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Variables Underlying Willingness to Communicate: A Causal Analysis

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This study considers the personality-based sources of Willingness to Communicate (WTC) among the constructs originally identified by Burgoon (communication apprehension, anomie, alienation, introversion, and self-esteem). The relations among these variables and their contribution to WTC are tested using causal modelling. Results suggest that WTC is caused by a combination of communication apprehension and perceived competence which have their roots in introversion and self-esteem. Limitations of the WTC construct and implications of the model are discussed.

The manner in which personality-based variables interact and exert influence on other constructs is a matter of considerable importance when attempting to use them to explain communicative behavior. Willingness to communicate (WTC) has been proposed as an important variable underlying the interpersonal communication process. It has been suggested that WTC functions as a personality trait, showing stable individual differences over time and across situations. Several studies have proposed that WTC may be influenced by other personality-based variables, such as introversion, self-esteem, anomie, and alienation (Burgoon, 1976; McCroskey & Richmond, 1987). Whereas those previous studies have shown that these variables are correlated, they have not articulated the underlying structure nor explicitly tested causal relations among the various constructs.

The purpose of this paper is to examine the structure underlying WTC. McCroskey maintains that WTC represents the intention to initiate communication when free to do so (McCroskey & Baer, 1985; McCroskey & McCroskey, 1986a, 1986b). This construct offers potentially strong explanatory power because it is, in essence, an intention to initiate a behavior. The extensive body of work generated by Fishbein and Ajzen's Theory of Reasoned Action and the more inclusive Theory of Planned Behavior has demonstrated that behavioral intentions are often predictive of actual behavior, particularly when the individual has control over the response (see Ajzen, 1988; Fishbein & Ajzen, 1975; see Eagly & Chaiken, 1993 for a review of these theories). WTC represents the intention to initiate communication behavior and this intention may be based in large measure on the speaker's personality.

Burgoon (1976) conducted one of the seminal studies in this literature using a construct identified as unwillingness to communicate. McCroskey and Baer (1985) adapted and re-named the

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construct "Willingness to Communicate," changing it from a negative to a positive orientation. McCroskey and associates have proposed a WTC scale that overcomes some of the problems with Burgoon's earlier measure (see McCroskey, 1992; McCroskey & Baer, 1985; McCroskey & Richmond, 1990). In general terms, however, the concepts described by Burgoon and McCroskey can be considered to be opposite sides of the same coin. However, the recommended measurement of those concepts differs between the two theorists. In this case, McCroskey's (1992) scale appears to have better reliability and validity.

The present analysis tests a causal model of the five basic constructs identified by Burgoon (1976) as determinants of the willingness to communicate: anomie, alienation, self-esteem, introversion, and communication anxiety. A sixth construct, perceived competence, will also be included in the model to account for variation in McCroskey's (1992) WTC scale. These procedures will allow for a test of the proposed causal relations among the variables. This will aid in more sharply defining the WTC construct and the implications of the causal paths may be tested in future research.

METHOD

The data for this investigation were taken from studies conducted by McCroskey and McCroskey (1986a) who included measures of the constructs relevant to WTC identified by Burgoon (1976). The data for the perceived competence scale was obtained from McCroskey, Richmond, and McCroskey (1987) and the correlations used here were averaged over the two reported samples using a Fisher Z transformation (MacIntyre & Gardner, 1993). The variables included in the model, their alpha reliabilities, and the previously cited reference are as follows: Willingness to Communicate ($\alpha = .92$; McCroskey & Baer, 1985), Perceived Competence ($\alpha = .92$; McCroskey & McCroskey, 1986a), Communication Apprehension ($\alpha = .92$; McCroskey, 1986), Introversion ($\alpha = .77$; Eysenck, 1970, 1971), Self-Esteem ($\alpha = .91$; Berger, 1952), Anomie ($\alpha = .69$; Srole, 1956), and Alienation ($\alpha = .79$; Dean, 1961).

