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ARTICLES

Communicated commitment and conversational voice: Abbreviated measures of communicative strategies for maintaining organization-public relationships

Kaye D. Sweetser[a] and Tom Kelleher[b]

[a]School of Journalism & Media Studies, San Diego State University, San Diego, California, USA; [b]College of Journalism & Mass Communications, University of Florida, Gainesville, Florida, USA

ABSTRACT

Guided by relationship theory, this study develops and tests abbreviated operational definitions of communicated commitment and conversational voice as communicative strategies in maintaining organization-public relationships (OPRs). Researchers first identified 25 relational maintenance items from 12 prior published studies. Then surveying three independent subsamples of an organization's key public (N = 1,169), the distilled list revealed two univariate concepts measured with a total of 11 items. The shorter scales make the measurement and evaluation of communication online and real-world activities more accessible and manageable for practitioners and academics focused on organization-public relationships.

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The study of organization-public relationships (OPRs) has served as a mainstay of public relations theory and research for 3 decades now. As noted many times before, relationships are so central to the practice of public relations that they are represented in the name of the field. J. Grunig, for example, pointed it out as "obvious from the name of the profession that public relations is about relationships with publics" and that "public relations provides value to organizations, publics, and societies through relationships" (2015, p. xxiii). At the turn of the millennium, public relationships were second only to excellence theory in public relations in amount of research attention received (Sallot, Lyon, Acosta-Alzuru, & Jones, 2003), and the pace of relationship scholarship has certainly not slowed in the past decade.

The most-cited scholars in this line of inquiry identify Ferguson's (1984) conference paper as a turning point in public relations scholarship. J. E. Grunig and Huang, for example, credited the paper for moving scholars toward "long-term indicators of the quality of organization-public relationships" (2000, p. 28), and Ledingham saw it as giving rise to "a major shift in the core focus of the discipline" (2003, p. 182). Even with the practice so keenly focused on relationships and scholarship investigating various facets of OPR, the measurement of relationships remains complex, which may dissuade practitioners from assessing relationships with their key publics. Chaffee noted in his seminal work, *Explication*, that relationships, as interactions between people, are prime examples of units of observation in communication research that are "rarely straightforward or widely agreed upon" (1991, p. 16). OPRs are complex phenomena to conceptualize, and they are moving targets to measure. For example, Hung (2007) recommended a dialectical approach to understanding OPRs. "Organizations, serving their own interests, as well as their publics', usually face contradictions in relationships," Hung wrote, "therefore the nature of a relationship changes" (Hung, 2007, p. 467).

CONTACT Kaye D. Sweetser ksweetser@mail.sdsu.edu School of Journalism & Media Studies, San Diego State University, 5500 Campanile Dr., San Diego, CA 92182-4561.

Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/HPRR.

The purpose of our research is not to explicate whole OPRs as dynamic, dialectical units of analysis. Rather, the purpose is to develop parsimonious, operational definitions of variables that can be used by theorists and practitioners in evaluating how publics perceive the way organizations manage relationships with them.

Literature review

Huang and Zhang (2013) and Ki and Shin (2015) identified two main clusters of OPR research. The first cluster adopted Hon and Grunig's (1999) and Huang's (2001) relationship management scale that includes trust, satisfaction, commitment, and control mutuality as relational outcomes. The second cluster adopted Ledingham and Bruning's (1999) approach of treating dimensions of OPRs such as trust, openness, involvement, and commitment more as independent variables that lead to publics' attitudes and behaviors as outcomes.

Relational maintenance strategies

Relational maintenance strategies (i.e., relational cultivation strategies) are often treated as independent variables. Hon and Grunig (1999) borrowed from research on interpersonal relationships to identify access, positivity, openness, assurances, networking, and sharing of tasks as variables that "can be applied to maintaining symmetrical public relationships, or those that benefit both the organization and publics" (1999, p. 14). Ten years later, Ki and Hon (2009) published a revised measure of these strategies in a quantitative study of a specific public (members) of a specific organization (Florida Farm Bureau). The main product of their research was an instrument that provided "a basic skeleton for each of the six relationship cultivation strategy dimensions" (p. 20).

Knowing the importance of relationships in both theory and practice, the ability to measure, monitor and evaluate how they are being maintained becomes a key consideration for both scholars and practitioners.

Evolving research and digital media in OPRs

As with any social science endeavor, context is critical in studying OPRs. At the same time that scholarship flourished on OPRs, the media environment for public relations changed dramatically. Digital and social media afforded organizations many more opportunities to establish, maintain, and cultivate relationships with publics on a more interpersonal level than did traditional media. This shift results in important implications for studying OPRs with metrics that are sensitive to the interpersonal nature of interactive communication while acknowledging the importance of OPRs at the organizational or social level (Kelleher, 2015).

Kelleher and Miller (2006) explored how relationship maintenance strategies correlated with relational outcomes in online communication. They adopted Hon and J. E. Grunig's (1999) *PR Relationship Management Scale* to develop measures of relationship maintenance strategies to compare public perceptions of an organization's blogs as opposed to the organization's traditional public relations communication vehicles online. In line with much other research in this cluster, they found that relational maintenance strategies positively correlated with relational outcomes such as trust, satisfaction, and control mutuality.

