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CONSTRUCT DIFFERENTIATION AS A MODERATOR OF ATTITUDE-BEHAVIOR CONSISTENCY: A FAILURE TO CONFIRM

Austin S. Babrow and Daniel J. O'Keefe

The concept of attitude has played a central role in explanations of communication phenomena, and particularly in explanations of the effects of persuasive messages; these messages are presumed to lead to changes in attitudes which in turn lead to changes in overt behavior. If one's interest is in building accounts of the relationship between suatory communication and overt conduct, then such attitude-based explanations can be useful only to the degree that the attitude-behavior relationship is understood. As is well known, however, attitudes are not consistently related to behavior,¹ and hence clarification of the attitude-behavior relationship is of some importance.

Researchers within the constructivist approach to communication have suggested that an important influence on attitude-behavior consistency in a given domain is one's degree of construct system development in that domain. Briefly, the position argues that objects or events in a given experiential domain are understood through the application of constructs, or perceptual dimensions. In the interpersonal domain, for example, an adolescent might apply the constructs "kind-cruel" or "caring-apathectic" to understand a parental reprimand. Systems of constructs

have repeatedly been shown to follow distinctive developmental patterns, such that with increasing development come increased construct differentiation (the number of available constructs increases), a greater proportion of abstract constructs, and heightened recognition and resolution of ambivalent information.² Concerning the attitude-behavior relationship, the hypothesis is that as one's system for construing objects and events in a given domain becomes better developed, one will progressively rely less on evaluative consistency as an organizing principle for one's beliefs and behaviors, and hence one will manifest decreasing attitude-behavior consistency (since attitude-behavior consistency is one species of evaluative consistency).³

O'Keefe and Delia initially examined this hypothesis by investigating the role of interpersonal construct system differentiation (as an indicator of construct system development) in the relationship of interpersonal

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¹A classic statement is that of Allen W. Wicker, "Attitudes versus Actions: The Relationship of Verbal and Overt Behavioral Responses to Attitude Objects," *Journal of Social Issues*, 25 (1969), 41-78.

²For example, see Helaine H. Scarlett, Allan N. Press, and Walter H. Crockett, "Children's Description of Peers: A Wernerian Developmental Analysis," *Child Development*, 42 (1971), 439-453; Jesse G. Delia, Brant R. Bursleson, and Susan L. Kline, "The Development of Interpersonal Cognition and Communication Abilities: A Longitudinal Analysis," paper presented at the Central States Speech Association annual convention, St. Louis, Mo., 1979; Donald S. Biskin and William Crano, "Structural Organization of Impressions Derived from Inconsistent Information: A Developmental Study," *Genetic Psychology Monographs*, 95 (1977), 331-348.

³Daniel J. O'Keefe, "The Relationship of Attitudes and Behavior: A Constructivist Analysis," in *Message-Attitude-Behavior Relationship: Theory, Methodology, and Application*, ed. Donald P. Cushman and Robert D. McPhee (New York: Academic Press, 1980), pp. 117-148.

⁴Daniel J. O'Keefe and Jesse G. Delia, "Construct Differentiation and the Relationship of Attitudes and

attitudes and behavioral intentions.⁴ Subjects completed both an attitude measure and a nine-item behavioral intention index (concerning intentions toward a subject-selected target person) whose items had been pre-tested for attitude-relevance. In support of the hypothesis, a significant difference was found in the correlation between attitude and the multiple-act behavioral intention index for high-differentiation ($r = .75$) and low-differentiation ($r = .95$) subjects.

That this result did not reflect some general effect of interpersonal construct system development on attitude-behavior consistency was evidenced by O'Keefe and Shepherd's investigation of religious attitudes and behaviors.⁵ In a design with high statistical power, using well-established measures of religious attitudes and attitude-relevant religious behaviors, O'Keefe and Shepherd found that subjects high and low in interpersonal construct system differentiation did not differ significantly in religious attitude-behavior consistency (correlations of .61 and .66, respectively). O'Keefe and Shepherd did not, however, obtain measures of religious construct system development, and hence could not provide direct evidence for the constructivist hypothesis.

