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THE UTILITY OF NON-VERBAL PROCEDURES IN  
THE FIRST GROUP MEETING

by

Linda Lee Van Vlack

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A Dissertation Submitted to the Faculty of the

DEPARTMENT OF PSYCHOLOGY

In Partial Fulfillment of the Requirements  
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA

GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my direction by Linda Lee Van Vlack entitled The Utility of Non-Verbal Procedures in the First Group Meeting be accepted as fulfilling the dissertation requirement of the degree of Doctor of Philosophy

Richard Can  
Dissertation Director

3/2/75  
Date

After inspection of the final copy of the dissertation, the following members of the Final Examination Committee concur in its approval and recommend its acceptance:\*

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\*This approval and acceptance is contingent on the candidate's adequate performance and defense of this dissertation at the final oral examination. The inclusion of this sheet bound into the library copy of the dissertation is evidence of satisfactory performance at the final examination.

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SIGNED: Linda Lee Van Vlack

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## ABSTRACT

This dissertation examined the effects of using non-verbal procedures in the first group meeting. Thirty-two small groups were conducted. Comparisons were made between those which were solely verbal, solely non-verbal, verbal followed by non-verbal, and non-verbal followed by verbal.

Dependent measures consisting of a subject questionnaire and behavioral observations scored on Bales' Interaction Process Scale showed a few significant differences. Groups begun with non-verbal procedures followed by verbal interaction were the most successful according to both dependent measures. Solely non-verbal groups were the least successful; solely verbal and verbal followed by non-verbal interaction groups fell in between the most and least successful. Twelve out of 15 questionnaire items and two out of four behavioral categories revealed no significant differences between conditions. The statistical procedures included analyses of variance, the Scheffé procedure, t-tests, and the Pearson correlation coefficient.

The study goes on to discuss the findings and make several recommendations for future research. Because of the limited number of significant findings, the author suggests caution in generalizing from the study and emphasizes the need for more research in this area.

## INTRODUCTION

As the group movement in the United States spreads, the use of non-verbal procedures in a small group setting is rapidly increasing. Non-verbal techniques include a wide range of activities: private fantasies, dance therapy, and sensory awareness exercises to name a few. A plethora of handbooks of such procedures exists. Joy (Schutz 1967), A Handbook of Structured Experiences for Human Relations Training, I-IV (Pfeiffer and Jones 1969, 1970, 1971, 1973), and Awareness (Stevens 1971) are notable examples. The significance of these procedures is reflected in the title of a book reporting a year's participation in the group movement--Please Touch (Howard 1970). The current trend is a re-focusing of energy away from a traditional, exclusively verbal approach to behavior change and toward a view of non-verbal experience as an effective and essential therapeutic tool.

The purposes of non-verbal procedures are several. In general, they enhance group interaction, creativity, relaxation, trust and unity. They also aid the growth and development of the individual group member by encouraging self-awareness. Middleman (1968) classifies non-verbal procedures into three categories based on the function each serves in the group process: beginning procedures which act as icebreakers, mixers, and warm-ups and which provide the impetus for group interaction; developmental procedures which function as the "heart" of the group and

are oriented toward individual development; and, ending procedures which provide closure for participants by concluding the meeting in a reflective, close, unified fashion. Non-verbal techniques provide ideal ways to meet these group needs. They also serve more specific functions. They have been demonstrated to be effective with specialized treatment populations: the suicidal person (Chapman 1971), chronic hospitalized patients (Bell 1970), and the non-verbally oriented individual (Middleman 1968).

The utility of non-verbal experiences within the group context is recognized by many group leaders. However, the support is stronger among the younger professionals. Weinstein and Pollack (1972) surveyed 47 National Training Laboratories trainers and reported significant differences between age groups (members, associates, and fellows) in the direction of a direct negative correlation between age and high endorsement of non-verbal exercises. Younger trainers use non-verbal, non-traditional exercises (such as milling, blind walk, and trust fall) more frequently, endorse them more highly, and find them more useful in groups than do older trainers. The use of non-verbal procedures will be included in the future of the group movement.

