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OPRA: A Cross-Cultural, Multiple-Item Scale for Measuring Organization–Public Relationships

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A cross-cultural, multiple-item scale for measuring organization–public relationships (called Organization–Public Relationship Assessment [OPRA]) was developed not only to fulfill the standards of reliability and validity in measurement but also to acquire cross-cultural comparability. After a discussion of the conceptualization and operationalization of the organization–public relationship construct, the procedures used in constructing and refining a multiple-item scale to measure the construct are described. Four data sets including 2 survey data sets (a total of 535 respondents) and 2 long interview data sets (a total of 32 in-person long interviews) were incorporated in the development of OPRA. Evidence of the scale’s reliability, factor structure, and validity is presented. The article concludes with a discussion of the scale’s potential applications and theoretical implications.

An area that has received much attention in the public relations field in the past decade is the organization–public relationship (OPR; Broom, Casey, & Ritchey, 1997; Bruning & Ledingham, 1999; Ferguson, 1984; J. E. Grunig & Huang, 2000; Ledingham, Bruning, & Wilson, 1999). For example, the conceptual foundation for the OPR can be found in Broom et al., Ferguson, and J. E. Grunig and Huang. Empirical research that defined OPR and illuminated the relationship dimensions along which a public perceives and evaluates OPR can be found in Huang (1997) and Ledingham et al.

The major reason that OPR has been emphasized extensively is that the existence of positive relationships between an organization and its publics has been demon-

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strated as one of the major contributions of public relations to organizational effectiveness (Dozier, L. A. Grunig, & J. E. Grunig, 1995; L. A. Grunig, J. E. Grunig, & Verčič, 1997; Huang, 1999). For example, drawing the results from their 10-year IABC Excellence study, J. E. Grunig, L. A. Grunig, and Dozier (1995) concluded that public relations increases organizational effectiveness when it builds a "long-term relationship of trust and understanding" (p. 5). Having identified OPR and conflict resolution as two new variables of public relations effects (Huang, 1997), Huang (1998) explored successfully the causal relationships between public relations strategies and OPR. Moreover, Huang (1999) demonstrated that relationships were key variables mediating the effect of an organization's public relations strategies on resolving the conflicts between the organization and its publics.

This investigation responded to the need for OPR scale measurement (Broom et al., 1997; Bruning & Ledingham, 1999). The purpose of this article is twofold. First, this article develops a cross-cultural, multiple-item scale for measuring OPRs (called Organization–Public Relationship Assessment [OPRA]). The scale is developed not only to fulfill the standards of reliability and validity in measurement but also to acquire cross-cultural comparability so that the instrument can be used in both Western and Eastern cultures (see Appendix). Second, this article discusses the scale's properties and potential implications for public relations theory and practice.

Four data sets were included in the discussion of the development of OPRA: data from 301 effective questionnaires given to legislators and their assistants in the Second Plenary Session of the Third Legislative Yuan in Taiwan from April to June 1997,¹ data from long interviews conducted with 18 legislative members and legislative assistants in April 1997, a second set of survey data from 235 congressional liaisons in the Executive Yuan (executive branches) in Taiwan from January to March 1999, and long-interview data collected in May 1999 from 14 congressional liaisons (public relations practitioners) who served in the Executive Yuan.

The basic steps used in constructing the OPRA (Figure 1) closely parallel the procedures recommended in Churchill's (1979) paradigm for developing better measures of marketing constructs and Parasuraman, Zeithaml, and Berry's (1988) measure of service quality (called SERVQUAL).² The following issues are ad-

¹The data were collected for and reported in Huang's (1997) unpublished dissertation. Partial statistical results of the OPRA scale, such as reliability efficiencies and model comparative fit index (CFI), were presented at the 1998 annual conference of the Association for Education in Journalism and Mass Communication (Huang, 1998).

²Several major differences in scale development between this article and Parasuraman et al. (1988) merit noting. First, Parasuraman et al. used a difference score $Q = P - E$ (where P and E are the ratings on the corresponding perception and expectation statement, respectively), whereas this study used the perception score of OPR. Second, several statistical results such as construct reliability, CFI, and structural modeling corresponding to exploratory factor analyses of OPRA are reported in this study. Third, qualitative results from long interviews were incorporated into the scale development of OPRA.

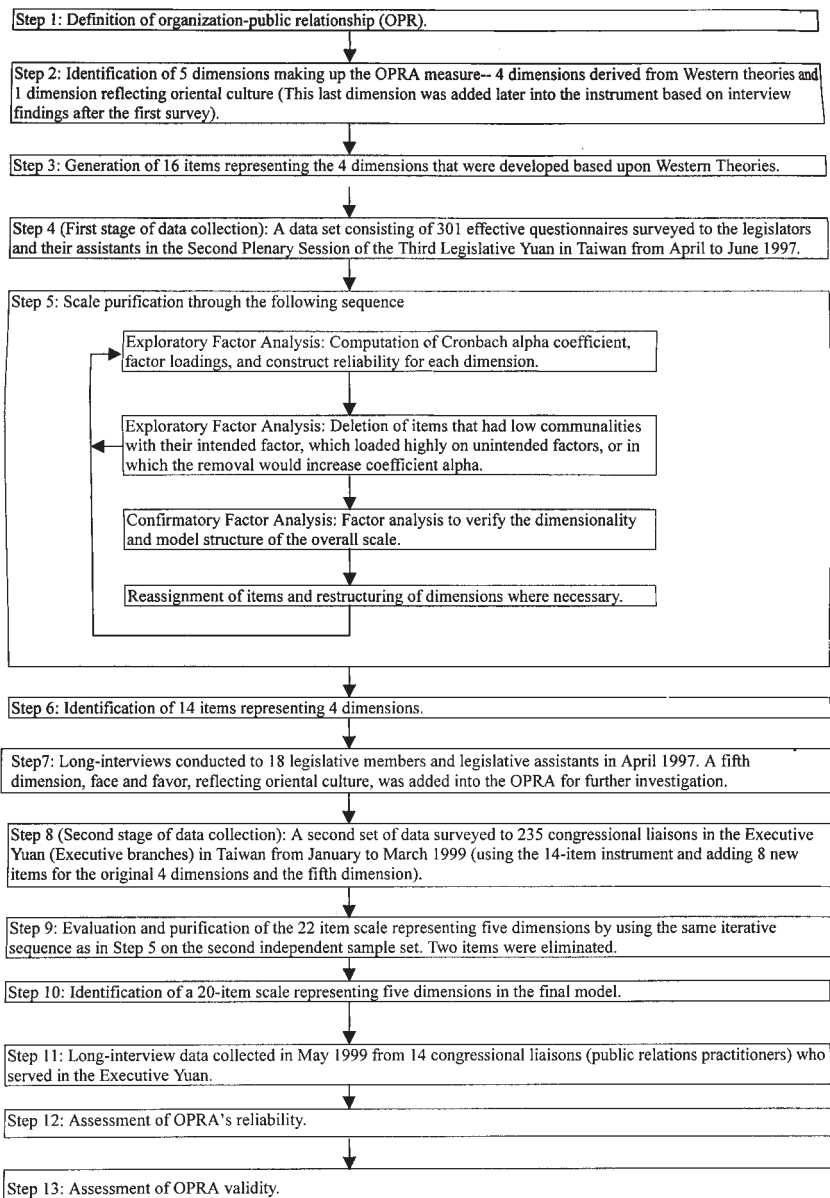


FIGURE 1 Summary of steps used to develop the Organization-Public Relationship Assessment (OPRA).

dressed in this article: theoretical and conceptual foundation of the scale; results of item analysis, internal reliability, and construct reliability assessments of the scale; and evaluation of the validity of the instrument.

This article is divided into three sections. In the Conceptualization section, the OPR construct is defined. Moreover, this section conceptualizes five relationship dimensions that make up the OPRA measure (Steps 1 and 2 in Figure 1). The first four dimensions (trust, control mutuality, relationship commitment, and relationship satisfaction) were developed based on Western theories. The fifth dimension, face and favor, which reflects Eastern culture, was added later, based on interview findings after the first survey in 1997.

The Method and Discussion section presents the procedures of item generation, data collection, and scale purification (Steps 3–11). Critical issues such as scale reliability, factor structure, and validity also are assessed (Step 12). The Implications and Conclusions section discusses theoretical and practical implications of the scale, limitations of the scale, and suggestions for future studies.