THE MODEL

Following Eysenck and Eysenck (1985), the starting point for this model assumes that more general personality dispositions (such as introversion and self-esteem) will interact with each other and will be instrumental in producing more specific predispositions, such as communication apprehension. This is not meant to eliminate the possibility of reciprocal influence between the more general and more specific traits (see Beatty & Behenke, 1980), it is intended as a point of departure from which to initiate the model.

The model shown in Figure 1 was tested during LISREL VII (Jöreskog & Sörbom, 1989) and the correlation matrix is presented in Table 1.

The present model shows excellent fit to the data, based on several indices. All of the paths shown are significant (t 's > 2.0). The LISREL goodness of fit index is .99 and the adjusted goodness of fit index (adjusted for degrees of freedom) is also quite high (.96). The chi square test is nonsignificant ($\chi^2(12) = 13.4$, n.s.) and the chi square to degrees of freedom ratio is low ($13.4/12 = 1.12$) indicating a strong model. A null model, postulating no relations among the variables, produced a chi square of $\chi^2(21) = 558.11$. Both the Tucker-Lewis Index and the Normed Fit Index (Bentler & Bonett, 1980) compare the hypothesized model's structure with the absence of structure in the null model. The Tucker-Lewis Index (.995) and the Normed Fit Index (.98) indicate well defined structure, suggesting that the addition of causal paths make a substantial improvement in accounting for the correlations. The coefficient of determination indicates that 60% of the variance is accounted for

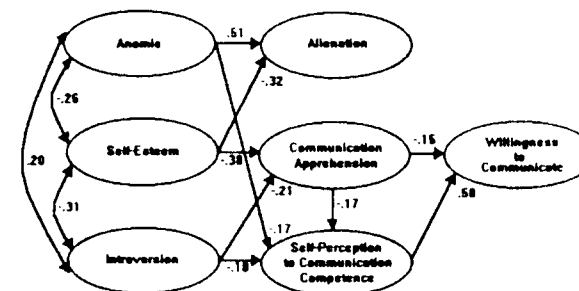
TABLE 1
Correlations Among Personality-Based Variables

	PRCA	Intro	Anom	S.E.	Alien	WTC	PC
PRCA	1.00						
Intro	0.33	1.00					
Anom	0.01	0.20	1.00				
S.E.	-0.45	-0.32	-0.26	1.00			
Alien	0.20	0.23	0.59	-0.45	1.00		
WTC	-0.50	-0.29	-0.14	0.22	-0.17	1.00	
PC	-0.61	-0.40	-0.21	0.36	-0.31	0.67	1.00

PRCA = Personal Report of Communication Apprehension, Intro = Introversion, Anom = Anomie, S.E. = Self-Esteem, Alien = Alienation, WTC = Willingness to Communicate, PC = Self-Report of Communicative Competence

FIGURE 1

Hypothesized causal sequence for predicting WTC using personality-based variables



The model terminates with Willingness to Communicate (WTC). In McCroskey's scheme, WTC is seen as a behavioral intention to initiate communication when free to choose to do so. In this sense, WTC can be considered as a last step before overt behavior. If a person intends to communicate, it is quite likely that s/he will do it (McCroskey, 1992; McCroskey & Richmond, 1990; Zakahi & McCroskey, 1989). For this reason, WTC was chosen as the final construct in the causal sequence.

The present model postulates two causes of WTC, communication apprehension (CA) and perceived competence (PC). It would appear that people are willing to communicate to the extent

that they are not apprehensive about it and perceive themselves to be capable (competent) of effective communication. The person least willing to speak-up would be the apprehensive individual who feels incompetent as a communicator. The model proposed here indicates that both skills training and anxiety reduction strategies would improve the WTC and that their effects may be partially independent (see Phillips & McCroskey, 1982).