It is essential that research be conducted to determine the specific utilities and effects of non-verbal methods. To date, however, the research is primarily descriptive and is remarkably sparse. In 1971, MacLennon and Levy summarized the group psychotherapy literature for that year. Of 481 books and articles, two studies consider non-verbal activities. Gendzel (1970) used non-verbal procedures (art work,

sensory awareness exercises) in 24-hour marathon groups. Three of his 100 subjects reported that the non-verbal activities did not contribute to the total marathon experience. Since only 60 to 90 minutes of the 24 hours were non-verbal, Gendzel suggests they made a significant contribution. Occasionally, it was the peak experience of the marathon. Galper (1970) describes two case studies in which non-verbal procedures have been effective and meaningful aids to the group process. Chapman (1971) reports success using movement therapy with suicidal patients; and, Bell (1970) recommends activity as a therapeutic tool in group therapy. Please Touch (Howard 1970) provides phenomenological support for the use of non-verbal procedures in groups.

Encounter Groups: First Facts (Lieberman, Yalom and Miles 1973) points out that different exercises produce different psychological experiences in a group. Feelings of group closeness are associated with both verbal and non-verbal group exercises. Non-verbal activities are reported to enhance sensory self-awareness in particular. In contrast, Brownell (1970) found no significant differences between control, warm-up, or placebo groups where the warm-up groups participated in sensitivity-like exercises in the first group meeting. This study found that non-verbal activities did not have a significant effect on the classroom participant.

Bowers, Banquer and Bloomfield (1974) used non-verbal techniques in group therapy with out-patient chronic schizophrenics. They summarize the effects of non-verbal procedures as facilitative of (1) articulation of feelings; (2) active group involvement; (3) listening skills; (4) increased sharing, caring, and supportive behaviors; (5) increased work in

the group; and (6) group cohesion. This study and the work of Betty Berzon (Berzon and Solomon 1964; Berzon, Pious and Farson 1963) represent two of the better contributions to the literature on non-verbal procedures. Solomon and Berzon (1972) have reported that non-verbal activities enhance the group dynamics in relevant and positive ways.

Two papers address themselves to theoretical aspects of non-verbal behavior. Gibb (1973) proposes the following criteria for assessing the impact of non-verbal experiences: moving toward more personal behavior, more open behavior, more realizing behavior, and more interdependent behavior. Trust, openness, realization, and interdependence are viewed as factors central to individual growth. Back (1962) recognizes that a stochastic model has been highly successful with cognitive ("IT" language) behaviors but is not appropriate for encounter ("THOU" language) behaviors, including non-verbal behavior. He suggests an equilibrium model for the latter.

This is the status of the literature on non-verbal procedures in groups. It is apparent that further research is needed: empirical studies to assess the utility and function of non-verbal techniques. This study is an attempt in that direction.

## STATEMENT OF PROBLEM

The first meeting of an encounter or therapy group is often crucial as a pace setter for following group interactions. The present study limited itself to this aspect of the group process: the first meeting. The objectives which this experimenter had for the first meeting were (1) to reduce anxiety for members, (2) to acquaint members with one another, (3) to establish the group environment as a safe one in which trust was possible, and (4) to begin to develop a common perception of the group as a cohesive unit.

The present study considered the utility of non-verbal procedures in the first group meeting. It was unknown whether or not groups which included non-verbal methods differed significantly from those which did not. It had been the experimenter's experience that non-verbal procedures did facilitate the achievement of the objectives stated above. The research hypotheses were that the combination of non-verbal and verbal procedures in the first group meeting would produce these specific effects.

1. Reduction of anxiety.
2. Enhancement of acquaintance with other group members.
3. Development of safety within the group.
4. Perception of the group as a cohesive unit.
5. Increased satisfaction with the group meeting.
6. Increased enjoyment of the group and the procedures.
7. Increased meaningfulness of the group procedures.

By including non-verbal procedures in a group meeting, it was expected that the above objectives would be met.

A strictly verbal group is restricted to one primary mode of interaction. The introduction of alternative, non-verbal modes of interaction was expected to provide new ways to relate to and share with other group members. Non-verbal activities also permitted actual motor release of tension via physical movement. This benefit is well-known and has been utilized in Gestalt therapy and bioenergetics (Polster and Polster 1973).

## METHOD

### Subjects

A total of 172 volunteer subjects was used. The subjects were college age students enrolled in the first semester of an introductory course in psychology (Psychology 1A) at The University of Arizona. Thirty-two groups consisting of six subjects and the experimenter were conducted. Each group had three male and three female subjects, and the experimenter functioned as the group leader. Complete subject anonymity was assured. At the time of recruitment, subjects were informed that the experiment involved being in a small group setting and participating in small group activities.