CONCEPTUALIZATION

Definition

Although OPR has been a central concept in the public relations literature, as suggested in Broom et al. (1997), there has been little scholarly attention to the conceptual definition and operational measures of the concept. Having reviewed the literature on interpersonal communication, interorganizational relationships, psychotherapy, and system theory, Broom et al. (1997) concluded,

The absence of a useful definition [of *relationship*] precludes measurement of organization–public relationships and forces both scholars and practitioners alike to measure one part or another and make potentially invalid inferences about the relationship. ... The absence of a fully explicated conceptual definition of organization–public relations limits theory building in public relations. (p. 96)

In response to Broom et al.'s (1997) comment, Bruning and Ledingham (1999) defined OPR as the “state which exists between an organization and its key publics in which the actions of either entity impact the economic, social, political, and/or cultural well-being of the other entity” (p. 160).

Whereas Bruning and Ledingham (1999) defined OPR from the perspective of relationship impacts, Huang (1997) and J. E. Grunig and Huang (2000) examined OPR from the perspective of relationship characteristics. Two basic assumptions underlie Huang's (1997) approach in defining OPR: Relationships consist of more than one fundamental feature, and four relational features represent the construct of OPR. In essence, J. E. Grunig and Huang and Huang (1998) agreed with

Burgoon and Hale's (1984) and Canary and Spitzberg's (1989) assertion that it is important to conceptualize relational characteristics in terms of universal features. Moreover, many published works had demonstrated conceptually and empirically that a relationship is composed of more than one relational dimension (Burgoon & Hale, 1984, 1987; Canary & Spitzberg, 1989; Canary & Stafford, 1992; Millar & Rogers, 1987; Stafford & Canary, 1991). Based on both conceptual foundations and empirical data, Huang (1998) defined OPR as "the degree that the organization and its publics trust one another, agree on one has rightful power to influence, experience satisfaction with each other, and commit oneself to one another" (p. 12).

Having reviewed the literature on organizational persona (Heath, 1992), corporate person (Cheney, 1992; Goodpaster & Matthews, 1982), and publics and stakeholders (J. E. Grunig & Repper, 1992), Huang (1997) further identified the following properties of OPR. First, OPR could be a relationship between a corporate person and another corporate person or relationships between a corporate person and a group of seemingly unrelated individuals. Second, OPR is a subjective experience rather than objective quality. Finally, at both interpersonal and interorganizational levels, relationships often involve the exchange of resources, although the resources to be exchanged at each level might be different.

Four Relational Features of OPR Derived From Western Literature

Four relationship dimensions derived from Western literature served as the basic structure from which items were derived at the first stage of OPRA scale development. The four dimensions of trust, control mutuality, relationship satisfaction, and relationship commitment are conceptualized as the essences of OPR. A detailed description of the four dimensions can be found in J. E. Grunig & Huang (2000). My reasons for emphasizing the importance of these factors are as follows.

First, as suggested in the conceptualization of *relationship*, these key relational features occur consistently in the literatures of interpersonal and organizational relationships: trust (L. A. Grunig, J. E. Grunig, & Ehling, 1992; Stafford & Canary, 1991), control mutuality (Burgoon & Hale, 1984, 1987; Canary & Spitzberg, 1989; Canary & Stafford, 1992; Ferguson, 1984; Stafford & Canary, 1991), commitment (Aldrich, 1975, 1979; Burgoon & Hale, 1984, 1987; Canary & Spitzberg, 1989; Canary & Stafford, 1992), and satisfaction (Ferguson, 1984; L. A. Grunig et al., 1992).

Second, I believe that these four factors represent the essence of OPRs. For example, control mutuality reflects the unavoidable nature of power asymmetry in OPRs. Likewise, both trust and satisfaction reflect the cognitive and affective aspects of all relationships. Moreover, the level of commitment reflects the degree of resource interchange, which includes emotional and psychological aspects of interpersonal relationships and behavioral aspects of interorganizational relationships. The characteristics of these four relational outcomes are summarized as follows.

Control mutuality. Stafford and Canary (1991) defined control mutuality as “the degree to which partners agree about which of them should decide relational goals and behavioral routines” (p. 224). The notion of control mutuality is similar to other concepts suggested as being critical to relationships, such as Bruning and Ledingham’s (1999) notion of mutual legitimacy, Aldrich’s (1975, 1979) concept of reciprocity, Ferguson’s (1984) idea of distribution of power in the relationship, Millar and Rogers’s (1976) construct of power, and Moore’s (1986) notion of empowerment. In summary, this article adopts Hon and J. E. Grunig’s (1999) conceptualization and defines control mutuality as “the degree to which parties agree on who has rightful power to influence one another” (p. 13).

In essence, the sense of control mutuality between the opposing parties in a relationship is critical to interdependence and relational stability (Stafford & Canary, 1991). Furthermore, the concept of control mutuality is germane to public relations practice, especially in relation to the practice of symmetrical or ethical communication. Huang’s (1999) study revealed that control mutuality is one of the two major variables mediating the effects of public relations strategies on conflict resolution (the other is trust). More specifically, Huang demonstrated that the use of symmetrical or ethical communication and two-way communication could produce control mutuality in the relationship. Control mutuality then could constructively inspire the counterpublic to search for creative and mutually beneficial solutions or to seek assistance from a third party to resolve the conflict. In summary, for a stable, positive relationship, control mutuality among the parties should exist to some degree.

Trust. Parks, Henager, and Scamahorn (1996) defined trust as the belief that others will not exploit one’s goodwill (Yamagishi, 1986; see also Komorita & Carnevale, 1992). Canary and Cupach (1988) conceptualized trust as “a willingness to risk oneself because the relational partner is perceived as benevolent and honest” (p. 308). From the perspective of relationship marketing, Morgan and Hunt (1994) defined trust “as existing when one party has confidence in an exchange partner’s reliability and integrity” (p. 23). They also quoted Moorman, Deshpande, and Zaltman (1993), who defined trust as “a willingness to rely on an exchange partner in whom one has confidence” (p. 82). To sum up, trust highlights one’s confidence in and willingness to open oneself up to fair and aboveboard dealings with the other party. Thus, Hon and J. E. Grunig (1999) defined trust as “one party’s level of confidence in and willingness to open oneself to the other party” (p. 14).

Trust has been a critical construct in the public relations field. For example, Bruning and Ledingham (1999) included trust as one of the nine dimensions in their OPR scale. Likewise, L. A. Grunig, J. E. Grunig, and Ehling (1992) stressed the importance of trust and credibility, inasmuch as trust from publics enables an

organization to exist. Trust has also been a critical notion in interpersonal relationships (Canary & Cupach, 1988) and organizational conflicts in which risk is involved (Fitchen, Hearth, & Ressenenden-Raden, 1987; Huang, 1994; Krimsky & Plough, 1988; National Research Council, 1989).

Several researchers have examined trust and the lack of trust in relationships. Huang's (1999) study demonstrated that except for control mutuality, trust is the second critical element in an OPRA scale: Trust between an organization and its publics can mediate the effect of public relations strategies on conflict resolution. To be more specific, the empirical data revealed that an organization's use of symmetrical or ethical communication and two-way communication can generate trust in OPR. The sense of trust, in turn, could reduce the possibility that a public would adopt distributive strategies. A lack of trust contributes to a public's use of "forcing" strategies.

Relational satisfaction. Unlike control mutuality and trust, which might involve cognitive dimensions, satisfaction encompasses affection and emotion. Hon and J. E. Grunig (1999) defined relationship satisfaction as "the extent to which one party feels favorably toward the other because positive expectations about the relationship are reinforced" (p. 14). Likewise, Hecht (1978) conceptualized satisfaction as the favorable affective response to the reinforcement of positive expectations in a certain kind of situation. Stafford and Canary (1991) held that from a social exchange perspective, a satisfying relationship is one in which "the distribution of rewards is equitable and the relational rewards outweigh costs" (p. 225). They also indicated that perceptions of partners' constructive maintenance behaviors increase one's satisfaction with the relationship, and they thus concluded that relational satisfaction probably is the hallmark of effective relational maintenance.

The importance of relational satisfaction as a crucial attribute of relational quality has been acknowledged widely (Ferguson, 1984; Millar & Rogers, 1976; Stafford & Canary, 1991). As suggested in Hendrick (1988), relationship satisfaction is one of the major established areas of relationship assessment, with numerous measures to assess feelings, thoughts, or behaviors in intimate relations. Likewise, Ferguson held that the degree to which both an organization and its public were satisfied with their relationship is one of the significant indicators for gauging organizational relationships with strategic publics.

Relational commitment. Hon and J. E. Grunig (1999) defined relationship commitment as "the extent to which one party believes and feels that the relationship is worth spending energy to maintain and promote" (p. 14). In this study, two aspects of commitment for an OPR were emphasized: affective commitment and

continuance commitment. According to Meyer and Allen (1984), continuance commitment is a commitment to continue a certain line of action, whereas affective commitment is an affective or emotional orientation to an entity.