DeLancey and Swanson undertook a preliminary investigation of the influence of political construct system development on political attitude-behavioral intentions consistency.⁶ Though they found that subjects low in political construct differentiation exhibited greater attitude-behavioral intentions consistency (mean correlation across two political figures of .61) than did subjects high in political construct differentiation (mean correlation of .45), this difference was

nonsignificant, as the design had relatively low power for detecting differences between correlations. Moreover, there was an indication that, since the attitude objects in question were persons (political candidates), general interpersonal construct system development might influence attitude-behavioral intentions consistency in this domain: subjects low in interpersonal construct differentiation exhibited nonsignificantly greater consistency (mean correlation of .64) than did subjects high in interpersonal construct differentiation (mean correlation of .41).

Thus to date no investigation of the constructivist hypothesis has examined the influence of construct differentiation in some clearly non-interpersonal domain upon attitude-behavior consistency in that domain. It is not known whether construct differentiation affects the attitude-behavior relationship only within the interpersonal sphere, or whether the hypothesis speaks more generally to the attitude-behavior problem. Without evidence bearing on the constructivist analysis in some non-interpersonal domain, both the vitality of the general hypothesis and the most sensible directions for continuing research are uncertain. Hence, in the following study, we set out to investigate attitude-behavior consistency in an area where the interpersonal construct system was unlikely to play a central cognitive role.

To provide an adequate test of the constructivist hypothesis in a new area, we sought a design that balanced the need to maintain measurement procedures comparable to those in past constructivist research with a desire to acquire valid data in a previously uncharted domain. Moreover, the requirements of high power necessitated a sample of college undergraduates. To meet these demands, the domain selected was college courses. Here we were able to create impression tasks that were nearly identical to past procedures (see below). Qualitative and quantitative differences in college experience were expected to yield adequate variance in impression differentiation. And the tasks of constructing impressions of, and behavioral

Behavioral Intentions," *Communication Monographs*, 48 (1981), 146-157.

⁴Daniel J. O'Keefe and Gregory J. Shepherd, "Interpersonal Construct Differentiation, Attitudinal Confidence, and the Attitude-Behavior Relationship," *Central States Speech Journal*, 33 (1982), 416-423.

⁶Charles A. DeLancey and David L. Swanson, "The Relation of Construct Differentiation to the Consistency of Attitudes and Behavioral Intentions in the Political Domain," paper presented at the annual convention of the International Communication Association, Minneapolis, Minn., 1981.

responses to, college courses and peers would seem to involve many similar cognitive operations: identification and application of relevant judgmental dimensions; sensitivity to abstract qualities; and recognition and integration of ambivalent information.

METHODS

Pretest

To establish a set of attitude-relevant behavioral items concerning college courses, a procedure akin to that suggested by Fishbein and Ajzen (and used by O'Keefe and Delia and by DeLancey and Swanson) was employed.⁷ A 71-item questionnaire was completed by 140 undergraduates in speech communication classes. Each item described a behavior concerning a college course, and asked the respondent to estimate the attitude toward the course that would be held by someone who performed the behavior; responses were made on a nine-point scale end-anchored by the phrases "Very Positive" and "Very Negative," with the midpoint labeled "Neutral or Can't Say."⁸ Nineteen items were selected for the final scale.⁹ Each

⁷Martin Fishbein and Icek Ajzen, "Attitudes Toward Objects as Predictors of Single and Multiple Behavioral Criteria," *Psychological Review*, 81 (1974), 59-74.

⁸Subjects in the pretest also described in writing one liked and one disliked college class, with these descriptions subsequently scored for differentiation following procedures described elsewhere in this report (two coders' independent scorings of 20 questionnaires yielded an interrater reliability coefficient by Pearson correlation of .90). Subjects' differentiation scores were not related to their judgments of the attitude-relevance of the 71 items: the correlation between each subject's differentiation score and the subject's mean extremity of judgment (disregarding valence) across the 71 items was nonsignificant ($r = .019$).