### Setting

The groups were conducted in the social psychology experimental room at The University of Arizona. This room was designed for group experimentation. It was comfortable and informal (soft chairs, carpeting, and hanging lights), which provided a good atmosphere for the groups. Also, this room was surrounded by one-way mirrors which allowed observers to view the room without being seen. This fact was important for one of the dependent measures described later.

### Treatment Conditions and Procedures

An A, B, A-B, B-A research design was used. Subjects were randomly assigned to one of four treatment conditions: Treatment A

(8 groups)--verbal interaction and verbal procedures only; Treatment A-B (8 groups)--verbal interaction for the first 30 minutes only followed by non-verbal procedures for the next 30 minutes; Treatment B-A (8 groups)--non-verbal interaction and procedures for the first 30 minutes followed by verbal interaction for the next 30 minutes; and Treatment B (8 groups)--non-verbal procedures only. The verbal/non-verbal treatment conditions constituted the focal independent variable. Each group had a 1-1/2 hour duration: 60 minutes in structured exercises, 15 minutes in an evaluation and wrap-up discussion, and 15 minutes in filling out subject questionnaires.

The verbal and non-verbal techniques chosen for use in the experimental groups were selected for their comparable level of difficulty. All techniques were classified as introductory procedures (Pfeiffer and Jones 1969). The selected techniques were (1) Verbal: name chaining, self-introduction, dyads, and the choose-a-color technique; and (2) Non-verbal: milling without contact, milling with contact, blind walk, and a simple relaxation technique (see Appendix A). These procedures were designed to facilitate initial group trust. They dealt with the inclusion aspect of the group process (Schutz 1967). Five minutes were allowed for group discussion following each procedure.

#### Sex Differences

Data obtained from the subjects were identified as male or female. Since it was unknown whether or not males differed from females in their preference for group procedures, this identification made statistical analysis of sex differences possible on this dimension.

### Control for Experimenter Bias

Since the effect of experimenter bias, or the Rosenthal effect, is well-known, this effect was controlled for in two ways. First, the experimenter conducted all groups, remaining constant across all treatment conditions. Second, subjects were asked to rate their satisfaction with the leader/experimenter at the end of the experiment (see Appendix B, Question #8). These data were submitted to an analysis of variance between treatment conditions to detect any bias.

### Controls for Extraneous Variables

The following controls for extraneous variables were part of the experimental design.

1. The group leader was held constant across all conditions.
2. The environmental setting was held constant across all conditions.
3. An equal number of males and females was assigned to each group.
4. To control for the effect of structured exercises, all treatment conditions included an equal amount of time spent in structured procedures, either verbal or non-verbal.
5. Students were randomly assigned to one of four different treatment conditions.
6. All procedures were at an introductory level of difficulty.
7. All groups were timed and contained the same number of procedures, whether verbal, non-verbal, or a combination of the two.
8. The final 15 minutes of the groups were held constant (an evaluation/wrap-up period) to permit identical treatment during the rating time (see Dependent Measures).

### Dependent Measures

Dependent measures consisted of a 15-item subject questionnaire and the Bales' (1950) Interaction Process Scale (IPS) for which ratings were provided by two graduate student observers.

The first dependent measure, a 15-item subject questionnaire, was completed by each subject at the end of each group (see Appendix B). Subjects responded to the items on a scale from 1 to 10. The questions were designed to provide data for the specific effects expected from the use of non-verbal techniques. As mentioned earlier, these effects are as follows.

1. Reduction of anxiety.
2. Enhancement of acquaintance with other group members.
3. Development of safety within the group.
4. Perception of the group as a cohesive unit.
5. Increased satisfaction with the group meeting.
6. Increased enjoyment of the group and the procedures.
7. Increased meaningfulness of the group procedures.

The second dependent measure, Bales' (1950) Interaction Process Scale (IPS), provided an objective source for evaluation of the different treatment conditions. The IPS yields numerical data and provides a criterion for measuring the success of a group, defined as member satisfaction with the group. Observers were trained to use Bales' scales and to score each unit of interaction in its proper category (see Appendix C).

Two graduate students rated the final 15 minutes of each group. This final 15 minutes were held constant across all conditions. It

consisted of an informal, evaluation and wrap-up discussion which was initiated by the experimenter. Subjects were instructed to discuss the entire group experiment, to ask any questions, to talk about the procedures, and to say anything else that they wanted to at that time. During this discussion, the graduate raters were seated behind the one-way mirrors. Because of this, they were initially naive as to the treatment condition they were rating and did not disturb the group process. Subjects were informed at the beginning of the experiment that two graduate students would be observing part of the group. However, subjects did not know that it was the final 15 minutes that were observed. This assured spontaneity of the subjects during that time period.

