization structure (Hickson, Pugh and Pheysey, 1969). Here size may be moderating the effect of environmental uncertainty on resultant organization structure and internal adaptations to those levels of environmental predictability perceived.

Another possible explanation for these results is that the level of ambiguity reported is a function of individuals'

expectations. In stable environments, an individual is prepared to find very little ambiguity in his job, since job descriptions are detailed, policies and procedures are spelled out and formal structures more clearly mapped. Any amount of ambiguity experienced would be a significant departure from the norm levels expected. If a few incidents resulting in the feeling of ambiguity occur, they are likely to stand out in an individual's memory as being trying moments in which he had difficulty coping or felt particularly uneasy about what was expected of him. The level of ambiguity reported by a person in such circumstances might be relatively high. Correspondingly, an individual dealing with change in unstructured situations on a regular basis might come to define high levels of ambiguity as "normal" for his job, and, consequently, report his assignments to be relatively low in ambiguity.

Tolerance for Role Ambiguity

The relationship between environmental uncertainty and tolerance for role ambiguity is an interesting one. It would seem logical that organizations functioning under conditions of uncertainty would experience high levels of role ambiguity due to the amount and unpredictability of change occurring around them. Ability to adapt organizational operations to relevant changes is essential to the survival of firms coping with high levels of change in their environments. Given this, it follows that individuals in such firms would, by selection, have or develop a greater tolerance for dealing with change and the resultant ambiguity it produces than would individuals in stable

environments. In this study, tolerance for role ambiguity was not significantly different between stable and volatile environments.

As was the case for tolerance for role conflict, the measure of tolerance for role ambiguity focused on the undesirability aspect and may have brought different responses if the items had differentiated between the legitimacy and desirability aspects of ambiguity. Had the measure tapped legitimacy, individuals in dynamic environments might have been found to consider role ambiguity to be more legitimate than did respondents in stable environments, while still rating it as undesirable.

Conclusions

The findings of this study raise significant questions about the validity of the current state of contingency and role theories. The relationships between environment and role conflict and ambiguity do not appear to be as straightforward as theory suggests. Instead of these role characteristics being greater in dynamic than in stable environments as role theory predicts, the reverse was found. Furthermore, instead of tolerance for these role characteristics being greater for incumbents in dynamic compared to stable environments, no difference was found. These findings do not appear to be adequately explained by differences in organizational performance or proportions of subjects in boundary spanning roles, however, there is some evidence to suggest that differences in firm size might be accounting for the unexpected findings. The importance of size suggested here

is consistent with previous studies which indicate size effects swamped the impact of technological constraints on organizational structure. Furthermore, the distinction between legitimacy and affective response could explain the lack of significant differences in tolerance for role conflict and ambiguity.

Further research is required to determine more completely the impact of these possible sources of variance, but, in the meantime, the current formulations of theoretical relationships between the role conflict and ambiguity and tolerance for these characteristics with environment should be treated with caution.

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