From the perspective of relationship marketing, Morgan and Hunt (1994) defined relationship commitment as

an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth promoting and savoring to ensure that it endures indefinitely. (p. 23)

They also quoted Moorman, Zaltman, and Deshpande (1992), emphasizing that commitment to a relationship is “an enduring desire to maintain a valued relationship” (p. 23), and concluded that commitment is central to the relationship of the organization and its various partners.

The literature reveals that commitment has long been a central notion in the social exchange approach (Stafford & Canary, 1991). Bruning and Ledingham (1999) adopted this concept into their nine-dimension scale. Cook and Emerson (1978) used the concept of commitment to distinguish social from economic exchanges. Likewise, commitment is examined as an effective indicator of internal relationships in an organizational setting. For example, commitment has been associated closely with increased organizational citizenship, recruiting and training practices, and organizational support (Morgan & Hunt, 1994). In service relationships, Berry and Parasuraman (1991) held that relationships are built on the foundation of mutual commitment. Likewise, in relationship marketing literature, Morgan and Hunt conceived of brand loyalty as a form of commitment. Following a similar line of conceptualization, I believe that the four components contributing to organizational relationships identified by Aldrich (1975, 1979)—formalization, intensity, reciprocity, and standardization—can be viewed as forms of commitment in OPRs.

A Fifth Dimension Reflecting Eastern Culture

Chinese culture can be characterized as relationship oriented (Bond & Hwang, 1986; Hwang, 1987) or socially oriented (Yang, 1981). In essence, the most notable characteristic in eastern Asia is the emphasis on social relationships (Yum, 1988). Having analyzed the social psychology of Chinese people, Bond and Hwang maintained that the essential aspects of Confucianism in constructing a Chinese social psychology are the following: People exist through and are defined by their relationships to others, these relationships are structured hierarchically, and social order is ensured through each party’s honoring the requirements in the role of rela-

tionships. Thus, Bond and Hwang concluded that *guanxi* (“social relations”) is a term used to denote particularistic ties in China and is the key concept for understanding Chinese behavior in social (Fried, 1969), political (Jacobs, 1979), and organizational (Walder, 1983) contexts.

In a society where relationships between parties have been clearly and hierarchically defined, the Chinese further developed a unique cultural characteristic: *Gao guanxi* (Huang, 2000), the exploitation of personal relations or human networks, is a behavior that the suppressed class often uses to show its association with power and to solve its practical daily life problems. In essence, manipulating interpersonal relationships has long been a strategy for attaining desirable social resources in Chinese society (Chiao, 1981).

Renqing ‘favor’ and *mianzi* ‘face.’ Hwang’s (1987) model of face and favor in Chinese society helped explain the context in which and the techniques by which the behavior of *gao guanxi* would occur. In Hwang’s theory, to strive for social resources (e.g., money, goods, information, and status) controlled by a particular allocator, a person can adopt several strategies to enhance his or her influence over the allocator. To be more specific, when a person is barely acquainted with a resource allocator, he or she can “pull” or “work” the connections (*la guanxi* or *gao guanxi*) by “asking an intermediary of high social status to introduce the petitioner to the allocator and to solicit a favor from the allocator on his or her behalf” (p. 225). In conclusion, Hwang noted, the rules of *renqing* and *mianzi* are the means people use most to expand their human network and obtain resources from resource allocators.

Renqing and *mianzi* can be understood as two aspects: a strategy to be used and a resource to be exchanged. This article adopts the latter perspective to define face and favor as kinds of resources to be exchanged in OPR.

From the perspective of strategy, *renqing* connotes a set of social norms by which one must abide to get along well with other people in Chinese society. Hwang (1987) maintained that the norm of *renqing* includes two basic types of social behavior: “(a) Ordinarily, one should keep in contact with the acquaintances in one’s social network, exchanging gifts, greetings, or visitations with them from time to time, and (b) when a member of one’s reticulum gets into trouble or faces a difficult situation, one should sympathize, offer help, and do a *renqing* for that person” (p. 954).

The strategy of face, or face-work, is also important in Chinese society. In general, maintaining face or doing a face-work in front of others is important in social interactions, especially for expanding or enhancing human networks. People might deliberately arrange the setting for social interaction, take particular care with personal appearance, and behave in a specific manner to shape a powerful and attractive image (Bond & Hwang, 1986). According to Bond and Hwang, the more skilled the impression management is, the more likely the resource allocator will be to accept the petitioner’s request. If the allocator rejects the pleas, the petitioner

loses face, and both sides might feel disaffected in the long run. Thus, the allocator generally is well advised to do a favor (*renqing*) and grant the request.

This discussion on the strategies of *renqing* and *mianzi* provides a sufficient foundation for understanding the second perspective of these two terms (i.e., the perspective of resource exchange). In Chinese society, *renqing* and *mianzi* are regarded as resources a person can present to another as a gift in the course of social exchange (Hwang, 1987). In other words, face and favor can be used as a medium of social exchange (Hwang, 1987). Hwang further explained that in Chinese society, when one has happy occasions or difficulties, one's acquaintances are supposed to offer a gift or render some substantial assistance. In such cases, it is said that they send their *renqing*, and thus the recipient owes a *renqing* to the donors.

To further define the resource aspect of *renqing*, Hwang (1987) adopted Foa and Foa's (1976) theory that used the two dimensions of concreteness and particularism as coordinates to describe the properties of resources that are exchanged in social interaction. Hwang maintained that *renqing* occupies the same location as the resource *love* does. Among other resources such as money, service, and goods, according to Hwang, *renqing* is located at the highest position on the dimension of particularism. This means that a person is likely to exchange *renqing* only with particular partners in his or her interpersonal network. On the other hand, *renqing* is located near the center of the dimension of concreteness. This means that as a resource for social exchange, *renqing* might contain not only such substantive materials as money, goods, or services but also some abstract component of affection. This is why *renqing* is so difficult to calculate and why one is never able to pay off debts of *renqing* to others.

METHOD AND DISCUSSION

My premise for developing OPRA was that relationships consist of more than one fundamental feature, which was demonstrated conceptually and empirically in other studies (Burgoon & Hale, 1984, 1987; Canary & Spitzberg, 1989; Canary & Stafford, 1992; Millar & Rogers, 1987; Stafford & Canary, 1991). In essence, OPRA was developed to meet standards of reliability and validity. As Parasuraman et al. (1988) suggested for assessing the quality of an organization's service, an appropriate approach is to measure a public perception toward it. In a similar vein, this article proposes³ to measure the quality of OPRs from the perspective of a public's perception of a specific relationship.

³Parasuraman et al. (1988) maintained that unlike goods quality, which can be measured objectively by such indicators as durability and number of defects, service quality is an abstract and elusive construct because of three features unique to services: intangibility, heterogeneity, and inseparability of production and consumption.

Generation of Scale Items

Items representing four dimensions of OPRA (control mutuality, trust, relationship commitment, and relationship satisfaction) were generated for the initial item pool. The initial measurement was based primarily on items demonstrating high reliability and validity in published Western studies. I used Stafford and Canary's (1991) measurement instrument of control mutuality, which demonstrated reliability and predictive validity in research on influence and conflict (Canary & Cupach, 1988; Canary & Spitzberg, 1989; Stafford & Canary, 1991). In addition, Morgan and Hunt's (1994) instrument was used to measure trust between the Legislative Yuan and Executive Yuan. The reliability alpha Morgan and Hunt (1994) obtained for their study was .949.

In addition, I adopted Hendrick's Relationship Assessment Scale, which has been accepted and applied widely because of its generic characteristics describing relational satisfaction (Metts & Cupach, 1990), with some necessary refinements to reflect a specific relationship to be measured. For example, the following three changes were made: substitution of the phrase "the executive department" for the word "mate," and the word "relationship" for the word "marriage," as well as changing the wording from questions to narrative statements. Finally, I consulted Stafford and Canary's (1991) measurement of commitment, Morgan and Hunt's (1994) construct of relationship commitment, and Mowday, Steers, and Porter's (1979) notion of continuance commitment to create the items measuring relational commitment. The reliability alpha in Morgan and Hunt was .895. The average alpha for Stafford and Canary's 5-item instrument was .76. This process resulted in the generation of 16 items as the initial item pool (approximately 5 items per dimension).