The IPS has been widely employed as a method for the observation and recording of group behavior. Bales (in Hare, Borgatta and Bales 1965) has successfully used the IPS to differentiate between satisfied and dissatisfied groups. Satisfaction was indicated by group members on a 12-point Likert scale: the high satisfaction group (highest of 16 groups) averaged 10.4 and the low satisfaction group (lowest of 16 groups) averaged 2.6. The satisfied group had a higher rate of attempted answers, more positive reactions, fewer negative reactions, and fewer questions than did the dissatisfied group. Bales (in Hare et al. 1965, p. 454), reported high correlations ( $r = .6$  to  $.8$ ) in ability to predict the mean group satisfaction as a "function of the degree to which positive reactions have outweighed negative reactions during the process." The present study interpreted the group IPS scores according to Bales' criteria for satisfied and dissatisfied groups.

An inter-rater reliability coefficient was obtained. Gurman and Bass (1961) have demonstrated that observers could provide optimal measures of overt group behavior. Borgatta and Bales (1953) obtained high inter-rater reliability coefficients ( $r = .75$  to  $.95$ ) depending on the category for highly skilled observers using the IPS. Using the Pearson  $r$  in a test-retest situation for the same raters, they reported correlations ranging from  $r = .65$  to  $r = .98$ . They write: "It would appear, thus, that researchers may plan to utilize formal scoring techniques such as Bales' IPA with a reasonable confidence that training will produce observers who are reliable . . . in their scoring" (Borgatta and Bales 1953, p. 278). The graduate student raters in the present study were trained following Bales' (1950) observer training instructions to a minimum level of  $r = .70$ .

Waxler and Mishler (1966) reported difficulty obtaining acceptable levels of reliability for each category in the IPS. They concluded that certain of Bales' 16 categories should be revised to get higher levels. Bales has revised the categories in Personality and Interpersonal Behavior (Bales 1970), and these new categories were used in the present study. In addition, this problem was avoided by evaluating the IPS scores by the four larger categories (Positive Reactions, Negative Reactions, Attempted Answers, and Questions) rather than by specific categories.

#### Statistical Procedures and Research Design

The questionnaire data were analyzed with an analysis of variance based upon a 4 (treatment conditions) x 2 (sex) factorial design for each

of the 15 questions. The results of these tests were submitted to the Scheffé post-hoc procedure to isolate the significant differences.

T-tests for differences between means were applied to the IPS data obtained by the raters. The raters' data then were tested for reliability by the Pearson product-moment correlation coefficient (the Pearson  $r$ ).

## RESULTS

### Questionnaire: Subject Self-report

#### Analysis of Variance

A two-way analysis of variance was applied to the data from the 15-item questionnaire. There were no significant differences based on treatment, sex, or interaction for 12 of the items.

Three questionnaire items reached significance: questions 7, 10, and 15. Question 7 ("I feel satisfied with this group meeting") produced a significant difference ( $p < .05$ ) based on treatment condition. Question 10 ("In comparison with other 'first meeting of a group' situations, I liked this group situation very much") was also significant ( $p < .05$ ) based on treatment condition. Question 15 ("I perceived our group as a cohesive unit by the end of the hour") produced significant differences ( $p < .05$ ) based on an interaction effect between treatment condition and sex of the subject.

Thus, three of the seven research hypotheses yielded significance based on the subject questionnaire. A summary of the results for the analysis of variance is presented in Table 1.

#### Post-hoc Tests

Post-hoc comparisons of the significant questionnaire items were made using the Scheffé procedure. The means for each treatment condition are presented in Tables 2 and 3 for the significant questions.

Table 1. Summary of Analyses of Variance Performed on 15 Questionnaire Items.

Source	df	Questionnaire Item Number							
		F(#1)	F(#2)	F(#3)	F(#4)	F(#5)	F(#6)	F(#7)	F(#8)
A (Treatment)	3	NS	NS	NS	NS	NS	NS	2.654*	NS
B (Sex)	3	NS	NS	NS	NS	NS	NS	NS	NS
AB (Interaction)	3	NS	NS	NS	NS	NS	NS	NS	NS

.....