Perceived competence is seen to be caused by a combination of CA and introversion. Introverts may perceive themselves as less competent based on a lack of experience or practice in social settings. Introverts tend to avoid social interaction and thus have fewer opportunities to improve their communication skills (Eysenck, 1970; 1971). Apprehensive individuals may perceive themselves as less competent based on difficulties encountered in past communicative experiences that lead to both the feeling of incompetence and fear over the next interaction (McCroskey, 1977; McCroskey & McCroskey, 1986a, 1986b). That is, apprehensive individuals expect their competence to be relatively low.

Communication apprehension is seen to be caused by a combination of introversion and low self-esteem. Thus, the person with the lowest levels of CA would be the extravert who feels high self-esteem. The introvert with low self-regard would be expected to show the highest levels of CA. The correlation between introversion and self-esteem is negative and significant ($r = -.32$), indicating a tendency for introverts to have lower self-esteem.

In terms of developing the model, it should be noted that if only the path from PC to CA is tested, it is declared to be significant. However, LISREL VII's modification index indicates that the path from CA to PC should also be added, thereby making the path from PC to CA nonsignificant. Based on this analysis, the data appear to indicate that postulating CA as a cause of PC is sufficient to account for the relation between the two constructs.

Alienation and anomie are two other variables proposed by Burgoon (1976) to underlie the unwillingness to communicate. However, the present data do not support their role in the causal stream. There are no significant links between anomie and WTC, alienation and WTC, or the combination of anomie and alienation with WTC. Further, no significant links between anomie and CA, alienation and CA, or the combination of anomie and alienation with CA were observed. The model presented here does support the hypothesis that anomie and a lack of self-esteem cause alienation and the path from anomie to PC was found to be significant. In one of the original studies of the anomie constructs, Srole (1956) argued that an "... interactive process (links) the individual state of anomia and interpersonal dysfunction in the social realm" (p. 716). Thus, the loss of normative standards in general reflected in anomie may lead to distrust in the communication process, possibly as a form of manipulation. As McCroskey and Richmond (1989) argue, it is much easier to view anomics as less competent than it is to view less competent people as anomie.

At the initial stage of the model are the correlations among the more broad-based personality variables: anomie, introversion, and self-esteem. In causal modelling, correlations are proposed when the researcher is unwilling or unable to specify causal relations among the variables (Jöreskog & Sorbom, 1989). The purpose of this paper is not to argue the primacy of one of these traits over another--in many ways this is a matter of preference for theories of personality with a small number of primary constructs (e.g., Eysenck, 1970; Goldberg, 1993) or those with a larger number (Cattell, 1947; Jackson, 1977). It is therefore sufficient to note that these variables are correlated among themselves, but not to a substantial degree.

Implications of the Model

There are several implications of the present model for understanding WTC. First, it would appear that CA and PC are the variables most immediately responsible for determining an individual's WTC. If the model is correct then it should be possible to affect WTC with changes in either of those two variables. As a person becomes more anxious about communicating, or feels

less competent, her/his WTC should decline. If events increase the perception of competence or reduce apprehension, then WTC should increase. The stronger of the two paths leading to WTC was observed for PC than for CA, indicating that changes in PC will be more strongly reflected in WTC. However, it would appear that a reduction in CA would increase WTC both directly and indirectly through its effect on PC.

Further implications may also be drawn. Both anomie and alienation were suggested as correlates of WTC in Burgoon's initial work, but the present data do not support them as causal factors. Theoretically it is possible to see how individuals experiencing either of these states would be less willing to communicate, but it is more difficult to explain a general unwillingness to communicate using anomie or alienation.

Finally, there are interesting implications for the CA construct as well. First, it would appear that CA has its roots in broader personality variables, such as introversion and self-esteem. This by no means exhausts the range of personality variables but these results do encourage future research to more fully assess the role of personality in determining CA. Another implication is for the relation of CA and PC. Several paths were tested but the most enduring relation was the hypothesis that CA causes the perception of competence.

Limitations of the Model

The limitations of the present model lie in three primary areas: the exclusive use of personality-based variables, situations where one does not have freedom of choice with respect to communicating, and the effect of WTC on communication after it has been initiated.