⁹The items selected were: I gave the course the lowest possible rating on a class evaluation questionnaire; I praised the course while talking to my parents; I asked the instructor for a recommendation; I dropped the class; I participated a lot in class discussions; I worked as hard as I could on the course even though I had no chance for a higher grade; I have visited the teacher in his/her office just to chat; I have complained to my adviser about the course; I gave the course the highest possible rating on a course evaluation questionnaire; I worked my hardest on class assignments; I visited the instructor in semesters following the course; I recommended the class to a friend; I disagreed with a classmate who criticized the course; I have praised the course to friends; I have advised a friend to avoid the course; I have praised the

selected item had a mean at least two scale points above or below neutrality, and a standard deviation of less than 1.50. By comparison, in O'Keefe and Delia's study, the behavioral intention items selected for their index had means at least two scale points from neutrality on a nine-point scale, and standard deviations less than 1.56; in Delancey and Swanson's study, the selected items had means at least 1.70 scale points from neutrality on a nine-point scale, and standard deviations less than 2.01.¹⁰

Main Study

In the main study, 253 undergraduates in speech communication classes completed a questionnaire in which they (a) described two college courses they had taken, (b) indicated their attitude toward that college class toward which they had developed the strongest feelings, and (c) indicated which of 19 attitude-relevant behaviors they had performed with regard to that class.

Construct differentiation measure. The measure of differentiation was obtained from descriptions subjects provided of two college courses they had taken, one liked and one disliked. This parallels the basis for the measure of interpersonal construct differentiation used in previous research, Crockett's Role Category Questionnaire (RCQ), which asks respondents to describe two persons their own age whom they know well, one liked and one disliked.¹¹ The instructions in the present measure were similar to those for the RCQ, and asked subjects to "describe this course as fully as you can. . . . Try to describe the class as completely as you can, so that a person who hadn't taken the course might be able to get a good idea of what the course was like." These descriptions were

course to my adviser; I did extra class work for no additional credit; I have ridiculed the class when talking to my friends; I have complained about the course to my parents.

¹⁰O'Keefe and Delia, p. 152; DeLancey and Swanson, pp. 9-10.

¹¹Walter H. Crockett, "Cognitive Complexity and Impression Formation," in *Progress in Experimental Personality Research*, ed. Brendan A. Maher (New York: Academic Press, 1965), II, 47-90.

subsequently scored for differentiation following procedures akin to those described by Crockett, Press, Delia, and Kenny for scoring interpersonal construct differentiation from person descriptions.¹² For example, descriptions of the course's difficulty ("this was a very hard course"), format ("a lecture course"), subject matter ("the material was interesting"), assignments ("the tests were ambiguous"), instructor ("the teacher was demanding"), effects ("I learned a lot in this course"), atmosphere and style ("lively discussion"), physical aspects ("class size was small"), and student characteristics ("almost all the students were pre-med") were scored; general comments about the respondent's preferences ("I like the kind of class where you can learn the material because you really want to learn it") or about general bases for preferences ("liking the teacher is a big part of liking a class") were not scored, since (following the parallel reasoning of Crockett et al.) these elements did not represent direct descriptions of the class.

The number of constructs produced across the two descriptions was taken as the index of construct differentiation. Two coders independently scored 20 randomly-selected questionnaires for differentiation, yielding an interrater reliability coefficient (by Pearson correlation) of .96. The differentiation scores were rank-ordered and broken at the median into groups of low (range from 6 to 20, $n = 122$) and high (range from 21 to 57, $n = 131$) construct differentiation.

Attitude measure. Subjects were asked to think of "the college class toward which you have developed the strongest feelings (either positive or negative)," an instruction that paralleled O'Keefe and Delia's request that subjects think of "the person in this class toward whom you have developed the strongest feelings (positive or negative)."¹³ Sub-

jects indicated their attitude toward that course by completing four 7-point evaluative semantic differential scales that were end-anchored by "Very Beneficial-Very Harmful," "Very Favorable-Very Unfavorable," "Very Undesirable-Very Desirable," and "Very Bad-Very Good," with the midpoint labeled "Neutral." These attitude scales, developed by Fishbein and Raven (and used by O'Keefe and Delia and by DeLancey and Swanson), were summed to yield an overall attitude measure for each subject.¹⁴ Scores on this measure could (and did) range from 4 to 28. The mean was 21.31; roughly three-quarters of the obtained attitudes were positive.