Source	df	Questionnaire Item Number						
		F(#9)	F(#10)	F(#11)	F(#12)	F(#13)	F(#14)	F(#15)
A (Treatment)	3	NS	2.625*	NS	NS	NS	NS	NS
B (Sex)	3	NS	NS	NS	NS	NS	NS	NS
AB (Interaction)	3	NS	NS	NS	NS	NS	NS	2.640*

\*  $p < .05$ ; Error = 161.

Table 2. Mean Subject Ratings for Questionnaire Item 7 ("I feel satisfied with this group meeting") and Item 10 ("In comparison with other 'first meeting of a group' situations, I liked this group situation very much").

	Question 7	Question 10
	$\bar{x}$ Rating per Group	
A (Verbal)	1.854	2.083
A-B (Verbal/Non-verbal)	2.188	2.333
B-A (Non-verbal/Verbal)	1.802*	1.896*
B (Non-verbal)	2.667**	2.833**

\* Most satisfied; most enjoyment.

\*\* Least satisfied; least enjoyment.

Table 3. Mean Subject Ratings for Questionnaire Item 15: "I perceived our group as a cohesive unit by the end of the hour."

	Females	Males
	$\bar{x}$ Rating per Group	
A (Verbal)	3.063**	2.354*
A-B (Verbal/Non-verbal)	2.250*	3.604**
B-A (Non-verbal/Verbal)	2.417***	2.417***
B (Non-verbal)	2.458	3.083

\* Most cohesion.

\*\* Least cohesion.

\*\*\* Most cohesion for combined males and females.

Question 7 measured the subjects' self-reported satisfaction with the group. Results provided mixed support for the research hypothesis that non-verbal procedures would increase subject satisfaction with the group. The subjects in the non-verbal/verbal (B-A) groups ( $\bar{x} = 1.802$ ) and in the verbal (A) groups ( $\bar{x} = 1.854$ ) reported significantly greater satisfaction ( $p < .05$ ) than did the subjects in the non-verbal (B) groups ( $\bar{x} = 2.667$ ). The verbal/non-verbal (A-B) groups did not differ significantly from any other condition. Table 4 presents a summary of this finding.

Table 4. Summary of Mean Differences for Scheffé Post-hoc Test Performed on Question 7: "I feel satisfied with this group meeting."

	A (Verbal)	B (Non-verbal)	A-B (Verbal/Non-verbal)	B-A (Non-verbal/Verbal)
A	--			
B	.813*	--		
A-B	NS	NS	--	
B-A	NS	.865*	NS	--

\*  $p < .05$ ;  $df = 3$ ; MS error = 2.863.

Question 10 measured how much the subjects liked the group in comparison with other "first group meeting" situations. The Scheffé procedure isolated the significant difference between the non-verbal/verbal

(B-A) groups ( $\bar{x} = 1.896$ ) and the non-verbal (B) groups ( $\bar{x} = 2.833$ ). Subjects in the non-verbal/verbal (B-A) condition liked the group significantly more than the non-verbal (B) groups ( $p < .05$ ). The two other treatment conditions (A and A-B) did not differ significantly from the others (see Table 5). Again, the results provided mixed support for the research hypothesis.

Table 5. Summary of Mean Differences for Scheffé Post-hoc Test Performed on Question 10: "In comparison with other 'first meeting of a group' situations, I liked this group situation very much."

	A (Verbal)	B (Non-verbal)	A-B (Verbal/Non-verbal)	B-A (Non-verbal/Verbal)
A	--			
B	NS	--		
A-B	NS	NS	--	
B-A	NS	.937*	NS	--

\*  $p < .05$ ;  $df = 3$ ; MS error = 3.137.

Finally, question 15 measured the subjects' perception of the group as a cohesive unit by the end of the experiment. Here, significance was due to an interaction between treatment condition and the sex of the subject. Females reported significantly more cohesion ( $p < .10$ ) following the verbal/non-verbal (A-B) groups ( $\bar{x} = 2.250$ ) than they did

following the verbal (A) groups ( $\bar{x} = 3.063$ ). Male subjects reported just the opposite: significantly greater cohesion ( $p < .05$ ) following verbal groups ( $\bar{x} = 2.354$ ) than following verbal/non-verbal groups ( $\bar{x} = 3.604$ ). Males also rated cohesion significantly higher ( $p < .05$ ) for the non-verbal/verbal (B-A) condition ( $\bar{x} = 2.417$ ) than they did for the verbal/non-verbal (A-B) condition ( $\bar{x} = 3.604$ ). The non-verbal (B) groups showed no significance for perceived group cohesion when compared to other conditions. See Table 6 for a summary of this finding.