Kelleher and Miller (2006) began with relational maintenance items that Hon and Grunig (1999) had derived from Stafford and Canary's (1991) work in interpersonal communication. These included positivity (interacting with partners in a cheerful, uncritical manner), openness (directly discussing the nature of the relationship and disclosing one's desires for the relationship), assurances (communicating one's desire to continue the relationship), social networks (relying on common affiliations and relations), and task sharing. In the context of an experiment comparing blogs to traditional corporate communication online, Kelleher and Miller's (2006) analysis yielded a modified

set of relational maintenance measures, including communicated relational commitment (derived from openness and assurances), conversational human voice (derived from popular literature on emerging social media at the time), task sharing, responsiveness, and a combined measure of positivity/optimism. Their results revealed participants perceived the organization's conversational voice as at higher levels in blog conditions than participants in the traditional corporate communication conditions. Conversational voice also correlated positively and significantly with trust, control mutuality, satisfaction, and commitment as relational outcomes. Though not perceived as different between conditions, communicated commitment and positivity/optimism also correlated with all four outcomes. The relational strategy of task sharing correlated with all outcomes except control mutuality. Responsiveness correlated with trust and commitment.

In a survey study with a broader sample of members of a public who had interacted online with a large organization's bloggers (members of Microsoft Developers Network), Kelleher (2009) further validated the constructs of conversational voice and communicated commitment. He found that both relational maintenance strategies correlated with trust, satisfaction, commitment, and control mutuality as outcomes.

Sweetser and Metzgar (2007) applied measures of conversational voice, communicated commitment, task sharing, responsiveness, and positivity/optimism in an experiment examining the impact of blog communication during crises. They found conversational voice and responsiveness to be key factors in improving relationships with publics in this context.

Focusing on the ethic of disclosure (a concept closely tied to openness in OPR research) in a social media context, Sweetser (2010) examined nondisclosure as an independent variable in an experiment involving viral videos online that were produced by a corporation with or without truthful attribution of the video source. Communicated commitment, conversational voice, task sharing, responsiveness, and positivity/optimism served as independent variables. Nondisclosure damaged the OPR in terms of communicated commitment, responsiveness, and positivity/optimism.

In a field experiment involving e-mail requests sent to 600 businesses and 600 nonprofit organizations in Israel, Avidar (2013) focused on interactivity and responsiveness as relational maintenance strategies. As she conceptualized the terms, organizations range in their responsiveness based on the degree of interactivity of their e-mail communication. Measuring responsiveness focused around if and how organizational representatives replied to generic e-mail inquiries, ranging from no response at all (noninteractive) to a response including evidence of multiple relational strategies initiating additional turns in the interaction (invitation to visit, join membership, get further information, use of positive expressions of appreciation, anticipation, etc.). Avidar (2013) found that nonprofits were significantly more responsive than businesses in her sample and theorized that such responsiveness and interactivity promotes OPR building.

Why are short instruments needed?

"Ultimately," Chaffee wrote, "a researcher asks not just that an operational definition work in a pragmatic sense, but that it work in an overall theoretical structure, the way the theory predicts" (1991, pp. 60–61). Straub (1989) would seem to agree, noting the importance of approaching conceptual definitions with rigor and systematic research. In the process of building and refining theory, public relations scholars have made significant strides in developing operational definitions for OPR-related constructs. Much of the focus has been on relational outcomes, such as Kim's (2001) instrument for measuring trust, commitment, community involvement, and reputation; and Bruning and Galloway's (2003) scale for measuring structural and personal dimensions of relationship commitment that members of publics have toward an organization. Kang and Yang (2010) developed a four-dimensional scale for measuring blog engagement including self-company connection, attitude toward the company, and intentions for word-of-mouth communication. In perhaps the most comprehensive effort to date to model communicative dimensions of OPRs, Yang, Kang, and Cha (2015) developed and tested a 28-item measure of two factors (mutuality and openness) with 10

subfactors to operationalize organization-public dialogic communication. Shen (2011) tested an employee-organization relationship maintenance scale, providing a 6-factor solution focusing on openness, assurances of legitimacy, networking, distributive negotiation, avoiding, and compromising.

The purpose of this study is to develop, test, and refine an abbreviated version of the relationship maintenance strategy measures commonly used in OPR research surveys and experiments. See Figure 1.

Concept explication is an iterative process. With each iteration, conceptual definitions and operational procedures can be tweaked and streamlined (Chaffee, 1991). Operational definitions for variables like conversational voice and communicated commitment previously passed initial tests of face validity, and bivariate analyses of how these relational maintenance strategies correlate with other OPR-related constructs as hypothesized continue to support their construct validity to date. More univariate and bivariate research is now required as the measures are refined for easier application. Chaffee defines univariate research as research "related to the concept itself rather than its relationship to other concepts" and bivariate research as a way to test the extent that concepts "enter into other theoretical relationships that are validated in a larger program of research" (1991, pp. 51, 61).

