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ABSTRACT

The convergent validity between the following measures was investigated: use of accomplices, imaginary accomplices, feltboard, disguised questionnaire, and undisguised questionnaire. The first four measures yielded corresponding results. Subjects' awareness proved to be an important methodological consideration. Results were not affected by the subject as participant vs. subject as arranger. (Author)

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AN INVESTIGATION OF FIVE PERSONAL
SPACE MEASURES

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1. Title: An investigation of five personal space measures.
2. Problem: In investigating personal space, a variety of measures has been employed, including: 1) direct observation of an interaction, 2) the distance an individual approaches an experimenter, 3) chair preference, 4) the distance placed between two figures, and 5) a variety of paper and pencil measures. The measures employed often vary in terms of the subject's awareness of the dependent variable.

The diversity makes it difficult to interpret contradictory findings in this voluminous body of research. Many of these measures rest upon 3 assumptions: 1) subject's awareness of the dependent variable is not a contaminating factor, 2) the distance a subject places between two figures is identical to the distance the subject himself would use, and 3) a subject's spatial preference on a paper and pencil measure adequately reflects his spatial preference in real life situations.

Few researchers have addressed the question, "To what extent do different personal space measures yield comparable results?" Of these studies, many contain methodological problems. In reviewing the literature, the present author judged less than five studies as acceptable, and even they are in disagreement. Knowles and Johnsen (1974), for example, report a low correlation between measures that differ on the dimension of subject as participant vs. subject as arranger whereas Rawls, Trego, and McGaffey (1968) report a high correlation. Another disputed issue concerns the effects of

the subject's awareness. Given the scarcity of studies, and their disagreement, additional research is clearly needed.

The present investigation corrects a number of problems found in previous studies. First, no subject is used more than once. This avoids the possible confounding variable of statistical dependence between responses. Second, the same variable is tested with each measure. In the present research, it is the effects of perceived similarity upon the use of space. Third, unlike most studies utilizing a free response situation, the present research employs a forced choice situation. The subject is asked to select a chair from a limited number of vacant chairs. This allows for an easier comparison between measures.

The measures selected for investigation are: 1) the use of accomplices, 2) the use of imaginary accomplices, 3) a feltboard technique, 4) a disguised questionnaire, and 5) an undisguised questionnaire. For each measure, the hypothesis is identical. It is predicted that an individual will maintain less personal space, as measured by chair preference, from an individual who is perceived to be similar. The first measure will serve as the control.

3. Subjects: Eighty-nine subjects participated in the experiment.

4. Procedure: With each measure, the experiment was presented as an investigation of two different approaches to personality assessment in which subjects would be tested either with

projective techniques such as the Rorschach and the TAT or objective techniques such as the GSR. The independent variable is the subject's perception of which other subject would be tested with the same materials and the dependent variable is the chair preference in relation to this subject.

The specific procedures for each of the measures are as follows:

1. Accomplices. Two accomplices were used and one was "randomly" assigned to the GSR condition while the other was assigned to the projective condition. Each was given the appropriate testing materials and selected a prearranged seat. The subject likewise was assigned to one of these conditions, given the appropriate materials and was asked to take a seat.
2. Imaginary Accomplices. When the subject reported to the laboratory, he was led to believe that other subjects had arrived but had momentarily stepped out. Placed on two of the chairs were either GSR materials or projective personality cards. The subject was assigned to one of the conditions, given the appropriate materials and was asked to take a seat.
3. Feltboard. The personality experiment was described and represented on a feltboard with the use of felt figures, felt chairs, etc. The subject was asked to imagine that one of the figures represented himself. The figure was assigned to one of the conditions and

the subject was asked to place the figure on the board.

4. Disguised Questionnaire. The questionnaire described the personality experiment and requested the subject to imagine himself in the situation. The subject indicated his chair preference in a diagram.

5. Undisguised Questionnaire. The introduction of this questionnaire stated that the experimenter was interested in seating preferences. The personality experiment was described and the subject indicated his seating preference.

5. Results: A chi square statistic was performed for each measure, testing the observed chair preference against a random outcome. Table 1 summarizes these statistics. This table also indicates the dimensions that are inherent in each measure.

6. Implications and conclusions: Unlike the fifth measure, the first four measures yielded significant results. The distinguishing aspect of the fifth measure is the subject's awareness of the dependent variable. It is noted from Table 1 that the first four measures differed from each other in three respects: 1) subject as participant vs subject as arranger, 2) subject imagining or believing a group to be present vs the actual presence of a group, and 3) participation of the experimenter vs the lack of such participation.

Results indicate that subject's awareness is an important methodological consideration. This finding is in agreement with the Knowles and Johnsen (1974) report and in disagreement

with other reports. Other findings, such as subject as participant vs subject as arranger, disagree with the Knowles and Johnsen report and agree with the results obtained by Rawls, Trego, and McGaffey (1968).

An examination of the procedures used in the present research and how they differed from those of other researchers is made in an attempt to clarify these methodological concerns. Resulting from such an examination, three conclusions are stated: 1) Measures not controlling for an individual's awareness are considered unacceptable. 2) A subject arranging others in an interaction or imagining himself in such an interaction adequately reflects his own use of space, and 3) paper and pencil measures, under limited circumstances, are a legitimate index of an individual's use of space.

The implications of the present results are twofold: 1) with the clarification of certain methodological issues, contradictory results obtained with different measures can begin to be understood and resolved, and 2) measures other than direct observation (e.g. the feltboard technique) of an individual's use of space are acceptable.

REFERENCES

- Knowles, E., and Johnsen, P. Intrapersonal consistency in interpersonal distance. JSAS Catalog of Selected Documents in Psychology, 1974, Fall, #768, 1-27.
- Rawls, J., Trego, R., and McGaffey, C. A comparison of personal space measures and correlates of personal space. Institute of Behavioral Research, Texas Christain University, NASA Grant Report, 1968.

<u>MEASURE</u>	<u>RESULTS:</u> Level of Significance χ^2 value Sample N	<u>DIMENSION:</u> Subject-as- participant vs. arranger	<u>DIMENSION:</u> disguised vs. undisguised	<u>DIMENSION:</u> participation of E vs. no parti.	<u>DIMENSION:</u> alone vs. group
USE OF ACCOMPLICES	χ^2 , $v=1$, =6.75 (N=12) .01	participant	disguised	E present	group
USE OF IMAGINARY ACCOMPLICES	χ^2 , $v=1$, =7.04 (N=24) .01	participant	disguised	E present	alone
FELTBOARD TECHNIQUE	χ^2 , $v=1$, 6.75 (N=12) .01	arranger	disguised	E present	alone
DISGUISED QUESTIONNAIRE	χ^2 , $v=1$, =12.19 (N=21) .001	not applicable	disguised	E absent	alone
UNDISGUISED QUESTIONNAIRE	χ^2 , $v=1$, =1.25 (N=20) NS	not applicable	undisguised	E absent	alone

TABLE 1.

SUMMARY TABLE OF RESULTS