Steps for Scale Purification

For scale purification, two stages of steps were adopted: exploratory factor analysis for the first stage and confirmatory factor analysis (CFA) for the second. To be specific, an exploratory factor analysis was used to create a preliminary version of measures. After items with low loadings for a given factor were removed, a CFA was conducted to examine the validity of the measurement structure. In essence, as suggested in Parasuraman et al. (1988), the first stage focused on "(1) condensing the instrument by retaining only those items capable of discriminating well across respondents having differing quality perceptions about firms in several categories, and (2) examining the dimensionality of the scale and establishing the reliabilities of its components" (p. 13). The second stage was essentially confirmatory and involved reevaluating the revised scale's dimensionality and reliability by analyzing fresh data from a different sample.

Reliability analyses for the instrument were conducted. First, Cronbach's alpha was used to assess the scale's reliability by examining internal consistency of

items. In addition to Cronbach's alpha test, I conducted a second reliability test, which used the amount of total standardized variance and covariance explained by a factor to be divided by the total amount of standardized variance and covariance to assess construct reliability.

Data Collection, First Stage

A sample of 311 legislative members and their assistants were surveyed in 1997 in Taiwan. The data were used to purify initial instruments containing a 16-item instrument (Huang, 1998). A 4-point Likert-type scale ranging from 1 (*never*) to 4 (*often*) was used in the OPRA measure. The respondents were divided evenly between men (49%) and women (51%). In addition, the proportion of party members represented in this sample closely paralleled the actual proportion of seats held by these parties in the Second Plenary Session of the Legislative Yuan (i.e., 46% for Kuomintang, 33% for Democratic Progressive Party, and 13% for New Party).

Scale purification, first stage: Exploratory factor analyses. As suggested in Parasuraman et al. (1988), the basic purpose of this research stage was "to develop a concise instrument that would be reliable and meaningful in assessing quality in a variety of service sectors" (p. 14). Purification of the instrument began with the computation of Cronbach's alpha in accordance with Churchill's (1979) recommendation. Because of the multidimensionality of the OPR construct, the alpha coefficient was computed separately for the four dimensions to ascertain "the extent to which items making up each dimension shared a common core" (Parasuraman et al., 1988, p. 19).

Then the factor loading of each item was computed. On the basis of this analysis, poorly performing items were eliminated if they turned out to be the second factor extracted in the intended factor, had factor-loading coefficients opposite those of the other items of their respective factors,⁴ and had factor loadings of less than .65 with the other items of their respective subscales.⁵ Thus, items that had low commonalities with their intended factor or that loaded highly on unintended

⁴The negatively worded items were reverse scored.

⁵A factor loading represents the correlation between an original variable and its factor. The larger the absolute value of the factor loading, the more important the loading is in interpreting the factor matrix. In exploratory factor analysis, there is the question of how large a variable's factor loading coefficient must be to use the variable as a constituent in defining the given factor. Researchers typically consider variables with factor loading coefficients of at least .30 in absolute value as worthy of consideration. Hair, Anderson, Tatham, and Black (1995) held that loadings with an absolute value of .30 are considered to meet the minimal level. Loadings of .40 are considered more important. If the loadings are .50 or greater,

factors were eliminated. After that, an iterative sequence of computing alphas and factor commonalities again was followed by deletion of items.

The results demonstrated that trust, control mutuality, relationship satisfaction, and relationship commitment were viable constructs for measuring OPRs. The values of the alpha coefficient for trust, relationship satisfaction, relationship commitment, and control mutuality were .71, .79, .73, and .58, respectively. The construct reliability values for these four constructs were .74, .80, .72, and .62, respectively. Among these four constructs, control mutuality had the lowest internal consistency and construct reliability. The other three constructs had much higher construct reliability and internal consistency of items and therefore reached acceptable standards.

The alpha values, construct reliability, and factor loadings pertaining to the 14-item instrument are summarized in Table 1. The relevant reliability values indicate good internal consistency between items within each dimension. Moreover, the combined reliability for the 14-item scale, computed by using the formula for the reliability of inner combinations (Nunnally, 1978), was high (.89). Therefore, the 14-item instrument was considered to be ready for further testing with data from new samples.

Scale purification, first stage: CFA. The second step was to conduct a CFA using the standard computer program EQS (Bentler, 1992) for the measure. The purpose of this step was to evaluate the adequacy of the hypothesized factor structure (Bentler & Newcomb, 1986).

CFA is a logical test to succeed an exploratory factor analysis for two reasons. First, according to Hoyle and Smith (1994), CFA is appropriate for hypotheses about structural validity that derive from questions such as the number of factors (i.e., latent variables) that underlie responses to items on a test, the relationships between those factors, and the contribution of the factors to the items of the test. Second, CFA using covariance structure analysis can provide a statistical test of the degree to which a proposed model fits observed data (Hoyle, 1991).

In CFAs, the extent to which an estimated model fits the observed data (item variance and covariance) is indicated by a variety of goodness-of-fit indexes. According to Bentler and Bonett (1980), who introduced several indexes and popularized the ideas, fit indexes were designed to avoid some of the problems of

they are considered practically significant (Hair et al., 1995). Because the items chosen in this study might be influenced by cross-cultural factors, I decided to adopt a high standard in choosing variables for factors. Following Galassi, Schanberg, and Ware (1992), who used a variable's commonality of .45 as the criterion (note that squared multiple correlations were used as the commonality estimate for a given factor in Galassi et al.'s study), I decided to use a comparable value (i.e., factor loadings of .65) as the yardstick for choosing a constituent variable in defining a given factor.

TABLE 1
Summary of Results From First Stage of Scale Purification

<i>Dimension</i>	<i>Label</i>	<i>No. of Items</i>	<i>Reliability Coefficients (α)</i>	<i>Construct Reliability</i>	<i>Items*</i>	<i>Factor Loadings**</i>
Trust	YTR1	3	0.71	0.74	R1	0.79
					R6	0.80
					R13	0.79
Relationship commitment	YCM1	4	0.73	0.72	R4	0.66
					R9	0.77
					R16	0.84
					R17	0.69
Relationship satisfaction	YST1	4	0.79	0.80	R2	0.74
					R7	0.71
					R8	0.84
					R12	0.85
Control mutuality	YMT1	3	0.58	0.62	R3	0.82
					R5	0.65
					R10	0.75
Reliability of linear combination (total scale reliability)			0.89			

*R indicates items in the first stage of data collection. **Of items on dimensions to which they belong.

sample size and distributional misspecification in evaluating a model. Among the indexes of fit proposed and reviewed (e.g., Bentler, 1990, 1992; Gerbing & Anderson, 1993; Hu & Bentler, 1995, 1998, 1999; McDonald & Marsh, 1990; Tanaka, 1993), one of those currently recommended and offered by EQS is the CFI (Bentler, 1990; Hu & Bentler, 1995, 1998; Sideridis, Kaissidis, & Padeliadu, 1998; Whang & Hancock, 1997). As suggested in Bentler (1990) and Hu and Bentler (1995), CFI is a very strong fit index, taking into consideration all relevant issues such as sample size, estimation method effects, effects of violation of normality, and independence. In general, CFI values ranging from .90 to 1.00 generally are regarded as reflecting good to excellent fit.

For confirmatory analyses, I adopted Morgan and Hunt's (1994) suggestion to compare the proposed model with its rival models. In essence, the extent to which an oblique model fits the data against two alternative models, an orthogonal model and a single-factor model, was compared to determine the number of latent vari-

ables that underlie responses to items on a test.⁶ Comparisons between these three models were subjected to the following questions. Can OPRs be represented meaningfully in terms of the number of dimensions as hypothesized? Are the factors (or subscales) of the OPRA measurement set interrelated or separate? If they are interrelated, are they so interrelated as to comprise a sole dimension rather than multiple interdependent dimensions? For model comparison, the Akaike Information Criterion (AIC) was used to select the best fitting model (Kato, Naniwa, & Ishiguro, 1996; Poulsen, Juhl, Kristensen, Bech, & Englund, 1996; Vinck, Vlietinck, & Fagard, 1999).

Examining the dimensionality of the 14-item scale was the next task in this stage of scale purification. Comparative fit analysis (CFA) indicated that the four-factor oblique model (i.e., trust, relational satisfaction, control mutuality, and relational commitment) was a good fit to the data, $\chi^2(71, 301) = 268.677$, CFI = .893, adjusted goodness-of-fit index (adjusted goodness-of-fit index [AGFI] = .833). For model comparison, the four-factor oblique model, among its competing models, provided the smallest AIC value (CFI = .893, AGFI = .833, AIC = 126.68), compared with the orthogonal model (CFI = .472, AGFI = .552, AIC = 836.46) and the one-factor model (CFI = .864, AGFI = .825, AIC = 158.80; Table 2). In conclusion, for the data collected at the first stage, CFA seemed to demonstrate that OPRA was composed of four distinct but related dimensions that could reflect the perceived executive–legislative relationship.

