

Invalidity of indirect and direct measures of attitude toward cheating

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Tests for the indirect assessment of attitudes have gained some currency in the literature of social psychology. They have been used primarily as indexes to behavior in situations where social pressures have been assumed to inhibit truthful response to direct questions. In such situations investigators have frequently assumed that responses to indirect questions provide more valid behavioral indexes than responses to direct questions. A few studies of the correlation between direct and indirect questions have been made (Campbell, 1953; Parish & Campbell, 1953; Proshansky, 1943; Rankin & Campbell, 1955; Robinson & Rohde, 1946; and Sanford & Rosenstock, 1952), but although Campbell has questioned the validity of indirect questions as indexes to behavior, no systematic study of this question has been reported. The present study was designed in an attempt to examine the validity of several types of indirect questions and a direct question against the criterion of overt behavior.

PROCEDURE

In attempting to test the validity of indirect questions it was considered desirable to select an area of behavior in which social pressures are known to operate, yet one which would be amenable to direct observation. Cheating on examinations by students is such an area; it was chosen for this study.

5's were a group of 38 freshmen and sophomores enrolled in introductory sociology at Syracuse University.

Actual cheating on an examination was measured by a device similar to the one suggested by Hartshorne and May (1928). Fifteen ambiguous questions were introduced into the students' regular mid-term examination. Five of these were true-false, five were fill-in, and five were multiple choice. After the tests were administered, responses to these fifteen questions were recorded and the least popular answers were chosen as "correct." A key was prepared for the whole examination, and at the next class period the 5s were asked to score their own tests. The instructor was called from the room and a student was drafted to read the "correct" answers. The papers were collected and the presence of a changed answer constituted an instance of actual cheating.

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Since "correct" answers had been determined according to the criterion of least (rather than zero) frequency, some of the original answers of some 6's were correct. In order to equalize opportunity to cheat, therefore, cheating was recorded in terms of type of answer changed rather than as an absolute frequency. Each 6" had "missed" at least two questions of each of the three question types, so each had an opportunity to cheat for every type of question. Scoring in this fashion produced a rank order of cheating. Fifteen v's changed no answers at all, seven changed only one type, seven changed two types, and nine changed answers of all three types. These results constituted a Guttman scale with a coefficient of reproducibility of .94 (Kuder-Richardson reliability coefficient = .76). True-false answers were changed most frequently, multiple choice answers (which had to be circled) were least frequently modified, and fill-in items were intermediate.

After a delay of four weeks a different *E* was introduced to the class and presented the 6's with a questionnaire entitled, "Honor System Questionnaire." This title was selected in an effort to direct the S's attention away from the intent of the inquiry. The "honor system" was, at the time, a topic of general interest and discussion at Syracuse.

The form consisted of 24 indirect items, six each of four types. The first six were apparently information questions concerned with factual data about the honor system. Questions of this error-choice type have been discussed by Hammond (1948). Examples of those used in the present study are the following:

What is the percentage of students who cheat in an average college class with the honor system? a. one tenth; b. one fourth; c. one half; d. three fourths; e. over three fourths.

What is the percentage of students who cheat in an average college class without the honor system? a. one tenth; b. one fourth; c. one half; d. three fourths; e. over three fourths.

Scoring of these items was based upon the assumption that 6's who inflated their estimates of the proportion of cheating were themselves cheaters. Two of these six items were dropped because of lack of variability among their answers. The remaining four formed a Guttman scale with a coefficient of reproducibility of .95 (Kuder-Richardson $r = .30$).

The second set of questions required the ^s to decide whether students described in ambiguous hypothetical situations were cheating or not. Here, the question form was similar to the projective questions discussed by Getzels (1951).

For example:

One student makes an excuse to leave the room.

Cheating————Not cheating————

One student is whispering to the student next to him.

Cheating————Not cheating————

Scoring here was based upon the assumption that 5's who perceived cheating were themselves cheaters. Again two items were dropped for the reason of minimal variability and the remaining four scaled with a coefficient of reproducibility of .98 (Kuder-Richardson $r = .30$).

The third set of questions represented a type derived from Smith (1947). They described cheating in a series of contrived situations and required the S's to decide whether such cheating had really occurred—whether the statement was fact or rumor. For example:

T_____F_____A set of students developed a code such that by coughing they were able to communicate the answers.

T_____F_____A student went to a magic shop and bought a piece of equipment which would allow him to make his notes appear and disappear at will.

The assumption in this case was that S's who believed the contrived situations were cheaters. Two items which showed no variability were dropped and the remaining four scaled with a coefficient of reproducibility of .95 (Kuder-Richardson $r = .49$).

The fourth set of questions were similar to those developed by Rosenzweig (1945) and Murray and Morgan (1945); they involved argument completion. S's were presented with six line drawings of pairs of people in interaction a la Rosenzweig's P-F scale. In each case one person was shown making a provocative remark about cheating. S's were required to complete the conversation. For example:

A student says, "Boy, did I cheat on that exam!" Complete the discussion.

A student says, "When you guys cheat like that the rest of us don't have a chance. . ." Complete the discussion.

Responses to these items were independently evaluated by two clinical psychologists.[^] The intercorrelation between these ratings was tested by means of chi-square. Chi-square was 1.76; it failed to achieve significance at the 5 per cent level. In view of this demonstrated lack of reliability these items were dropped from further analysis.

Finally, at the end of the task, the students were requested to turn their papers over and write either "yes" or "no" in answer to the direct question, "Have you ever cheated in an exam?" Of the 38 students 5 claimed not to have cheated and 33 admitted having cheated.

RESULTS

Analysis was conducted on the basis of responses to the direct question, three types of indirect questions, and observed cheating behavior. Intercorrelations among these variables were computed by means of Kendall's *tau*. The results are summarized in Table 1.

Table 1 reveals no appreciable amount of relationship between any of the pairs of variables studied. All of the observed correlations are small, five of the eight are negative, and none is significant at the 5 per cent level.

* These responses were evaluated by F. N. Amhoff of New York State Department of Mental Hygiene and N. Goldman of Syracuse University. The authors wish to express their gratitude for their help.

TABLE 1
 INTERCORRELATIONS OF INDIRECT INDEXES AND
 ACTUAL CHEATING (KENDALL'S TAU)

Actual cheating	Indirect indexes			
.10	Set 1			
.03	-.08	Set 2		
-.19	.10	-.03	Set 3	
-.13	-.13	.18	.20	Direct question

DISCUSSION

On the basis of the results shown in Table 1, it must be concluded that neither the indirect items nor the direct question used in this study were of any utility whatsoever in predicting overt behavior. Such a result does not, of course, demonstrate any general lack of validity on the part of items of either type. It does suggest, however, that in some cases at least, the results provided by either direct or indirect items cannot be accepted as indexes to behavior. Although it is possible that other items might provide valid indexes, or that items of these types might be valid in other settings, the results of this study do imply that such assumptions are not necessarily true. Most of all, this study had demonstrated the need for further study of the validity of indirect attitude items rather than their acceptance on faith as indexes to behavior.

SUMMARY

This study examined the relationship between overt behavior, a direct question, and three types of indirect attitude items on a sample of 38 5's. Ss were ranked in terms of observed cheating, they were questioned both directly and indirectly about cheating, and the results were correlated. Since all correlations were insignificant, the results of this study cast some doubt upon the validity of either direct or indirect items for the assessment of certain types of overt behavior.

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