

## Willingness to Communicate: A Potential Confounding Variable in Communication Research

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Informed consent provisions of regulations involving use of human subjects in communication research have resulted in virtually all subjects in communication research being volunteer subjects. Since communication research often requires subjects to be involved in actual communication, an individual's willingness to communicate may have an important impact on whether the individual will be willing to volunteer for research in communication. This study reported that people who are highly willing to communicate, compared to those less willing, are significantly more likely to agree to participate in a communication study, are more likely to appear as scheduled for participation, and are more likely ultimately to participate after persistent efforts to obtain their participation.

■ The establishment on most university campuses of committees to review the use of human subjects in research has created a new research environment for those in our field who wish to study human communication behavior. While studies such as the one on frustration and persuasion reported by Carmichael and Cronkhite in 1965 were not unusual in the social sciences twenty years ago, similar studies would be very unlikely to be approved by review committees today. Today, committees typically require the researcher to obtain "informed consent" of subjects prior to their use in a study.

While current standards have served well in reducing severe abuses of human subjects in the medical and social sciences, they have had the side effect of making most subjects in experimental and observational research, for all practical purposes, "volunteer" subjects. Equally important, if not more so, these "volunteers" must be informed of at least the general nature of the research prior to obtaining their consent. While a small amount of deception normally is approved by review committees a person must at least have a general indication of what he or she will be asked to do prior to giving consent to serve as a subject. In our field this means they will need to know at a minimum that they will be expected to "be interviewed," "observed," or "participate in a communication study." In some cases they will need to know that they will be expected to "give a short speech," "participate in a group discussion," or "be videotaped while talking" with someone else.

This change in the research environment has come gradually and has received little attention in the communication literature. If individual researchers have questioned its impact on the external validity of our research, they have remained silent and accepted the new strictures as a

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"fact of life." While this response is understandable (few researchers wish to challenge the authority of a university review committee, and even fewer could do so successfully), it has permitted a threat to the generalizability of our research to go virtually ignored. This threat is strongest to research involving experimentation, but it can also impact research involving observation of communication in the laboratory or a naturalistic environment.

Although the field of communication has largely ignored the impact of the volunteer subject on research this has not been true of all fields of study in the social sciences. Psychology generated an impressive body of research on the volunteer subject during the sixties and seventies. This research centered on demographic variables (e.g. age, sex, SES), factors which served as incentives to increase the number of volunteers (e.g. monetary reward), and a limited number of psychological variables (e.g. arousal seeking, authoritarianism, and conformity, Rosenthal & Rosnow, 1969, 1975).

Generalized anxiety initially received a great deal of attention as a source of error as it relates to the volunteer subject. It was assumed that someone who suffers from anxiety would be less willing to participate in research than someone who is not anxious. However, the results relating to anxiety and subjects' volunteering for research are, at best, confusing. In 1969 Rosenthal and Rosnow summarized the results of eleven studies on generalized anxiety and volunteer subjects. Of the eleven studies only two found that volunteers were less anxious than nonvolunteers. Rosenthal and Rosnow updated this review in 1975. Reviewing thirty-five studies they found only nine reported that volunteers were less anxious than nonvolunteers. Nineteen studies reported no significant differences and seven studies actually reported volunteers to be more anxious than nonvolunteers. In the end Rosenthal and Rosnow were unwilling to argue that there was no effect for anxiety, but they noted that in the studies reporting less anxiety for volunteers, the magnitude of the relationship observed tended to be less than one-third of a standard deviation. Such an effect size would not lead most researchers to be highly concerned about the danger of reduced external validity.

An area which has received some attention fits under the broad term "sociability." This research does not have the tight conceptual or operational development found in the research on anxiety, yet there appears to be a discernible pattern to the results. McDonald (1972, a, b) found in two studies that volunteers had more friends than nonvolunteers. Hayes, Meltzer and Lundberg (1968) found volunteers to be more talkative than nonvolunteers. Schubert (1964) found that volunteers scored higher on the social participation measure of the MMPI than nonvolunteers. Finally, Martin & Marcuse (1957) testing females found volunteers scored higher on sociability than nonvolunteers. It appears that volunteers might generally be described as more outgoing than nonvolunteers.