Long interviews. According to Parasuraman et al. (1988), assessing a scale's content validity is necessarily qualitative rather than quantitative. Follow-

⁶An oblique model assumes that the factors in the proposed model are correlated. In an orthogonal model, factors are assumed to be independent. A single factor assumes that there is one overall factor or that the subscales (or factors) are correlated perfectly.

TABLE 2
Summary of Model Fit Statistics for OPRA (Results From First Stage of Data Collection)

<i>Model</i>	χ^2	<i>df</i>	<i>CFI</i>	<i>AGFI</i>	<i>RMSEA</i>	<i>SRMR</i>	<i>AIC</i>
Null	1822.543	91					
4-factor oblique	268.677	71	0.893	.833	0.096	.059	126.68
4-factor orthogonal	990.460	77	0.472	.552	0.199	.324	836.46
1-factor	312.801	77	0.864	.825	0.101	.065	158.80

Note. OPRA = organization–public relationship assessment; CFI = comparative fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; AIC = Akaike Information Criterion.

ing Parasuraman et al.'s suggestion, the OPRA instrument was further investigated through in-depth interviews with 18 legislative members in 1997 to assess the validity and cultural compatibility of the scales. In essence, a qualitative method was chosen to provide the opportunity to uncover information and experiences "held in the vessel of answers behind the respondent" (Holstein & Gubrium, 1995, p. 8).

The interview results revealed that the four dimensions of OPRA could effectively assess the respondents' perception of the executive-legislative relationship. The interview findings also suggested that a fifth dimension, which was not included in the original instrument but was reported as an important factor reflecting Eastern culture—face and favor—should be added to the OPRA instrument for future investigation. Moreover, a couple of items pertaining to trust and control mutuality dimensions also were suggested to be added into the scale.

Data Collection, Second Stage

A second set of survey data was collected to further evaluate the scale and the psychometric properties of OPRA instrument. A total of 235 public relations practitioners from the Executive Yuan in Taiwan were surveyed from January to March 1999.

Scale purification, second stage: exploratory factor analysis. A major objective of this stage was to evaluate the robustness of the 14-item scale when used to measure the executive-legislative relationships. In other words, the results from the second sample facilitated cross-validation of the results from the first sample. An iterative sequence similar to the one shown in Step 5 in Figure 1 was followed for the scale purification of the second stage.

The results of the reliability tests and factor loadings are presented in Table 3. The results of this analysis were consistent but differed somewhat from those of the first stage. First, as suggested earlier, a fifth dimension—face and favor (or resource exchange)—was added to the instrument. Second, a couple of items were added in the trust and control mutuality dimensions based on interview findings. This procedure resulted in a refined scale with 20 items spread among five dimensions. A comparison of the statistics obtained from the first and second data sets is summarized in Table 4.

To analyze the second sample, Cronbach's alphas for five dimensions (i.e., trust, control mutuality, relationship commitment, relationship satisfaction, and face and favor, or resource exchange) were .75, .73, .72, .74, and .81, respectively. The construct reliabilities were .77, .70, .71, .72, and .85. The reliability scores were near or at the standard of .80. Moreover, the five dimensions in the OPRA measure also had sufficiently high construct reliability at .70 level. Thus, it can be concluded that

TABLE 3
Summary of Results From Second Stage of Scale Purification

<i>Dimension</i>	<i>Label</i>	<i>No. of Items</i>	<i>Reliability Coefficients (a)</i>	<i>Construct Reliability</i>	<i>Items*</i>	<i>Factor Loadings**</i>
Trust	YTR2	4	0.7536	0.77	C1	0.85
					C2	0.82
					C6	0.60
					C10	0.75
Relationship commitment	YCM2	4	0.7166	0.71	C7	0.74
					C11	0.78
					C13	0.71
					C15	0.71
Relationship satisfaction	YST2	4	0.7380	0.72	C4	0.81
					C9	0.74
					C12	0.86
					C14	0.59
Control mutuality	YMT2	4	0.7276	0.69	C5	0.65
					C8	0.72
					C17	0.82
					C22	0.76
Face and favor	YFF2	4	0.8080	0.85	C18	0.74
					C19	0.87
					C20	0.86
					C21	0.76
Reliability of linear combination (total scale reliability)			0.907			

*C indicates items in the second stage of data collection. **Of items on dimensions to which they belong.

OPRA had sufficiently acceptable measurement reliability, with a condition that the dimension of face and favor warrants further test for cross-validation.

Scale purification, second stage: CFA. CFAs were conducted. A series of tests then were conducted to determine whether the five-factor oblique model fit the data better than a five-factor orthogonal model or a one-factor model. The results (Table 5) indicated that the five-factor oblique model yielded a nearly acceptable fit to the data, compared to the null model, $\chi^2(30, 235)$, CFI = .854, AGFI =

TABLE 4
A Comparison of the Statistical Results From the First and Second Data Sets

<i>Dimension</i>	<i>Label</i>	<i>No. of Items</i>	<i>Reliability Coefficients (α)</i>		<i>Construct Reliability</i>		<i>Items</i>		<i>Factor Loadings</i>	
			<i>Set 1</i>	<i>Set 2</i>	<i>Set 1</i>	<i>Set 2</i>	<i>Set 1</i>	<i>Set 2</i>	<i>Set 1</i>	<i>Set 2</i>
Trust	YTR	3 (1st), 4 (2nd)	0.71	0.75	0.74	0.77	R6	C1	.8	.85
							R13	C2	.79	.82
							R1	C6	.79	.60
Relationship commitment	YCM	4	0.73	0.72	0.72	0.71		C10		.75
							R9	C7	.77	.74
							R16	C11	.84	.78
							R17	C13	.69	.71
Relationship satisfaction	YST	4	0.79	0.74	0.80	0.72	R4	C15	.66	.71
							R12	C4	.85	.81
							R7	C9	.71	.75
							R8	C12	.84	.86
							R2	C14	.74	.59
Control mutuality	YMT	3 (1st), 4 (2nd)	0.58	0.73	0.62	0.7	R10	C5	.75	.65
							R3	C17	.82	.82
							R5	C22	.65	.76
								C8		.72
								C18		.74
Face and favor	YFF	4		0.81		0.85		C19		.87
								C20		.86
								C21		.76
Reliability of linear combination (total scale reliability)			0.89	0.91						

TABLE 5
Summary of Model Fit Statistics for OPRA (Results From Second Stage of Data Collection)

<i>Model</i>	χ^2	<i>df</i>	<i>CFI</i>	<i>AGFI</i>	<i>RMSEA</i>	<i>SRMR</i>	<i>AIC</i>
Null	2089.330	190					
5-factor oblique	437.763	160	0.854	0.798	0.086	0.066	117.76
5-factor orthogonal	999.020	165	0.561	0.579	0.147	0.298	669.02
1-factor	612.018	170	0.767	0.715	0.105	0.078	272.02
Final CFA with six-error covariance	332.740	154	0.906	0.838	0.071	0.057	24.74

Note. OPRA = organization–public relationship assessment; CFI = comparative fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; AIC = Akaike Information Criterion; CFA = comparative fit analysis.

.798. For model comparison, the five-factor oblique, among its competing models (i.e., five-factor orthogonal and one-factor model), was better (AIC = 117.76 and root mean square error of approximation [RMSEA] = .086, compared with AIC = 669.02 and RMSEA = 0.147 for the five-factor orthogonal model and AIC = 272.02 and RMSEA = .105 for the one-factor model; see Table 5). In summary, the five-factor oblique model fit the data better than a five-factor orthogonal model or a one-factor model. The data showed that five fundamentally separate but intercorrelated factors represented OPRs.

Long interviews. To further assess scale validity, 14 public relations practitioners from various departments in the executive branches were interviewed in April 1999. The respondents revealed that the items of the OPRA instrument could measure their perception of the OPRs between Executive Yuan and Legislative Yuan.

OPRA's Reliability and Factor Structure

It generally is recommended that a construct reliability be greater than .70 to indicate good construct reliability. On the other hand, a generally accepted benchmark for adequate internal consistency reliability is .80 (Nunnally, 1978). Cronbach's alpha assumes that the constructs involved are the simple sum of the constituent variables, whereas construct reliability does not make this assumption. Thus, I relied more on the results of construct reliability than on those of internal consistency of items because the statistical assumption underlying Cronbach's alpha could not be shown to apply in this study. Nevertheless, the results of both statistical tests are reported.

Table 4 demonstrates the component, total reliabilities, and factor loadings of OPRA for two different samples. The values of alpha reliability and construct reliability are consistently high across the two samples. The total scale reliability is close to or higher than .9. Moreover, the overall patterns of factor loadings are remarkably similar across the two independent sets of results.