As a practical matter, although academic researchers may have access to student populations and well-funded researchers may be able to recruit paid participants to complete lengthy questionnaires, practitioners and scholars often face the choice of using a shorter instrument or no reliable or valid instrument at all to test complex constructs. By starting with existing measures known to have excellent variance explained, solid construct validity, and high reliability, then using them as the basis for developing an abbreviated measure, this study aims to produce a short set of items that can be easily deployed by academics and professionals alike.

Saucier (1994), and Robins, Hendin, and Trzesniewski (2001) posited that shorter measures, including single-item measures, "eliminate item redundancy and therefore reduce the fatigue, frustration, and boredom associated with answering highly similar questions repeatedly" (p. 152). Looking at the appropriateness of a shorter scale to measure the construct at hand, Burisch (1984, 1997) showed that a short and simple measure can be both as valid and sophisticated as its longer alternatives.

	Communicated Relational Commitment	*Responsiveness/ Openness/ Inetractivity*	*Conversational Voice/ Human Voice*	*Positivity*	*Task Sharing*
Hon & Grunig (1999)		✓		✓	✓
Kelleher & Miller (2006)	✓	✓	✓	✓	✓
Jo (2006)	✓	✓			
Sweetser & Metzgar (2007)	✓	✓	✓	✓	✓
Ki & Hon (2008)	✓	✓			✓
Kelleher (2009)	✓		✓		
Sweetser (2010)	✓	✓	✓	✓	✓
Park & Lee (2013)	✓		✓		
Avidar (2013)	✓	✓			
Sweetser & Tedesco (2014)	✓	✓		✓	
Sweetser et al. (2015)	✓	✓	✓	✓	
Sweetser (2015)	✓	✓	✓	✓	
Phase 1 (this research)	✓	✓	✓	✓	
Phase 2 (this research)	✓	✓	✓		
Phase 3 (this research)	✓	✓	✓		

Figure 1. Communicative strategies for maintaining OPR in existing literature.

Given that much relationship research of late has focused on the impact of digital communication on relationships and collects data via online surveys, an abbreviated measure for communicative strategies in relationship maintenance would be helpful to both scholars and practitioners. Furthermore, an abbreviated measure would provide researchers the ability to ask respondents to rate OPRs with several organizations in one setting.

Research question

This study is designed to develop parsimonious operational definitions of communicative strategies in an OPR context that includes both online and traditional communication channels.

RQ: *How can communicative strategies be operationally defined in an OPR context that includes both online and traditional communication channels?*

Method

To establish parsimonious, valid, and reliable abbreviated measures of communicative strategies in OPR maintenance, the researchers began with 25 commonly used items from studies cited in Figure 1. The design employed a series of three survey phases to reduce the number of items within each of the relationship factors and to combine factors for parsimony as appropriate. To continue the cycle of explication, the emerging factors underwent review as they relate to prior conceptual definitions, and bivariate relationships with attitudinal outcomes were observed to reexamine construct validity. OPR literature over many years suggests that individual attitudes toward an organization (which theoretically lead to behavioral intention and behavioral outcomes) are outcomes of effective OPR strategies and processes (Huang & Zhang, 2015). These initial 25 items measuring communicative strategies in OPR maintenance faced reduction over the three iterations (or phases) of this study, a process discussed in detail in the results.

Attitudes toward the organization were measured through two different scales and cover varying aspects in which an organization may have interest. The first general attitude scale is represented by attitude toward the organization. Operationalizing attitude toward the organization using Mathwick and Rigdon's (2004) Attitude toward the Company scale, the measures contained four items on a 5-point Likert-type scale such as positive word-of-mouth, as well as general attitude toward the services provided (education) and standing of the organization. The four items were summed into a single index (Cronbach's interitem correlation coefficient = .81). The Lichtenstein, Drumwright, and Braig (2004) scale measured perception of social responsibility. This 5-item Likert-type scale was summed into a single index (Cronbach's interitem correlation coefficient = .92), and included items assessing the respondent's perception of the organization's commitment to the community, involvement in community service, and benefits enjoyed by the community as a result of the organization, among other items. These two attitude indices will be used as dependent variables to determine if perceived communication strategies relate to attitude as expected (i.e., to check theoretical validity).

Sample

The population used in this study was alumni of a large state university's college of journalism and mass communication. The alumni were surveyed as a key public, and the focal organization for the items was the college. Although alumni surveys are commonly conducted as nonacademic market research by an alumni relations office, this was not the case here. By design from the start, this project, in coordination with alumni relations, was an academic research endeavor to abbreviate the measures of communicative strategies in OPR. As such, researchers followed the university's human subjects process. This project had Institutional Review Board (IRB) approval prior to the deployment of the first survey. After IRB

approval, the entire alumni list for the college was split into three separate samples so that different surveys could be administered without respondents being asked to complete the same items repeatedly.