Taken together these results provide direction for research on the volunteer subject within the field of communication. The results of previous research on the volunteer subject would tend to guide us away from anxiety as an explanation for a subject's failure to volunteer. There

may, however, be other motivational or demotivational factors connected to the communication process which are related to the act of volunteering to be a research subject. The research suggests that how much potential subjects enjoy or like interaction may provide a better explanation for their behavior. The problem which we address here is the variability in people referred to as their "willingness to communicate" (McCroskey & Richmond, 1985).

Consistent behavioral tendencies with regard to frequency and amount of talk have been noted in the research literature for decades (Chapple & Arensberg, 1940; Goldman-Eisler, 1951; Borgatta & Bales, 1953). Such tendencies have been shown to be associated with communication apprehension (McCroskey, 1984); unwillingness to communicate (Burgoon, 1976), predispositions toward verbal behavior (Mortensen, Arntson, & Lustig, 1977), shyness (McCroskey & Richmond, 1982), and reticence (Phillips, 1984) as well as a number of other variables.

These tendencies have been taken as an indication of an underlying personality variable referred to as "willingness to communicate" (WTC: McCroskey & Richmond, 1985). WTC is viewed as a general (trait-like) tendency to approach or avoid communication.

While much research conducted by communication scholars does not involve actual observation of communication, our concern here is with that which does, or at least that which potential volunteer research subjects might believe would do so. Our concern is the possibility that the selection of research subjects for studies of communication behavior may be based on those people who exhibit a high WTC tendency.

Recent research has indicated substantial correlations of WTC with a variety of trait-like orientations of individuals. McCroskey and McCroskey (1986a) have found that WTC is negatively associated with communication apprehension, introversion, anomie, and alienation and positively associated with self-esteem (statistically significant moderate correlations). They also found WTC to be positively associated with self-perceived communication competence (McCroskey & McCroskey, 1986b). These variables have been demonstrated to be associated with actual communication behaviors in numerous research studies in the fields of communication and psychology as well as more diverse fields such as medicine, education, business, and pharmacy. Previous research supports the validity of the WTC. Chan & McCroskey (1987) found that students who scored high on WTC were significantly more likely to verbally participate in class than were those scoring low on WTC.

#### RATIONALE AND HYPOTHESES

Researchers in communication may have failed to consider the impact of communication orientations on their own research. What should potential participants logically expect to do if they agree to participate in a study conducted by the "Department of Communication?" If they do not like or are unwilling to communicate they may choose not to participate in the study.

## METHODS

A total of 381 students enrolled in an introductory communication class were initially screened for participation in this study. The class involved no required oral communication performance. Data on willingness to communicate were collected during the Fall semester as a part of a regular class assignment. Subjects completed an informed consent form in which they agreed to complete the pre-test and be contacted for phase two of the study. All subjects signed the form and agreed to participate in the first phase of the study. Subjects were not contacted with regard to participation in the study until the following semester—after they had completed the course in which they were enrolled and had received their final grades.

The initial screening of the subjects involved completion of the Willingness to Communicate Scale (see Figure 1, WTC; McCroskey & Baer, 1985; Richmond & McCroskey, 1985). Alpha reliability for the scale in the present study was .86. Subjects in the top quartile of the sample ( $N = 87$ ) were classified as "high willing" and those in the bottom quartile ( $N = 89$ ) were classified as "low willing." The phone numbers of these individuals were obtained from class records. A random sample of 25 individuals from each group were selected to be contacted for this research. Those who could not be contacted (no longer in the university, phone disconnected with no new number) were replaced in the same manner.

A check of those subjects who could not be contacted revealed no apparent bias in the sampling procedures. There were twenty-two potential subjects who could not be contacted (unlisted or disconnected telephones, no longer attending the university). Thirteen of these potential subjects came from the willing pool and nine came from the unwilling pool. A Chi-square goodness of fit test failed to indicate any systematic bias ( $X^2 = .98$ ,  $df = 1$ ,  $p > .05$ ).

Potential subjects were asked to participate in a study to be conducted by the communication department. They were told that their participation would involve completion of "a couple of questionnaires like you completed in your class last semester" and be interviewed by the researcher. They were told that it was very important to the research project that they participate and that the project would take "no more than twenty minutes" of their time. They were given no financial inducements to participate nor were they promised any other tangible rewards. Individuals who refused to participate were recorded as "refusals" and no further contact was made. The people making the phone calls were unaware of the true purpose of the study.