Model respecification and evaluation of model structure. Byrne (1994) suggested that given substantial statistical and theoretical evidence, models at the lower end of the range of CFI, between .90 and 1.00, might make the minor respecification necessary to achieve a more satisfactory overall fit. Thus, after completing the model comparison phase, model modification was used in this study, based on the best model to represent the data. The major purpose was to see whether meaningful improvements could be made. Such improvements might include dropping unnecessary indicators, adding cross-loadings (where a single observed variable serves as an indicator for more than one construct), and allowing pairs of residuals to covary (Whang & Hancock, 1997). The latter two types of modification were made for this study.

Then the multivariate Lagrange multiplier modification indexes offered by EQS to conduct the respecification of the model were used. The criteria suggested by Byrne (1994) and Whang and Hancock (1997) for allowing pairs of residuals to covary or cross-loadings to be added are when

- 1) its inclusion would make theoretical sense, 2) it would make a significant improvement in the model, 3) the magnitude of this contribution would be substantial enough to be certain that overfitting (i.e., capitalization on chance covariance) is not concurring, and 4) it would not yield offending estimates anywhere in the model. (p. 16)

Although the fit of the initial five-factor oblique model was sufficiently large (CFI = .854) for an initial measurement model, the Lagrange multiplier modification procedure was used. When six error covariances were added to the model, the fit indexes of the CFA models reached .906. The final CFA model was significantly better than the initial five-factor oblique model, $\chi^2(6, 235) = 175$, AIC = 24.74 for the final CFA model compared to AIC = 117.76 for the five-factor oblique model. The results are presented in Table 5. In summary, OPRA is a brief (20-item) measure of the quality of OPRs with acceptable construct reliability and internally consistent items.

Assessment of OPRA's Validity

The high reliabilities and consistent factor structures of OPRA across two independent samples provide support for its trait validity (Campbell, 1960; Peter, 1981). Although high reliabilities and internal consistencies are necessary condi-

tions for a scale's construct validity, Churchill (1979) maintained that these are not sufficient. The scale must "satisfy certain other conceptual and empirical criteria to be considered as having good construct validity" (Parasuraman et al., 1988, p. 28).

Face and content validity. According to Parasuraman et al. (1988), the essential conceptual criterion pertaining to construct validity is face and content validity. With regard to assessing content validity, Parasuraman et al. suggested that a qualitative review is more appropriate than a quantitative method. They contended that content validity should involve examining two aspects: "the thoroughness with which the construct to be scaled and its domain were explicated and the extent to which the scale items represent the construct's domain" (p. 28). Following Parasuraman et al.'s argument, the content validity of the OPRA scale in this article should have been assessed for two aspects. First, the procedures used in developing OPRA (Figure 1) should satisfy the evaluative requirements of face and content validity so that it "can be considered to possess content validity" (p. 28).⁷ Moreover, qualitative results from a total of 32 respondents' long interviews could further guarantee the issue of content reliability.

Convergent validity. In addition to qualitative review, Parasuraman et al. (1988) suggested that the scale's validity can be assessed empirically by examining its convergent validity. Parasuraman et al. examined convergent validity by means of "the association between SERVQUAL scores and responses to a question that asked customers to provide an overall quality rating of the firm they were evaluating" (p. 28). Following Parasuraman et al.'s suggestions, respondents in the second stage of data collection in this study were asked to give their overall ratings to OPR quality (Overall R), ranging from 0 to 100% (later the scores were recoded and categorized into three groups of "excellent," "good," and "poor"). The correspondence between Overall R and OPRA scores was examined using one-way analysis of variance (ANOVA). The treatment variable in the ANOVAs was Overall R, and the dependent variable was the average score of OPRA.

The results (Table 6) revealed that the separate and combined OPR scores for those in the "excellent" category are significantly higher (less negative) than for those in the "good" category. Furthermore, respondents in the "good" category had a significantly higher combined OPR score than those in the "poor" category. In conclusion, the strength of the linkage between the Overall R categories and the OPR scores offered strong support for OPRA's convergent validity.

⁷As discussed in earlier sections, the procedures used in developing OPRA parallel those of SERVQUAL (Parasuraman et al., 1988). They suggested that the procedures should have satisfied the evaluative requirements of face and content validity, and therefore "the scale can be considered to possess content validity" (p. 28).

TABLE 6
Significant Differences in Mean Scale Values for Respondents, Segmented
According to the Variable Overall *R*

	<i>Overall R</i>		
	<i>Excellent</i>	<i>Good</i>	<i>Poor</i>
YTR2	0.34	-0.44	-2.33
YCM2	0.27	-2.22	-2.53
YST2	0.31	-0.43	-3.07
YMT2	0.33	-0.33	-2.08
YFF2	0.31	-0.33	-2.20
Combined scale	0.28	-0.30	-1.77
<i>n</i>	143	71	5

Note. For overall *R* variable, Excellent = 67–100%, Good = 34–67%, and Poor = 0–33%. All analyses of variance were significant at the .05 level.

IMPLICATIONS AND CONCLUSIONS

Applications of OPRA

OPRA is a concise multiple-item scale with good reliability and validity that an organization can use to better understand its publics' perceptions toward their relationship quality and thus improve public relations practice. The applications of OPRA can be addressed in the following ways. First, the instrument has been designed to be applied across a broad spectrum of organizational scales and types. When necessary, the skeleton can be adapted or supplemented to fit the characteristics or specific research needs of a particular OPRs.

Second, as the application of SERVQUAL suggested in Parasuraman et al. (1988, p. 34), OPRA is valuable when it is used periodically to track relationship trends. For example, an organization can learn a great deal about its public relations practice and what must be improved by administering OPRA three or four times per year.

Third, one of the other potential applications of OPRA is to determine the relative importance of the five dimensions in influencing a public's overall perceptions. An approach for assessing relative importance, as suggested in Parasuraman et al. (1988), is to regress the overall quality perception scores on the OPRA scores. Another approach is to evaluate the relative effects of OPR on conflict resolution. Huang (1999) demonstrated that conflict resolution is an important variable of public relations effect. It would be valuable to learn the relative importance of the five relationship dimensions in affecting a public's evaluation of overall conflict resolution. The results of multiple regression and stepwise regression tests are presented in Tables 7 and 8.

TABLE 7
Results of Stepwise Regression Test: Relative Importance of Five Dimensions
in Predicting Overall Relationship Quality and Conflict Resolutions

<i>Dimension</i>	<i>Standardized Slope Coefficient</i>	<i>Significance Level of Slope</i>	<i>Adjusted R²</i>
Overall R			
YTR2	.152	.133	.400 ($p < .000$)
YCM2	.120	.156	
YST2	.102	.379	
YMT2	.214	.032	
YFF2	.220	.011	
Resolution of tangible conflicts			
YTR2	.009	.943	.075 ($p < .311$)
YCM2	.070	.508	
YST2	-.014	.929	
YMT2	.215	.098	
YFF2	.114	.340	
Resolution of intangible conflicts			
YTR2	.051	.696	.146 ($p < .000$)
YCM2	.126	.225	
YST2	.002	.989	
YMT2	.214	.093	
YFF2	.128	.273	
Resolution of all conflicts			
YTR2	.043	.738	.163 ($p < .000$)
YCM2	.106	.304	
YST2	-.015	.919	
YMT2	.260	.040	
YFF2	.143	.218	

Note. Significance levels are for two-tailed tests.

For the results presented in Tables 7 and 8, several interesting findings are noteworthy. Among the five relationship dimensions, control mutuality was the most critical factor in predicting Overall R ($r = .321$), face and favor second ($r = .278$), and relationship commitment third ($r = .191$). With regard to the relationship dimensions contributing to resolving conflicts at an organizational level, control mutuality remained the most influential factor. Specifically, the existence of control mutuality in an executive–legislative relationship effectively can predict resolution of various conflict types to some degree, which include tangible conflicts, intangible conflicts, and all conflicts ($r = .310$, $.381$, and $.409$, respectively; all r s are statistically significant at .01 level).