Respondents were recruited for the online surveys via e-mail message, signed by the college's director of alumni services, who was a known point of contact for the alumni group. Data were collected in tight succession over the course of 3 months from a total of 1,169 respondents. A number of respondents did not provide their gender or demographic information. Overall, 58.8% of the entire sample (n = 687) reported to be female and nearly a third overall reported to be male (n = 338; 28.9%). The response rate was monitored for each phase (Phase 1: 12%, Phase 2: 11%, Phase 3: 10%), and although low, these response rates were within standard limits noted in other surveys of information industry professionals such as those working in advertising, journalism, and public relations (Porter, Sweetser, & Chung, 2009; Sweetser, Porter, Chung, & Kim, 2008).

Results

In Phase 1, the original 25-item measure determined the baseline OPR and measured the public's perceptions of the organization's communicative strategies. The following two iterations for Phase 2 and Phase 3 were reductions from the previous phase's measures based on factor loadings and reliability statistics. All reductions occurred in conjunction with a theoretical review to ensure that fidelity and construct validity were not lost in the reduction process. Based on Chaffee's (1991) assertion that explication is an iterative process as discussed previously, this study sought to develop, test, and refine a set of items to measure communicative strategies for relationship maintenance. As such, in operationalizing this process, the researchers employed three distinct phases to obtain as efficient of a measure as possible, without losing explanatory power. This method enabled the researchers to pare down the items from the initial 25-item scale into a more parsimonious abbreviated measure. Consistent with Jo (2006), percentage of variance and scree plot were used to determine the number of factors to extract in each phase. Finally, a confirmatory factor analysis addressed the statistical appropriateness of the abbreviated measures for communicative strategies for maintaining OPR.

Phase 1

Phase 1 (n = 492) served as a baseline, and included all original 25 items measuring alumni perceptions of the college's communicative strategies in relationship maintenance. The survey was sent to 4,100 possible respondents. The response rate for this group was 12%, which, although low, is acceptable (see Porter & Sallot, 2003, 2005; Porter et al., 2009; Porter & Whitcomb, 2003; Sha & Toth, 2005).

Consistent with prior research on relational maintenance factors, a principal component factor analysis using varimax rotation was conducted. The resulting 4-factor solution explained 66.43% of the variance. This factor analysis was more parsimonious than previous research, which has found up to seven factors emerging from these items. In this initial iteration, Factor 1 may be described as *communicated relational commitment* (Cronbach's interitem correlation coefficient = .93), Factor 2 as *responsiveness/interactivity* (Cronbach's alpha = .86), Factor 3 as *conversational voice* (Cronbach's alpha = .86), and Factor 4 as *positivity* (Cronbach's alpha = .79). One item was reverse-coded as needed, and no items were deleted from the analysis. See Table 1 for the factor loading scores for the 25-item OPR scale.

Phase 2

Phase 2 (n = 162) was the first step in reducing the items. This phase of the survey was sent to a smaller sample size segment of the overall population (n = 1,470), and the response rate was 11%. To determine which items would remain in the new abbreviated measure, we reviewed the factor loading scores from Phase 1, considered face validity and item wording based on prior conceptualization, and consulted prior analyses for consistency in the relationship concept (Kelleher, 2009; Kelleher & Miller, 2006; Sweetser, 2010; 2015; Sweetser, English, & Fernandes, 2015; Sweetser &

Table 1. Factor analysis of Phase 1's 25-item measures of communicative strategies for maintaining OPR.

Item	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1: *Communicated relational commitment*				
Demonstrates a commitment to maintaining a relationship	.76			
Communicates desire to build relationship	.76			
Implies relationship has future/long term commitment	.70			
Treats me/others as real people	.63			
Invites people into conversation	.62			
Open to dialogue	.58			
Discusses the organization's nature	.41			
Factor 2: *Responsiveness/interactivity*				
Accepts feedback/comments		.68		
Positively address complaints or queries		.66		
Accepts email (from me or others)		.57		
Would admit mistakes		.55		
Provides prompt/uncritical feedback when addressing criticism		.54		
Directly addresses organizational responsibilities		.53		
Factor 3: *Human voice*				
Uses a sense of humor in communication			.79	
Provides connections to competitors			.61	
Makes communication enjoyable			.60	
Interesting in communication			.55	
Communication in a conversational style			.46	
Emphasizes relationship quality			.42	
Factor 4: *Positivity*				
Expresses cheer & optimism about the future				.74
Uses a positive/optimistic tone				.72
Performs organizational responsibilities				.54
Communicates in a human voice				.50
Avoids duties				.31
Variance explained	49.5%	6.9%	5.59%	4.4%

Metzgar, 2007; Sweetser & Tedesco, 2014; among others). Ten items were removed from the common list, and a new abbreviated 15-item measure was tested in Phase 2. Prior to launching Phase 2, the Phase 1 dataset was factor analyzed using only the abbreviated 15-item measure to test its strength and suitability in explaining relationships.

As done in Phase 1, the Phase 2 data were submitted to a principal axis factor analysis using varimax rotation. The result was a two-factor solution explaining 59.8% of the variance. Factor 1 is labeled as *communicated commitment* (Cronbach's alpha = .88) and Factor 2 as *conversational voice* (Cronbach's alpha = .88). See Table 2 for the factor loading scores for the 15-item OPR scale.