Individuals who agreed to participate were recorded as "agreed" and scheduled to appear at a time which was convenient for them. Within 24 hours prior to the time the individual was scheduled to appear, he or she was again contacted as a reminder and confirmation of the appointment. If the time was no longer convenient, it was possible at that time to reschedule the appointment.

Individuals who appeared at the scheduled time were recorded as "participated—time 1" and not contacted further. Those who agreed to participate but did not appear as scheduled (no shows) were recontacted

Figure 1  
*Willingness to Communicate Scale*

Directions: Below are 20 situations in which a person might choose to communicate or not to communicate. Presume you have completely free choice. Indicate the percentage of time you would choose to communicate in each type of situation. Indicate in the space at the left what percent of the time you would choose to communicate. 0 = never, 100 = always.

- \_\_\_\_\_ 1. \*Talk with a service station attendant.
- \_\_\_\_\_ 2. \*Talk with a physician.
- \_\_\_\_\_ 3. Present a talk to a group of strangers.
- \_\_\_\_\_ 4. Talk with an acquaintance while standing in line.
- \_\_\_\_\_ 5. \*Talk with a salesperson in a store.
- \_\_\_\_\_ 6. Talk in a large meeting of friends.
- \_\_\_\_\_ 7. \*Talk with a policeman/policewoman.
- \_\_\_\_\_ 8. Talk in a small group of strangers.
- \_\_\_\_\_ 9. Talk with a friend while standing in line.
- \_\_\_\_\_ 10. \*Talk with a waiter/waitress in a restaurant.
- \_\_\_\_\_ 11. Talk in a large meeting of acquaintances.
- \_\_\_\_\_ 12. Talk with a stranger while standing in line.
- \_\_\_\_\_ 13. \*Talk with a secretary.
- \_\_\_\_\_ 14. Present a talk to a group of friends.
- \_\_\_\_\_ 15. Talk in a small group of acquaintances.
- \_\_\_\_\_ 16. \*Talk with a garbage collector.
- \_\_\_\_\_ 17. Talk in a large meeting of strangers.
- \_\_\_\_\_ 18. \*Talk with a spouse (or girl/boy friend).
- \_\_\_\_\_ 19. Talk in a small group of friends.
- \_\_\_\_\_ 20. Present a talk to a group of acquaintances.

\*Filler item

Scoring: To compute the subscores add the percentages for the items indicated and divide the total by the number indicated below.

Public: 3 + 14 + 20; divide by 3.

Meeting: 6 + 11 + 17; divide by 3.

Group: 8 + 15 + 19; divide by 3.

Dyad: 4 + 9 + 12; divide by 3.

Stranger: 3 + 8 + 12 + 17; divide by 4.

Acquaintance: 4 + 11 + 15 + 20; divide by 4.

Friend: 6 + 9 + 14 + 19; divide by 4.

Total WTC = Stranger + Acquaintance + Friend.

for rescheduling. If they appeared at a rescheduled time they were recorded as "participated—later" and not contacted further. This process of rescheduling continued for 23 days (17 class days and three weekends), and all subjects who eventually participated after being a no show received the "participated—later" designation. Only one subject (a low willing) expressed irritation at being recontacted. No further contact was made with that subject.

Data relevant to the first hypothesis were the initial responses of agreement or refusal to participate. Hypothesis two involved the "participated—time 1" data. The third hypothesis involved the combination of "participated—time 1" and "participated—later" data. The proportion of subjects in the two classifications related to each hypothesis were tested (one-tailed z test, Bruning & Kintz, 1968) for significance at the alpha = .05 level.

## RESULTS

The results of the study provided support for all three hypotheses. Twenty-three of the high WTC subjects (92%) agreed to participate in the study when first contacted. In contrast, 17 (68%) of the low WTC subjects agreed to participate ( $z = 3.16$ ,  $p < .0001$ ,  $h = .629$ ).<sup>1</sup> Thus, the first hypothesis was supported—high WTC subjects were more likely to agree to participate in a communication study than low WTC subjects.