Behavioral index. The 19 behavioral items identified in the pretest as especially attitude-relevant were listed, and respondents indicated which of these behaviors they had performed with regard to the previously-identified ("strongest feelings") class. Of the 19 items, 13 involved favorable acts (performance scored +1) and 6 involved unfavorable acts (performance scored -1), so scores on the index could range from -6 to +13; the actual range was -5 to +12.

RESULTS

Separate correlation coefficients were computed for high- and low-differentiation subjects, and the coefficients were compared. For subjects low in construct differentiation, the correlation of attitude with the multiple-act behavioral index was .861; the corresponding correlation for high-differentiation subjects was .856. These correlations are not significantly different. For the 19 items considered individually, only one item showed a significant difference in attitude-behavior correlations between the two differentiation groups, and that difference was opposite to the constructivist hypothesis: on the item "I gave the course the lowest possible rating on a class evaluation questionnaire," the corre-

¹²Walter H. Crockett, Allan N. Press, Jesse G. Delia, and Charles T. Kenny, "The Structural Analysis of the Organization of Written Impressions," unpublished manuscript, Department of Psychology, University of Kansas, 1974.

¹³O'Keefe and Delia, p. 150.

¹⁴Martin Fishbein and Bertram H. Raven, "The AB Scales: An Operational Definition of Belief and Attitude," *Human Relations*, 15 (1962), 35-44.

lation was .711 for low-differentiation subjects, and .833 for high-differentiation subjects ($z = 2.15, p < .05$). The paucity of significant differences between differentiation groups is not likely to be a matter of low statistical power; with a two-tailed test and .05 alpha, the power of the design for detecting differentiation-group correlation differences was .65 for medium effects and .98 for large effects, and for detecting very large effects (of the size reported by O'Keefe and Delia) the power was in excess of .995.¹⁵

DISCUSSION

The Prima Facie Interpretation

Taken at face value, these results do not support O'Keefe's constructivist hypothesis that construct differentiation in a domain is related to attitude-behavior consistency in that domain. We first want to consider possible grounds for impeaching this prima facie interpretation.

It is difficult to find fault with the attitude measure. It is a common and straightforward one that has been used without incident in previous research. The range of obtained attitude scores was wide, and although there was a preponderance of positive attitudes, O'Keefe and Delia found a similar positive bias.¹⁶

The behavioral measure developed for this investigation seems to have characteristics like those of similar indices. Previous studies have commonly found that the mean correlation of attitude with individual behavioral items is lower than the correlation of attitude with multiple-act indices.¹⁷ In O'Keefe and

Shepherd's study using Fishbein and Ajzen's religious behavior inventory, for example, the correlation of attitude with the multiple-act index was .618; correlations of attitude with the individual behavioral items ranged from .058 to .508, with a mean (after r-to-z transformation) of .267. In the present investigation, the correlation of attitude with the multiple-act index was .855; correlations with individual items ranged from .042 to .807 with a (transformed) mean of .490.

The measure of construct differentiation might appear to be an attractive target for criticism. But although the college-course differentiation measure lacks the web of supportive evidenced enjoyed by the RCQ interpersonal construct differentiation measure, at least in surface appearance the present index seems quite similar to the interpersonal differentiation index.¹⁸ The range of scores was from 6 to 57; studies of interpersonal differentiation have reported ranges such as from 3 to 61, from 9 to 46, and from 12 to 44.¹⁹ The median split in the present study came between 20 and 21; interpersonal differentiation medians have come at such points as between 18 and 19, between 23 and 24, and between 24 and 25.²⁰ In the present investigation the distribution of differentiation scores was positively skewed (skewness = .575) and was flatter than a normal curve (kurtosis = 1.253); skewness and kurtosis information about distributions of interpersonal differentiation scores has not been published, but researchers familiar with distributions of RCQ-based interpersonal differentiation scores will likely recognize similarities here.

¹⁵An alternative regression analysis was also performed, in which attitude, differentiation, and their interaction (created by multiplying attitude by differentiation scores) were used to predict scores on the multiple-act index. The constructivist hypothesis predicts a significant contribution from the interaction term, but (consistent with the results reported in the text) attitude was the only significant predictor.

¹⁶O'Keefe and Delia, p. 151.