Phase 3

Phase 3 was the final iteration (n = 515), and yielded a 10% response rate (sent to 5,150 possible respondents), still acceptable based on other academic research on professional communicators and at this point consistent with this particular sample.

In this phase, the OPR scale was abbreviated to an 11-item scale. The 11 items in this phase were determined in the same manner as the first reduction that informed the Phase 2 measure (loading scores, face validity, previous research). Prior to the final selection of the 11 items that would make up this version of the measure, Phase 1 and Phase 2 data were combined into a single data file where the 11 proposed items were factor analyzed. This step ensured the strength and suitability of the abbreviated list of 11 items before deploying the measures in Phase 3.

Consistent with the process in the previous phases, in Phase 3 the data were factor analyzed using varimax rotation. The result was a two-factor solution explaining 59.3% of the variance. Factor 1 is best described as *communicated commitment* (Cronbach's alpha = .88) and Factor 2 as *conversational voice* (Cronbach's alpha = .79). See Table 3 for the factor loading scores for the final abbreviated 11-item measure.

Table 2. Factor analysis of Phase 2's 15-item measures of communicative strategies for maintaining OPR.

Item	Factor 1	Factor 2
Factor 1: *Communicated commitment*		
Demonstrates relationship has future/long term commitment	.81	
Communicates desire to build relationship	.76	
Uses a positive/optimistic tone	.75	
Demonstrates a commitment to maintaining a relationship	.71	
Expresses cheer & optimism about the future	.69	
Communicates in a conversational style	.49	.46
Factor 2: *Conversational voice*		
Provides prompt/uncritical feedback when addressing criticism		.78
Uses a sense of humor in communication		.69
Provides connections to competitors		.68
Positively addresses complaints or queries		.65
Would admit mistakes		.64
Open to dialogue	.42	.59
Makes communication enjoyable	.49	.56
Accepts feedback/comments	.41	.51
Interesting in communication	.42	.48
Variance explained	47.6%	12.10%

Table 3. Factor analysis of Phase 3's 11-item measures of communicative strategies for maintaining OPR.

Item	Factor 1	Factor 2
Factor 1: *Communicated commitment*		
Communicates desire to build relationship	.83	
Implies relationship has future/long term commitment	.81	
Uses a positive/optimistic tone	.72	
Demonstrates a commitment to maintaining a relationship	.70	
Expresses cheer & optimism about the future	.67	
Factor 2: *Conversational voice*		
Provides prompt/uncritical feedback when addressing criticism		.71
Positively address complaints or queries		.69
Would admit mistakes		.62
Makes communication enjoyable		.57
Uses a sense of humor in communication		.53
Provides connections to competitors		.48
Variance explained	42.9%	16.3%

Final factor analysis

The last step of the item-reduction process was to perform a final factor analysis on the data from all three phases (N = 1,169) using just the 11 items from the Phase 3 abbreviated measure. Applying the same technique of principal component factoring with varimax rotation, the resulting solution yielded two factors explaining 61.8% of the variance. Factor 1 is best described as *communicated commitment* (Cronbach's alpha = .88) and Factor 2 as *conversational voice* (Cronbach's alpha = .82). See Table 4 for the factor loading scores for the entire sample across all three surveys using the 11-item communicative strategies measure.

Confirmatory factor analysis

A confirmatory factor analysis (CFA) tested the statistical model of the abbreviated 11-item measures for communicative strategies in maintaining OPR (see Figure 2). CFA allows researchers to test the measurement model based on the expected relationships, as predicted by theory. As such, the CFA is simply confirming whether the data fits what is theorized in the model. The CFA was run using AMOS Graphics to assess the measurement properties. The model identified generally showed signs of good fit to the data (χ^2 = 273.12, df = 40, $p \leq .001$, root mean square error of approximation [RMSEA] = .073, Tucker-Lewis Index [TLI] = .95, comparative fit index [CFI] = .96, normed fit index [NFI] = .95). The

Table 4. Factor analysis of entire sample for 11-item measures of communicative strategies for maintaining OPR.

Item	Factor 1	Factor 2
Factor 1: *Communicated commitment*		
Communicates desire to build relationship	.78	
Implies relationship has future/long term commitment	.78	
Uses a positive/optimistic tone	.75	
Demonstrates a commitment to maintaining a relationship	.74	
Expresses cheer & optimism about the future	.70	
Factor 2: *Conversational voice*		
Provides prompt/uncritical feedback when addressing criticism		.71
Positively address complaints or queries		.63
Uses a sense of humor in communication		.63
Would admit mistakes		.60
Provides connections to competitors		.59
Makes communication enjoyable		.59
Variance explained	46.4%	15.3%