The second hypothesis was also supported. Thirteen (52%) of the high WTC subjects reported for the study as initially scheduled whereas only six (24%) of the low WTC subjects did so ( $z = 3.01$ ,  $p = .001$ ,  $h = .59$ ).<sup>2</sup> Thus, of the original 50 subjects contacted, 38% appeared for the study as scheduled and it was more than twice as likely that a high WTC subject would appear as it was that a low WTC subject would appear.

After persistent attempts to obtain participation of the subjects, 21 (84%) of the high WTC subjects actually did so whereas 13 (52%) of the low WTC subjects ever appeared for the study ( $z = 3.56$ ,  $p < .0001$ ,  $h = .71$ ). Thus, the third hypothesis was supported.

## DISCUSSION

An incidental outcome of this study was the strong support provided for the willingness to communicate construct and the WTC measure. Although the communication situation studied, participation in a study requiring only a small amount of dyadic communication, was at the fringe of the construct's limits, the predictive validity of the scale was clearly supported.

The results of this investigation also supported the three hypotheses. High WTC subjects were more likely to agree to participate in an out-of-class communication study, were more likely to appear as scheduled initially, and were more likely to ultimately participate after persistent efforts of the researcher than were low WTC subjects. It appears, therefore, that the underlying assumption of this research is tenable, high WTC subjects are much more likely to be used in communication research studies than are low WTC subjects.

The seriousness of this problem may be increased in many cases by the nature of the study and the information provided to permit "informed consent." In the present study, the only oral communication which the subjects had reason to expect would be required by participation was contact with a receptionist and being interviewed by the researcher. Thus, the results obtained in this study may provide conservative estimate of the impact willingness to communicate on the recruitment of volunteer subjects for research in the field of communication. Contrast the minimal communication demands expected by the subjects asked to volunteer in this study with those expected for a study which would require giving a public speech and/or having one's communication videotaped. It does not require stretching one's imagination very far to suspect that very few low WTC subjects would participate with "informed consent" in such studies. Researchers should be concerned anytime they ask subjects to

volunteer to do more than fill out a questionnaire in a group or classroom situation.

Future research should include the further comparison of the communication patterns of high vs. low scorers on the WTC scale. Research cited earlier in this paper (Chan & McCroskey, 1987) noted that those scoring high on WTC were more likely to verbally participate in class than were those scoring low on WTC. If such a pattern is also found in other settings (e.g. social, professional, public) it may be necessary to re-evaluate research in the field which could be influenced by subjects' willingness to communicate.

We also need to undertake additional research to determine what can be done to increase participation in our research by low WTC subjects. In the present investigation, no inducements to subjects were provided. Several studies report that financial inducements generally have a small but significant positive effect on the act of volunteering (Howe, 1960; MacDonald, 1972a; Nottingham, 1972). Will financial inducements increase participation of low WTC subjects? Will giving points toward a final grade or waiver of some other course assignment do so? Such research should receive a high priority from communication researchers concerned with the external validity of the conclusions drawn from their research.

At a minimum, we should measure WTC when possible as a part of our data collection process so we can use the scores from the measure as a covariate to remove at least part of the effect of this variable from our results.

#### NOTES

1. Cohen (1977) has identified  $h$  as an estimate of effect size for a  $z$ -test. He notes that an  $h$  of .2 is equal to a small effect, .5 is equal to a medium effect size and .8 is a large effect size. All three of the  $z$ -tests in the present paper fall between a medium and large effect.

2. A more conservative approach to this  $z$ -test provides essentially the same results. If for hypotheses two and three the number of subjects from each group who initially agreed to participate are used for the proportions instead of the entire twenty-five for each group. The results are as follows: For hypothesis two 13 (57%) of the high WTC subjects reported as scheduled whereas only 6 (35%) of the low WTC subjects did so ( $z = 2.00$ ,  $p < .05$ ). For hypothesis three, 21 (91%) of the high WTC subjects finally reported whereas 13 (76%) of the low WTC subjects ever appeared for the study ( $z = 1.88$ ,  $p < .05$ ). It is our belief that the figures reported in the body of the paper are more valuable because they more closely represent the subjects' actual "behavior" (i.e. actual participation in the study), rather than their self-report ("I do not wish to participate in the study").

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