The first issue represents an intended limitation of the model. This study examines the way in which personality variables combine to influence WTC. Several other types of variables are necessary to completely account for the development of WTC. For example, recent personality theory has converged on five basic, global personality traits. Whereas introversion is only one of them (see Goldberg, 1993), the influence of the other four should be considered. However, despite its limitation, the present model accounts for 60% of the variance in WTC based exclusively on the other personality variables measured here. Also, it should be noted that the model can be used to explain situational variation in WTC. If a given situation produces changes in CA and/or PC, then the model would predict concomitant variation in WTC.

With respect to the second issue, free choice, McCroskey conceptualizes and measures WTC on the assumption that people are free to choose to communicate. Obviously there are conditions under which this choice is diminished, such as the strong convention of replying to another person's question. Therefore, in McCroskey's scheme, WTC best represents a behavioral intention to *initiate* communication in various settings. The degree to which the present model applies to situations where free choice is reduced may be an issue for future research.

With respect to the third issue, the effect of WTC during communication, McCroskey & Richmond (1989) have suggested that reduced WTC leads to both a reduction in the person's effectiveness as a communicator and negative perceptions of the individual on the part of the receivers. Whereas WTC appears to be influential in initiating communication, its effects on the quality of that communication are less certain. It is unclear why an unwillingness to communicate *necessarily* leads to less effective communication. WTC implies that the person intends to perform an action, thus it should affect the decision to initiate communication rather than the quality of it. It is necessary to postulate a more direct influence on the ongoing communication. For example, if a person is relatively unwilling to communicate but is forced to do so, a state of anxiety may arise (Beatty, 1988). Anxiety arousal can lead to disruption of cognition and interfere with both receiving and sending messages (Beatty & Payne, 1981; Greene & Sparks, 1983; Sarason, Sarason, & Pierce, 1991; Wheelless, 1975). The cognitive interference created by state anxiety can reduce the quality of the individual's speech and this would be reflected in both the perceptions of the receivers as well

as the self-perceptions of the speaker. Thus, WTC may be correlated with the quality of communication, but is not an immediate cause.

The role of WTC in explaining variability in communicative behavior warrants further examination. It would appear that personality variables strongly influence the development of WTC. Situational variation also must be expected. The interaction between general personality variables and specific situational characteristics also would provide a potential avenue for future research. The model described here may be useful as a basis for generating hypotheses to be tested in the future.

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Ethnic and Gender Differences in Opening Lines

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This study reports an examination of ratings of opening lines by male and female, African American and European American college students. Two hundred and seventy-five undergraduates from a large mid-western university volunteered to rate seventy-two inductively-derived opening lines. Each opening line was previously coded as being either direct, innocuous, or cute-flippant. Results indicated statistically significant and substantial main effects for sex, ethnicity, and line type. In general, innocuous lines were related most favorably, and cute-flippant lines were rated least favorably. African Americans rated lines more positively than European Americans, and males more positively than females. Two-way and three-way interactions between gender, ethnicity, and type of line were also found. African American males rated direct lines much more favorably than other groups, and European American females rated innocuous lines higher than European American males or African American females, but rated direct and cute-flippant lines lower than other subjects. The implications of these results are discussed.

Scholars have long been interested in how individuals initiate romantic relationships. For example, Krivonos and Knapp (1975) discuss the functions and sequence of greetings, and Parks and his colleagues have examined the role of third parties and network membership in relational initiation (e.g., Parks & Eggert, 1989). Researchers have also studied greetings' more sensational cousin, pick-up lines.

The purpose of this study is to extend the literature on opening lines by conducting an empirical examination of perceptions of opening lines by African American and European American, female and male college students. This perception data should be informative about gender and ethnic differences in the use of, and reactions to, types of opening lines. This paper begins with a review of the literature on opening lines.

Opening Lines

Although opening lines have received a good deal of attention in the popular literature (Krivonos & Knapp, 1975), these popular accounts may be "woefully inadequate" (Murray, 1985,

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