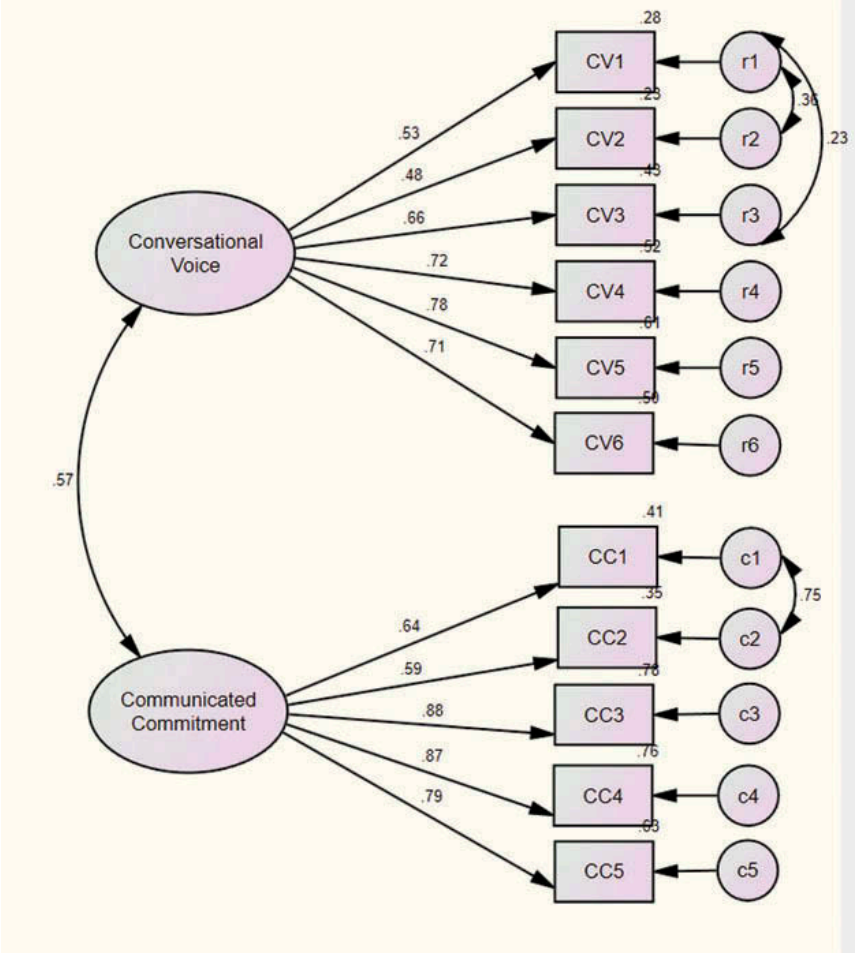

Figure 2. Two-factor confirmatory factor analysis results.

expected thresholds were met with RMSEA less than .08 and NFI greater than .95 (Meyers et al., 2006), as well as being statistically significant.

Convergent validity was examined for each latent item. Average variance extracted is a marker of convergent validity. Average variance extracted (AVE) for *communicated commitment* was .59, and the AVE for *conversational voice* was .43. Composite reliability should be greater than .80, and in this

data CR was .82 for *communicated commitment* and .87 for *conversational voice*. As mentioned by Zait and Bertea (2011), discriminant validity can be conducted using three commonly accepted models; this analysis uses the AVE method. Scholars have noted that more than one method does not need to be applied because they all produce strong and valid results (Zait & Bertea, 2011). The method employed here was adopted because it is noted to be preferred during the confirmatory stage and offers a more parsimonious procedure over other options (Zait & Bertea, 2011), such as the chi-square difference test method (Segars, 1997). The discriminant validity for *communicated commitment* was .77 and .66 for *conversational voice*, indicating that the constructs are unique from one another. See Tables 5 and 6 for bivariate correlation and measurement model item loadings, respectively.

Review of conceptual definition

Following the final factor analysis and the CFA, conceptual definitions of *communicated commitment* and *conversational voice* were reviewed to check if modifications were necessary, as recommended by Chaffee. The following two definitions were found to still be "in line with operational realities" (Chaffee, 1991, p. 50).

Communicated commitment indicates—from the perspectives of publics—"communication in which members of an organization work to express their commitment to building and maintaining a relationship" (Kelleher, 2009, p. 176).

Conversational voice indicates "an engaging and natural style of organizational communication as perceived by an organization's publics based on interactions between individuals in the organization and individuals in publics" (Kelleher, 2009, p. 177). The final items for the measures of communicative strategies for maintaining OPR are listed in Table 7.

Attitude and communicative strategies

After the 11-item communicative strategies measure was created, the two factors were correlated with overall attitude toward the organization. These attitude items were used as a first attempt to test the newly abbreviated scale against other measures. Attitude was represented through two different

Table 5. Bi-variate correlation: Conversational voice and communicated commitment.

Measures	1	2
Conversational voice	**.66**	
Communicated commitment	.51**	**.77**

Note. Diagonal elements represent the square roots of average variance extracted). **$p < .01$.

Table 6. Measurement model: Item loadings.

