

Responsiveness and communication medium in dyadic interactions

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Pairs of subjects discussed a case history in a face-to-face situation, or via closed-circuit TV, telephone, or written messages. In addition to these true conversations, other subjects engaged in pseudoconversations in which they were yoked to one member of an interacting pair. Subjects tested with responsive partners rated them and the discussion more favorably and showed more opinion change than subjects with unresponsive pseudopartners, while communication medium had no effect.

Face-to-face interactions are certainly the most frequent and perhaps the most potent of communication media. They are considered to be far superior to influence attempts made by telephone, letter, or any of the mass media. Arguments favoring face-to-face communication tend to fall into two classes: one emphasizes the effectiveness of a live speaker's unidirectional delivery: his ability to use speech inflections, gestures, and other nonverbal cues to transmit persuasive information to the audience; the other emphasizes his ability to participate in bidirectional interaction: to exchange information with his audience, getting feedback and commitment from them and to tailor make his arguments to them (Klapper, 1965; London, 1973; McGuire, 1969; Weiss, 1969).

If delivery and presentation are important aspects of impact, media which enhance such transmittal should provide the most impact to a speaker. Relatively "live" media, such as a face-to-face encounter or TV, should be more effective than audio or written contact. A number of experiments in controlled laboratory settings, however, have failed to support this expectation, finding written, oral, and audiovisual communications equally as persuasive as live deliveries (Frandsen, 1963; Keating, 1972; Sawyer, 1955). On the other hand, although few researchers have focused on the exchange process as a determinant of interpersonal effectiveness, there is some indirect evidence that responsiveness between conversants affects the success of an interaction (Davis, 1973; Rosenfeld, 1966; Werner & Latané, 1974).

It is the purpose of the present experiment to compare the importance of transmittal and exchange for interpersonal impact. Communication media were varied to assess the effect of transmittal ability,

and responsiveness was varied to evaluate the importance of the exchange process. In this experiment, true conversations were compared with pseudoconversations in which subjects were yoked to one member of a truly interacting dyad.

METHOD

Male and female introductory psychology students ($n = 143$) arrived in the laboratory to participate in a dyadic discussion of a counseling center case history. They were randomly assigned to individual cubicles and allowed to read instructions, a brief biography of a student who had been visiting the center, and comments by one of his friends. Each member of a pair read different comments, leading them to take opposing viewpoints about the case. When they had finished reading, they recorded their initial opinion and then were given the chance to discuss the case with a partner for 10 min.

Dyads discussed the case under one of seven different conditions comprising a 2 (responsive-nonresponsive) by 4 (face-to-face/TV/audio/written) incomplete factorial design. Face-to-face interactions were always responsive. Media differences were tested with a one-way four-cell ANOVA based on the responsive conditions; a 2 by 3 design excluding the face-to-face condition was used to test responsiveness.

Dyads in the face-to-face condition discussed the problem in a small room at a comfortable speaking distance; in other conditions, subjects used separate rooms. In the TV condition, they used microphones and headsets to converse and could see each other over a closed-circuit TV system arranged so that they appeared to look directly at one another through the monitor. Subjects in the audio condition used only their microphones and headsets and letter subjects held discussions by writing notes which the experimenter delivered to their partner.

In the nonresponsive conditions, video and sound equipment were arranged so that a single subject was yoked to one member of an interacting dyad. He could hear and, in the TV condition, see a live subject and believed he was discussing the case with him. In reality, this pseudopartner could neither hear nor see the subject, and, in fact, was responding to his own partner, a third subject. In the nonresponsive letter condition, the experimenter simply gave yoked subjects letters

which had been written previously by subjects in the responsive letter condition. To enhance the deception, all subjects called each other Gene.

Subjects recorded their opinions about the case on a seven-point scale before and after this discussion; persuasive impact was measured as opinion change towards greater agreement with the partner. Subjects also evaluated their partners and their interactions on five interpersonal judgment scale items and two sets of 14 bipolar adjectives (good-bad, pleasant-unpleasant, warm-cold, sincere-insincere, etc.). Factor analysis identified 13 central items (varimax factor loadings greater than .40) and the sum of the subject's ratings on these items was used as a single dependent measure in analysis of variance. Ratings were made on unlabeled seven-point scales, but are presented in an expanded scale (0 to 100, with 100 being most positive and 50 neutral) for clarity of exposition.

Conversations which occurred under the nonresponsive conditions were not entirely unrealistic. Both the yoked subject and his real counterpart had been given the same information and had been induced to take the same opinion, one opposed to the opinion held by the central partner. Consequently, they tended to have the same questions and arguments. Thus, when the central partner responded to or asked something of his real partner, it was often directly or indirectly relevant to the yoked subject's comments. Discussions under these conditions varied from fully credible to slightly psychotic. Several subjects questioned their partner's authenticity during the discussions. Sometimes the partner made an (inadvertently) appropriate response; at other times, he just kept talking and the discussion continued. In general, each yoked subject seemed to struggle to carry on an intelligent discussion despite the rather unusual behavior of his partner. For most yoked subjects, there was little inkling of the deception, and attempting to debrief them was quite difficult. Several were convinced that they had influenced their partners' opinions, and one freshman sadly compared his pseudopartner to the people living in his dormitory: "They all talk to me like that."