Fourth, another application of the instrument is its use in categorizing an organization's publics into several perceived relationship quality segments (e.g., high, medium, and low) on the basis of their individual OPRA scores. These segments

TABLE 8
Results of Multiple Regression Test: Relative Importance of the Five Dimensions
in Predicting Overall Relationships and Conflict Resolutions

<i>Dimension</i>	<i>Standardized Slope Coefficient</i>	<i>Significance Level of Slope</i>	<i>Adjusted R²</i>
Overall R			
YTR2			.389 ($p < .000$)
YCM2	.191	.009	
YST2			
YMT2	.321	.000	
YFF2	.278	.001	
Resolution of tangible conflicts			
YTR2			.089 ($p < .000$)
YCM2			
YST2			
YMT2	.310	.000	
YFF2			
Resolution of intangible conflicts			
YTR2			.138 ($p < .000$)
YCM2			
YST2			
YMT2	.381	.000	
YFF2			
Resolution of all conflicts			
YTR2			.160 ($p < .000$)
YCM2			
YST2			
YMT2	.409	.000	
YFF2			

Note. Significance levels are for two-tailed tests.

can be analyzed on the basis of demographic, psychographic, or other profiles; the relative importance of the five dimensions in influencing relationship quality perceptions; and the reasons behind the perceptions reported (Parasuraman et al., 1988). For example, suppose a chemical company found that a large number of OPRA respondents falling in the “medium” perceived-quality group fit its prime target based on demographic and psychographic criteria. Suppose further that control mutuality and trust were found to be the most critical relationship dimensions and that, based on the scores for items about these two dimensions, the item relating to notorious operational records and behavior of contact personnel revealed the biggest gaps. With these data, the chemical company’s management would understand better what must be done to improve its OPR with community residents.

Implications for Theories

This study helped move the concept of OPRs to a higher theoretical, operational, and cross-cultural level. Specifically, five aspects are notable in terms of the implications of OPRA for relevant theories. First, by incorporating an Eastern cultural aspect into a Western instrument, this study was cross-cultural. The research findings can shed light on studies of global public relations.

Second, this study is a starting point for surpassing present limits in the theory of public relations or the lack of “fully explicated conceptual definition of organization–public relationships” (Broom et al., 1997, p. 96).

Third, the OPRA scale proved its potential as a new measure of public relations effects. Having replicated Huang’s research (1997), this study demonstrated that OPRA had acceptable construct reliability and structural validity.

Fourth, this scale moved beyond measuring relationships at an interpersonal level; it could benefit future research as a measure of an organizational level, especially of the relationships between an organization and its publics.

Fifth, this study replicated the proposition that relationships consist of more than one fundamental feature and that several relationship dimensions, such as trust, control mutuality, satisfaction, commitment, and even a new dimension, face and favor, were germane constructs in measuring relationships (Burgoon & Hale, 1984, 1987; Canary & Spitzberg, 1989; Canary & Stafford, 1992; Millar & Rogers, 1987; Stafford & Canary, 1991).

Limitations of the study and Suggestions for Future Studies

There are a couple of limitations to this study. First, several sensitive issues involved in the executive–legislative relationship examined, especially those dealing with political factors and moral values, made the surveys more difficult. In particular, the sensitive nature of the relationships per se might have prevented the respondents from pointing out some detailed truths or “inner stories” in interviews. Second, the statistical results about the dimension of face and favor should be viewed as suggestive because the confirmatory analysis was embedded within the exploratory analyses of the OPRA scale.

The following directions for future research are suggested. First, a logical next step would be to statistically cross-validate the dimension of face and favor in the OPRA scale, although qualitative data from two interviews support the robustness of the dimension. A second step is to test OPRA across different types of organizations (for-profit, nonprofit, small, and large) and across various OPRs (e.g., community relations, media relations, stockholder relations). Thus, the applicability of OPRA to a broad spectrum of organizational scales, types, and relationships can be assessed.

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REFERENCES

- Aldrich, H. E. (1975). An organization–environment perspective on cooperation and conflict between organizations in the manpower training system. In A. R. Negandhi (Ed.), *Interorganizational theory* (pp. 49–70). Kent, OH: Kent State University Press.
- Aldrich, H. E. (1979). *Organizations and environments*. Englewood Cliffs, NJ: Prentice Hall.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*, 238–246.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the bulletin. *Psychological Bulletin*, *112*, 400–404.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *88*, 588–606.
- Bentler, P. M., & Newcomb, M. D. (1986). Personality, sexual behavior, and drug use revealed through latent variable methods. *Clinical Psychology Review*, *6*, 363–385.
- Berry, L., & Parasuraman, A. (1991). *Marketing service*. New York: Free Press.
- Bond, M. H., & Hwang, K. K. (1986). The social psychology of Chinese people. In M. H. Bond (Ed.), *The psychology of Chinese people* (pp. 213–266). Oxford, England: Oxford University Press.
- Broom, G. M., Casey, S., & Ritchey, J. (1997). Toward a concept and theory of organization–public relationships. *Journal of Public Relations Research*, *9*, 83–98.
- Bruning, S. D., & Ledingham, J. A. (1999). Relationship between organization and publics: Development of a multi-dimensional organization–public relationship scale. *Public Relations Review*, *25*, 157–170.
- Burgoon, J., & Hale, J. (1984). The fundamental topoi of relational communication. *Communication Monographs*, *51*(3), 193–214.
- Burgoon, J., & Hale, J. (1987). Validation and measurement of the fundamental themes of relational communication. *Communication Monographs*, *54*(1), 19–41.
- Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows: Basic concepts, applications, and programming*. Thousand Oaks, CA: Sage.
- Campbell, D. T. (1960). Recommendations for APA test standards regarding construct, trait, or discriminant validity. *American Psychologist*, *15*, 546–553.
- Canary, D. J., & Cupach, W. R. (1988). Relational and episodic characteristics associated with conflict tactics. *Journal of Social and Personal Relationships*, *5*, 305–325.
- Canary, D. J., & Spitzberg, B. H. (1989). A model of the perceived competence of conflict strategies. *Human Communication Research*, *15*, 630–649.
- Canary, D. J., & Stafford, L. (1992). Relational maintenance strategies and equity in marriage. *Communication Monographs*, *59*(3), 243–267.
- Cheney, G. (1992). The corporate person (re)presents itself. In E. L. Toth & R. L. Heath (Eds.), *Rhetorical and critical approaches to public relations* (pp. 165–183). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Chiao, C. (1981, November–December). *Chinese strategic behavior: Some general principles*. Paper presented at a conference in honor of Professor John M. Roberts, Claremont, CA.
- Churchill, G. A., Jr. (1979, February). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*, 64–73.

- Cook, K. S., & Emerson, R. M. (1978). Power, equity and commitment in exchange networks. *American Sociological Review*, 43, 721–739.
- Dozier, D. M., Grunig, L. A., & Grunig, J. E. (1995). *Manager's guide to excellence in public relations and communication management*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Ferguson, M. A. (1984, August). *Building theory in public relations: Interorganizational relationships*. Paper presented at the annual conference of the Association for Education in Journalism and Mass Communication, Gainesville, FL.
- Fitchen, J. M., Hearth, J. S., & Ressenenden-Raden, J. (1987). Risk perception in community context: A case study. In B. B. Johnson & V. T. Covelto (Eds.), *The social and cultural construction of risk* (pp. 31–54). Dordrecht, the Netherlands: D. Reidel Association.
- Foa, E. B., & Foa, U. G. (1976). Resource theory of social exchange. In J. W. Thibaut, T. T. Spence, & R. C. Carson (Eds.), *Contemporary topics in social psychology* (pp. 99–131). Morristown, NJ: General Learning.
- Fried, M. H. (1969). *The fabric of Chinese society: A study of the social life of a Chinese county seat*. New York: Octagon.
- Galassi, J. P., Schanberg, R., & Ware, W. B. (1992). The patient reactions assessment: A brief measure of the quality of the patient–provider medical relationship. *Psychological Assessment*, 4, 346–351.
- Gerbing, D. W., & Anderson, J. C. (1993). Monte Carlo evaluations of goodness-of-fit indices for structural equation models. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 40–65). Thousand Oaks, CA: Sage.
- Goodpaster, K. E., & Matthews, J. B., Jr. (1982, January–February). Can a corporation have a conscience? *Harvard Business Review*, 60(1), 132–140.
- Grunig, J. E., Grunig, L. A., & Dozier, D. M. (1995, November). *Combining the two-way symmetrical and asymmetrical models into a contingency model of excellent public relations*. Paper presented at the annual meeting of the Association for the Advancement of Policy, Research, and Development in the Third World, Las Vegas.
- Grunig, J. E., & Huang, Y. (2000). From organization effectiveness to relationship indicators: Antecedents of relationships, public relations strategies, and relationship outcomes. In J. A. Ledingham & S. D. Bruning (Eds.), *Public relations as relationship management: A relational approach to the study and practice of public relations* (pp. 23–53). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Grunig, J. E., & Repper, F. C. (1992). Strategic management, publics, and issues. In J. E. Gruning (Ed.), *Excellence in public relations and communication management* (pp. 285–325). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Grunig, L. A., Grunig, J. E., & Ehling, W. P. (1992). What is an effective organization? In J. E. Gruning (Ed.), *Excellence in public relations and communication management: Contributions to effective organizations* (pp. 65–89). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Grunig, L. A., Grunig, J. E., & Verčič, D. (1997, June). *Are the IABC's excellence principles generic? Comparing Slovenia and the United States, the United Kingdom, and Canada*. Paper presented at the annual meeting of the International Association of Business Communicators, Los Angeles.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). Factor analysis. In L. B. Grimm & P. R. Yarnold (Eds.), *Reading and understanding multivariate statistics* (pp. 364–406). Englewood Cliffs, NJ: Prentice Hall.
- Heath, R. L. (1992). Critical perspectives on public relations. In E. L. Toth & R. L. Heath (Eds.), *Rhetorical and critical approaches to public relations* (pp. 37–64). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Hecht, M. L. (1978). The conceptualization and measurement of interpersonal communication satisfaction. *Human Communication Research*, 4, 253–264.
- Hendrick, S. S. (1988). A generic measure of relational satisfaction. *Journal of Marriage and the Family*, 50, 93–98.
- Holstein, J. A., & Gubrium, J. F. (1995). *The active interview*. Thousand Oaks, CA: Sage.