	Loading	Mean	SD
Perceptions about *communicated commitment*			
Composite reliability = .89			
CC1: Uses a positive/optimistic tone	.64	4.11	.65
CC2: Expresses cheer & optimism about the future	.59	4.02	.68
CC3: Implies relationship has future/long term commitment	.88	3.95	.79
CC4: Communicates desire to build relationship	.87	4.06	.79
CC5: Demonstrates a commitment to maintaining a relationship	.79	4.06	.85
Perceptions about *conversational voice*			
Composite reliability = .82			
CV1: Uses a sense of humor in communication	.53	3.08	.75
CV2: Provides connections to competitors	.48	2.90	.69
CV3: Makes communication enjoyable	.66	3.58	.70
CV4: Would admit mistakes	.72	3.44	.72
CV5: Provides prompt/uncritical feedback when addressing criticism	.78	3.27	.59
CV6: Positively address complaints or queries	.71	3.29	.59

Table 7. 11-item abbreviated scale communicative strategies for maintaining OPR.

Instructions: On a 5-point Likert-type scale, please indicate your agreement with the following items.
The organization . . .:
Factor: *Communicated commitment*
CC1: Uses a positive/optimistic tone
CC2: Expresses cheer & optimism about the future
CC3: Implies relationship has future/long term commitment with its publics
CC4: Communicates desire to build relationship
CC5: Demonstrates a commitment to maintaining a relationship
Factor: *Conversational voice*
CV1: Uses a sense of humor in communication
CV2: Provides connections to competitors
CV3: Makes communication enjoyable
CV4: Would admit mistakes
CV5: Provides prompt/uncritical feedback when addressing criticism
CV6: Positively address complaints or queries

Note. Perform a principal components factor analysis with varimax rotation to determine factor groupings.

summative indices—attitude toward the organization (Mathwick & Rigdon, 2004) and social responsibility (Lichtenstein et al., 2004). These two separate attitude measures were then correlated with two communicative strategy factors from all respondents across the three phases.

The *communicated commitment* factor correlated with attitude toward the organization (r = .40; $p \leq .001$) and with perceived social responsibility of the organization (r = .30, $p \leq .001$).

The *conversational voice* factor correlated with attitude toward the organization (r = .30; $p \leq .001$) and with perceived social responsibility of the organization (r = .42, $p \leq .001$).

Knowing there is a correlation between these communicative strategies and attitudes, a series of linear regressions were next run to separately predict attitude through communicative strategies. The two communicative strategies factors were able to significantly predict attitude toward the organization, with the resulting regression model explaining 23% of the equation (adjusted R^2 = .229, $p \leq .001$). Social responsibility was significantly predicted by both of the communication strategy factors as well, with the resulting regression model explaining 24.4% (adjusted R^2 = .243, $p \leq .001$).

Discussion

In the general timeline of OPR inquiry, the period from 1984 to 2006 yielded a great deal of productive conceptualization. Few would argue that the study of OPRs in public relations lacks heuristic provocativeness, as Chaffee and Berger (1987) called it, as a hallmark of good theory. Ki and Hon's (2009) article on the 2006 development of a valid and reliable instrument for measuring relational cultivation strategies punctuates that era. Since 2006, a thread of research that embraces the importance of interpersonal interaction while exploring the nuanced role of digital and social media in OPRs has produced operational measures and theoretical constructs that are appropriate for application in environments in which organizations and publics are just as likely to interact online as they are to communicate in more traditional contexts for public relations tactics.

This study sought to test variations of measures of communicative strategies to maintain OPRs and to create a more parsimonious and abbreviated version of the measures used in past research. Given that much OPR scholarship now incorporates other concepts in studies to better understand relationships in concert with other concepts, this attempt at reducing the battery length of the OPR measures was needed. Furthermore, given the development of communication technologies and increasingly digital forms of OPR emerging over the past decade, it appeared an appropriate time to revisit the measures.

Over the course of the process to abbreviate the measures, variance degraded. The variance lost from Phase 1 to Phase 2 was the most noticeable, and the variance lost from Phase 2 to Phase 3 was minimal. The change in the factor make-up from Phase 2 to Phase 3 was also minimal, suggesting that the 15-item and the 11-item measures were nearly identical. The parsimony added from the two

shorter measures, and the cleaner factor loading obtained through Phase 3's 11 items make a case for more research to be done using Phase 3's 11-item abbreviated measure. The CFA confirmed the appropriateness of the model presented in Phase 3.

Further suggesting the potential of the 11 items, the final factor analysis of the combined data across all three studies shows a strong, statistically healthy, and reliable factor solution. The resulting two-factor solution from the combined data set of all three phases not only created reliable factors nearly identical to the factors occurring in Phase 3, but cleared the threshold of the desired variance explained for a factor solution (Child, 2006; Netemeyer, Bearden, & Sharma, 2003).

There does appear to be some trade-off between reliability and length of instrument. As the number of the items was reduced, there was a marginal decrease in reliability. However, the reliability overall did remain strong and well within statistical standards.