Only 12 subjects (29%) stopped talking before being instructed to do so—some because they assumed a mechanical problem, others because they suspected an experimental deception. They were instructed to make evaluations about the discussion they had had. In general, these subjects showed the most extreme reactions on the postexperimental measures. Results and significance levels are based on analyses including these subjects; for comparison, significance levels from analyses omitting them are presented second.

RESULTS

On a postdiscussion bipolar adjective scale, real partners were rated as more responsive than pseudo-partners (78.4 vs. 66.2, $p < .03$, $\omega^2 = .06$; $p > .20$), but this was most noticeable in the TV and audio conditions. Real partners in the letter condition were rated as less responsive than other real partners and did not differ from their nonresponsive counterparts (interaction $p < .008$, $\omega^2 = .07$; $p > .20$). Comparison of the two analyses indicates that only subjects who knew their partners were not real considered them unresponsive.

Evaluations of the Interaction

Overall, subjects had good feelings about their interactions, assigning them an average rating of 70.2, which was well above the neutral point. Subjects were equally favorable towards interactions

held in all four responsive media conditions. Interactions by letter received an average evaluation of 71.7, audio discussions received 76.2, TV received 75.3, and face-to-face received 76.3 ($F < 1$). There was no indication that the medium used for communicating influenced subjects' feelings about the interaction, a finding which is consistent with previous media research.

Responsiveness, on the other hand, had a powerful effect on reactions to the partner and evaluations of the discussion. Ratings of responsive interactions on the evaluative index were 74.4, significantly greater than the 64.0 evaluations made by yoked subjects ($p < .001$, $\omega^2 = .12$; $p < .059$, $\omega^2 = .03$).

Discussion medium interacted with responsiveness such that letter discussions were least affected by a partner's nonresponsiveness, and audio discussions suffered the most (interaction $p < .001$, $\omega^2 = .08$; $p < .056$, $\omega^2 = .04$). In fact, letter discussions with a nonresponsive partner were evaluated slightly, though not significantly, more favorably than letter interactions with a real partner. These results are consistent with the finding that the differential responsiveness of the partners was least noticeable after interactions held by letter. One explanation may be that the most noticeable effect of non-contingent behavior on the part of a partner is inappropriate timing of utterances. This effect, of course, would not occur in interchanges of letters.

Opinion Change

Few subjects changed their opinion, the average change per subject being .37 units out of a possible 2.43. Change was approximately equal after face-to-face, TV, and letter discussions (.50, .50, and .60 units, respectively) and .17 after audio discussions; the difference is not significant. The average change, however, was greater in responsive than in non-responsive conditions (.44 vs. .14, $p < .08$, $\omega^2 = .04$: from analysis of covariance, possible change as covariate; $p < .09$, $\omega^2 = .04$). In general, relevance and contingency seemed important prerequisites to opinion change.

DISCUSSION

The communication medium used for discussion tended to be less important than a partner's responsiveness in determining opinion change and reactions to discussions. The media did not differ in their ability to convey positive images or to impart pleasure to the interaction. But responsive partners were more likable, more persuasive, and discussed better than nonresponsive partners. Although the partner's behavior was identical in responsive and nonresponsive conditions, its relationship to the subject's behavior affected its impact. Unresponsive partners frequently interrupted the yoked subjects, did not answer or answered questions inappropriately, and were probably less stimulating, less witty, and less coherent by being less relevant. It may not be your partner's behavior per se, but its contingency on your own that makes him attractive or likable.

It is interesting and rather surprising that only a minority of subjects in the nonresponsive conditions discovered that their yoked "partners" were oblivious to their presence. In this experiment, as in other dyadic interactions, both participants had to get involved; each had to spend time presenting himself and saying intelligent and likable things, as well as listening and reacting to his partner. Worrying about his own presentation may have made it difficult to attend to his partner's, and the partner's apparent disinterest may have led to increased efforts to be interesting. Subjects may have gotten so caught up in monitoring their own behavior that they failed to notice the strangeness of their partners'. Likewise, in evaluating the discussion, subjects rated the interactive combination of their own and their partner's contributions, possibly explaining why nonresponsive interactions were liked as well as they were.

In summary, we found that discussions which are responsive and interactive are more enjoyable and more effective than discussions which are nonresponsive, and that this factor makes far more difference than the medium over which the discussion is transmitted. This result suggests that communicators may benefit more from attention to exchange processes than to communication medium. The responsiveness by media interaction suggests that future media research emphasize interactions between media and other variables rather than searching for simple main effects.

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