- Hon, L. C., & Grunig, J. E. (1999, October). *Measuring relationship in public relations*. Paper presented to the Institute for Public Relations, Gainesville, FL.
- Hoyle, R. H. (1991). Evaluating measurement models in clinical research: Covariance structure analysis of latent variable models of self-conception. *Journal of Consulting and Clinical Psychology, 59*(1), 67–76.
- Hoyle, R. H., & Smith, G. T. (1994). Formulating clinical research hypotheses as structural equation models: A conceptual overview. *Journal of Consulting and Clinical Psychology, 62*(3), 429–440.
- Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Thousand Oaks, CA: Sage.
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*, 424–453.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.
- Huang, Y. (1994). *Ke chi feng hsien yu huan pao kang cheng: Tai-wan min chung feng hsien jen chih ke an yen chiu* [Technological risk and environmental activism: Case studies of public risk perception in Taiwan]. Taipei: Wu-nan Tsung Shu.
- Huang, Y. (1997, May). *Toward the contemporary Chinese philosophy of public relations: A perspective from the theory of global public relations*. Paper presented to the Division of Public Relations, the 47th annual conference of the international Communication Association, Quebec, Canada.
- Huang, Y. (1998, August). *Public relations strategies and organization—public relationships*. Paper presented at the annual conference of the Association for Education in Journalism and Mass Communication, Baltimore.
- Huang, Y. (1999, May). *The effects of public relations strategies on conflict management*. Paper presented at the 49th annual conference of the International Communication Association, San Francisco.
- Huang, Y. (2000). The personal influence model and *gao guanxi* in Taiwan Chinese public relations. *Public Relations Review, 26*, 216–239.
- Hwang, K. (1987). Face and favor: The Chinese power game. *American Journal of Sociology, 92*, 944–974.
- Jacobs, B. J. (1979). A preliminary model of particularistic ties in Chinese political alliances: *Ran-ching* and *kuan-hsi* in a rural Taiwanese township. *China Quarterly, 78*, 237–273.
- Kato, H., Naniwa, S., & Ishinguro, M. (1996). A Bayesian multivariate nonstationary time series model for estimating mutual relationships among variables. *Journal of Econometrics, 75*(1), 147–161.
- Komorita, S. S., & Carnevale, P. J. (1992). Motivational arousal vs. decision framing in social dilemmas. In W. B. G. Liebrand, D. M. Messick, & H. A. M. Wike (Eds.), *Social dilemmas* (pp. 209–224). New York: Pergamon.
- Krimsky, S., & Plough, A. (1988). *Environmental hazards: Communicating risks as a social process*. Dover, MA: Auburn House.
- Ledingham, J. A., Bruning, S. D., & Wilson, L. J. (1999). Time as an indicator of the perceptions and behavior of members of a key public: Monitoring and predicting organization–public relationships. *Journal of Public Relations Research, 11*, 167–183.
- McDonald, R. P., & Marsh, H. W. (1990). Choosing a multivariate model: Noncentrality and goodness of fit. *Psychological Bulletin, 107*, 247–255.
- Metts, S., & Cupach, W. R. (1990). The influence of relationship beliefs and problem-solving responses on satisfaction in romantic relationships. *Human Communication Research, 17*, 170–185.
- Meyer, J. P., & Allen, N. (1984). Testing the side-best theory of organizational commitment: Some methodological considerations. *Journal of Applied Psychology, 69*, 372–378.
- Millar, F. E., & Rogers, L. E. (1976). A relational approach to interpersonal communication. In G. R. Miller (Ed.), *Explorations in interpersonal communication*. Thousand Oaks, CA: Sage.
- Millar, F. E., & Rogers, L. E. (1987). Relational dimensions of interpersonal dynamics. In M. E. Roloff & G. R. Miller (Eds.), *Interpersonal process: New directions in communication research* (pp. 117–139). Thousand Oaks, CA: Sage.

- Moore, C. W. (1986). *The mediation process*. San Francisco: Jossey-Bass.
- Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing*, 57, 81–101.
- Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships between providers and users of marketing research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29, 314–329.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment–trust theory of relationship marketing. *Journal of Marketing*, 58, 20–38.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224–247.
- National Research Council. (1989). *Improving risk communication*. Washington, DC: National Academy.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Parks, C. D., Henager, R. F., & Scamahorn, S. D. (1996). Trust and reactions to messages of intent in social dilemmas. *Journal of Conflict Resolution*, 40(1), 134–151.
- Peter, J. P. (1981, May). Construct validity: A review of basic issues and marketing practices. *Journal of Marketing Research*, 18, 133–145.
- Poulsen, C. S., Juhl, H. J., Kristensen, K., Bech, A. C., & Engelund, E. (1996). Quality guidance and quality formation. *Food Quality and Preference*, 7(2), 127–135.
- Sideridis, G. D., Kaissidis, A., & Padelidiu, S. (1998). Comparison of the theories of reasoned action and planned behaviour. *British Journal of Educational Psychology*, 68, 563–580.
- Stafford, L., & Canary, D. J. (1991). Maintenance strategies and romantic relationship type, gender and relational characteristics. *Journal of Social and Personal Relationships*, 8, 217–242.
- Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 10–39). Thousand Oaks, CA: Sage.
- Vinck, W. J., Vlietinck, R., & Fagard, R. H. (1999). The contribution of genes, environment and of body mass to blood pressure variance in young adult. *Journal of Human Hypertension*, 13(3), 191–197.
- Walder, A. G. (1983). Organized dependency and cultures of authority in Chinese industry. *Journal of Asian Studies*, 63, 51–75.
- Whang, P. A., & Hancock, G. R. (1997). Modeling the mathematics achievement of Asian-American elementary students. *Learning and Individual Differences*, 9(1), 63–68.
- Yamagishi, T. (1986). The provision of sanctioning system as a public good. *Journal of Personality and Social Psychology*, 51, 110–116.
- Yang, K. (1981). Social orientation and individual modernity among Chinese students in Taiwan. *Journal of Social Psychology*, 113, 159–170.
- Yum, J. O. (1988). The impact of Confucianism on interpersonal relationships and communication patterns in east Asia. *Communication Monographs*, 55(4), 374–388.

APPENDIX: OPRA Items

Trust

- C1. Members of the organization are truthful with us.
- C2. The organization treats me fairly and justly, compared to other organizations.
- C6. Generally speaking, I don't trust the organization. (R)
- C10. The organization keeps its promises.

Control Mutuality

- C17. Generally speaking, the organization and we are both satisfied with the decision-making process.
- C22. In most cases, during decision making both the organization and we have equal influence.
 - C5. Both the organization and we agree on what we can expect from one another.
 - C8. Both the organization and we have symmetrical pay–gain relationships.

Relationship Satisfaction

- C14. Generally speaking, organization members meet our needs.
 - C9. Generally speaking, our relationship with the organization has problems. (R)
- C12. In general, we are satisfied with the relationship with the organization.
 - C4. Our relationship with the organization is good.

Relationship Commitment

- C15. I do not wish to continue a relationship with the organization. (R)
 - C7. I believe that it is worthwhile to try to maintain the relationship with the organization.
- C11. I wish to keep a long-lasting relationship with the organization.
- C13. I wish I had never entered into the relationship with the organization. (R)

Face and Favor

- C18. Given a conflict situation, they will consider the *quanxi* between us.
- C19. When I have a favor to ask, they will give us face and render their help.
- C20. In certain conditions, they will do the face-work for us.
- C21. Given a situation of disagreement, they won't let us lose face.

Note. (R) indicates item was reverse-scored.