CFA is meant to be deductive to predict an outcome from a theoretical framework (Meyers et al., 2006). According to Fornell (1987), CFA is a second-generation test meant confirm a theory. As such, the goal in CFA is to determine if the relationships in a model resemble that which is produced by the data (Meyer et al., 2006). Because "confirmatory factor analysis is not an arena for proof" (Meyer et al., 2006, p. 563), the approach relies heavily on the researcher to consider the statistical model produced alongside the theory itself in a more holistic evaluation for fit. To this point, Steiger (1990) submitted that scholars should be careful about deleting or adding to a model merely for a stronger model fit, emphasizing the importance of the overall theory at play.

Given the theoretical emphasis in communicative strategies for maintaining OPR on variables such as using a *sense of humor* with one's publics, we applied the Steiger (1990) approach with prudence. Here we did not sacrifice theory fit for statistical perfection. Drawing from the theory and heavily guided by Chaffee's (1991) call for constant refinement and improvement, the researchers here submit this abbreviated scale for communicative strategies for maintaining OPRs as a step forward in parsimonious measurement. Using that holistic approach, the recommendations here weighed professional advice from public relations thought leaders expressed in key social media trade press like *Groundswell* (Li & Bernoff, 2008, 2009), *Engage* (Solis, 2011), and *Naked Conversations* (Scoble & Isreal, 2006), in addition to consultation of theory and examination of statistical strength. This set of measures, however, is not meant to be the final step, and the researchers here anticipate further refinement from the academy and profession.

Tool for practitioners

One of the largest benefits of an abbreviated measure is the opportunity it affords public relations practitioners in evaluating and understanding organization-public relationships. A 25-item battery is cumbersome for a practitioner looking to measure communicative strategies along with other OPR variables. By creating a shorter, more parsimonious measure, some barriers for practitioners interested in tracking this crucial concept are removed.

Given that public relations' very definition revolves around the concept of relationships, practitioners would be well-served with a brief measure through which to understand OPR. Such ability to accurately and quickly gauge relationships with one's target publics could be extremely useful in stakeholder analysis in preparing for a campaign, as well as potentially assessing the success of a public relations campaign.

The impact the communication strategies had when analyzed as independent variables related to different attitudes toward the organization and further showcase the importance of OPR. The results here show that, indeed, communicated commitment and conversational voice, both pieces of an organization's public relations approach, correlate with attitudes of key stakeholders toward that organization. This ability to draw the line between an organization's actions (i.e., communication strategies) and the result (i.e., attitudes) among publics is key. The two predictive equations for attitude here were further tests of the utility of communication strategies, and the findings signal that practitioners can improve the impact of their public relations programs through continued relationship maintenance.

Limitations and future research

A consistent, agreed-upon definition of OPRs still eludes the public relations field. Huang and Zhang recognized the need for "a multi-indexed approach for measurement" of OPRs (2015, p. 19). Like many OPR studies that have preceded it, this study falls short of capturing all the dynamics and major constructs that define relationships between organizations and publics. Our goal was more modest—continuing explication of relational maintenance strategies to develop more parsimonious measures for these constructs as key pieces of the larger puzzle. These key pieces (communicated commitment and conversational voice) are valuable in their own right as indicators for practice and theory, but as Chaffee reflected, the explication process is a circular one, rarely completed in a single study. The "dialectic between operational and conceptual scholarship" can last a scholar's lifetime (Chaffee, 1991, p. 6; citing Blalock, 1982). This iteration focused primarily on univariate research on the evaluation of operational definitions with a secondary goal of reinforcing construct validity with bivariate analyses. Bivariate analysis did reveal correlations between the focal relationship maintenance strategies and positive attitudinal outcomes to support the construct validity of the former, but the dynamics of those relationships (e.g., causality, moderation, mediation, etc.) need further study with experimental or longitudinal research.

Furthermore, future researchers should pay close attention to the subtle but important conceptual and operational distinctions between antecedent variables that represent communicative strategies as perceived by publics and the actual relational outcomes as perceived by publics. For example, the essence of communicated commitment is the perception that an organization is *attempting to communicate* commitment (e.g., the organization *communicates* a desire to build relationships, and *implies* the relationship has a future). However, this construct is different than the perception of actual commitment as an outcome of a healthy relationship (e.g., there is a long-lasting bond between the organization and its publics). Instruments designed for future multivariate research should clarify when respondents are being asked to assess what and how an organization communicates as distinct from assessments of the actual quality of the relationships that result from the organization's strategies.

The abbreviated 11-item measure of communicative strategies presented in this study is far from perfect. As discussed, some fidelity and variance was lost through the reduction process. This shorter measure also does not include the whole range of relational maintenance strategies in contexts such as crises or the conceptual detail of measures that parse out large numbers of subfactors as found in Yang et al. (2015) or any of the studies listed in Table 1. However, the service that such a shortened scale provides both the practice and the expanding scholarship of OPR in public relations where several theories and concepts are tested in concert with one another is of value. These 11 items should be further tested in other relationship contexts and among other stakeholder groups.

Although the process of creating an abbreviated measure for communicative strategies in maintaining relationships may not have resulted in a perfect solution, it represents an important step forward in public relations research where scholars seek to improve ways to measure integral concepts within the field. It also provides practitioners an easy way to measure and evaluate communicative strategies for maintaining organization-public relationships.

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