¹⁷For example, Lennart Sjöberg, "Attitude-Behavior Correlation, Social Desirability, and Perceived Diagnostic Value," *British Journal of Social Psychology*, 21 (1982), 283-292; Russell H. Weigel and Lee S. Newman, "Increasing Attitude-Behavior Correspondence by Broadening the Scope of the Behavioral Measure," *Journal of Personality and Social Psychology*, 33 (1976), 793-802.

¹⁸Evidence concerning the reliability and validity of the RCQ-based interpersonal construct differentiation measure is reviewed by Daniel J. O'Keefe and Howard E. Sypher, "Cognitive Complexity Measures and the Relationship of Cognitive Complexity to Communication," *Human Communication Research*, 8 (1981), 72-92. The data in this paragraph concerning the college-course differentiation measure are based on 264 respondents.

¹⁹These ranges of interpersonal differentiation scores were reported by, respectively, O'Keefe and Shepherd, O'Keefe and Delia, and DeLancey and Swanson.

²⁰These medians for interpersonal differentiation scores were reported by, respectively, O'Keefe and Shepherd, DeLancey and Swanson, and O'Keefe and Delia.

So this investigation had a differentiation measure that, to all appearances, was quite similar to the interpersonal differentiation measure. The behavioral index, constructed following established procedures, seemed to function much like previous behavioral indices. And the study employed a commonly-used attitude measure. All this suggests that the *prima facie* interpretation of the results should be accepted; the findings fail to support the hypothesis that (generally) construct differentiation in a domain is related to attitude-behavior consistency in that domain.

Distinctiveness of Interpersonal Cognition

Obviously the cognition of persons is in some ways similar to, and in some ways different from, the cognition of other sorts of objects. These results can be seen as suggesting something distinctive about the interpersonal cognitive system, since in non-interpersonal domains it appears that construct differentiation does not influence attitude-behavior relations. In fact, if one looks back at the evidence reviewed by O'Keefe in support of his more general "evaluative consistency" thesis—the thesis that persons with developmentally less advanced construct systems in a domain place greater reliance on evaluative consistency principles in organizing their beliefs, attitudes, and behaviors in that domain—one will see that that evidence overwhelmingly concerns interpersonal construct systems and interpersonal beliefs, attitudes, and behaviors.²¹ It may simply be that O'Keefe's statement of that thesis was overly general; certainly the evidence seems much stronger for a thesis limited to the interpersonal domain.

Behavior and Behavioral Intentions

O'Keefe and Delia's investigation found interpersonal differentiation to significantly influence the relationship of interpersonal attitudes and behavioral *intentions*—not attitudes and behaviors. It is worth mention-

ing the possibility that, within a given domain, construct system differentiation may influence the attitudinal consistency of the intentions formed, though not the attitudinal consistency of the behaviors performed. If such were to be the case, then (given the evidence to date) one would suppose that construct differentiation plays some role in mediating the relationship of intentions and behaviors. One is reminded of the suggestion by Ajzen, Timko, and White that the observed differences in attitude-behavior consistency between high and low self-monitors actually reflect self-monitoring differences in the relation of behavioral intentions and behaviors: high and low self-monitors, it is argued, form similar intentions given similar attitudes, but differ in the extent to which those intentions are actualized in conduct (thus yielding the observed attitude-behavior consistency differences).²² If related reasoning were used to refine the constructivist hypothesis so as to make it congruent with the research evidence to date, high- and low-differentiation individuals would have to form dissimilar intentions given similar attitudes (thus yielding the observed attitude-intention consistency differences), but also differ in the behavioral actualization of those intentions, with these two differences canceling each other (so as to yield no attitude-behavior consistency differences).

CONCLUSION

The present investigation does not support the constructivist hypothesis that construct differentiation in a domain influences attitude-behavior consistency in that domain. Future research should (a) insure that the present findings are not a special function of the domain studied, by pursuing replications in additional domains, and (b) explore the possible effects of construct differentiation on the attitude-intention relationship in various domains.

²²Icek Ajzen, Christine Timko, and John B. White, "Self-Monitoring and the Attitude-Behavior Relation," *Journal of Personality and Social Psychology*, 42 (1982), 426-435.

²¹See O'Keefe, pp. 124-135.