#### Interaction Process Scale (IPS) Data

##### Inter-rater Reliability:

##### Pearson r

Two graduate students in psychology observed the final 15 minutes of each group and rated the behavior on Bales' IPS. To determine the reliability of the raters, the Pearson correlation coefficient was applied to the data. Data were grouped into the four large categories of Positive Reactions, Negative Reactions, Attempted Answers, and Questions and the Pearson r was computed for each of the four categories.

Results yielded a mean reliability of  $r = .70270$ , meeting the specifications of the study.

##### T-tests

T-tests were applied to the data collected by the Bales' IPS raters. These data were grouped into the four large categories of Positive Reactions, Negative Reactions, Attempted Answers, and Questions.

Table 6. Summary of Mean Differences for Scheffé Post-hoc Test Performed on Question 15:  
 "I perceived our group as a cohesive unit by the end of the hour."

	Female				Male			
	A	B	A-B	B-A	A	B	A-B	B-A
<u>Female:</u>								
A	--							
B	NS	--						
A-B	.813*	NS	--					
B-A	NS	NS	NS	--				
<u>Male:</u>								
A	NS	NS	NS	NS	--			
B	NS	NS	NS	NS	NS	--		
A-B	NS	NS	1.354**	NS	1.250**	NS	--	
B-A	NS	NS	NS	NS	NS	NS	1.187**	--

\* p < .10

\*\* p < .05

df = 3

MS error = 3.519

Then, the data were organized by treatment condition (A, B, A-B, B-A) for each of the IPS categories. There were no significant differences between treatment conditions for mean number of Positive Reactions or for mean number of Attempted Answers. Significance was reached ( $p < .075$ ;  $p < .10$ ) between treatment conditions for four t-tests performed on the Question and Negative Reaction categories. Table 7 presents a summary of the mean number of responses per group for each of the IPS categories in each treatment condition.

Under the Question category on the IPS, subjects in the verbal/non-verbal (A-B) groups ( $\bar{x} = 22.938$ ) asked significantly fewer questions ( $p < .075$ ) than did subjects in the non-verbal (B) groups ( $\bar{x} = 31.438$ ). Using Bales' criteria for interpreting this finding, it can be shown that subjects in the verbal/non-verbal condition were significantly more satisfied than those in the non-verbal condition. A second t-test in the Question category achieved significance ( $p < .10$ ): subjects in the non-verbal/verbal (B-A) groups ( $\bar{x} = 23.750$ ) asked significantly fewer questions than subjects in the non-verbal (B) groups ( $\bar{x} = 31.438$ ). According to Bales, this indicates significantly greater satisfaction on the part of the subjects in the non-verbal/verbal groups. There were no significant differences between the verbal (A) groups and any other condition. Thus, the results indicate greater subject satisfaction with the verbal/non-verbal and the non-verbal/verbal groups, using number of questions asked as the criterion for satisfaction. A summary of these findings is presented in Table 8.

Table 7. Summary of Mean Scores per Group for Bales' IPS.

Bales' IPS Category	A Verbal	A-B Verbal/Non-verbal	B-A* Non-verbal/Verbal	B Non-verbal
<u>Positive Reactions</u> (Seems friendly, dramatizes, agrees)	39.875	41.875	44.625	45.0
<u>Attempted Answers</u> (Gives suggestion, information, opinion)	171.875	174.313	177.188	169.188
<u>Questions</u> (Asks for suggestion, information, opinion)	26.375	22.938	23.750	31.438
<u>Negative Reactions</u> (Disagrees, shows tension, seems unfriendly)	35.625	42.313	29.50	31.75

\* Treatment condition producing highest subject satisfaction using Bales' IPS criteria.

Table 8. Summary of t-tests for the IPS: t Values for Questions.

	A Verbal	A-B Verbal/Non-verbal	B-A Non-verbal/Verbal	B Non-verbal
A	--			
A-B	1.006	--		
B-A	.782	.234	--	
B	1.091	1.797**	1.641*	--

\*  $p < .10$   
 \*\*  $p < .075$

Under the category of Negative Reactions, the verbal/non-verbal groups produced a significantly greater ( $p < .10$ ) number of negative reactions ( $\bar{x} = 42.313$ ) than did the non-verbal/verbal groups ( $\bar{x} = 29.50$ ). The verbal/non-verbal groups were also significantly higher ( $p < .10$ ) on negative reactions than were the non-verbal groups ( $\bar{x} = 31.75$ ). The verbal groups did not differ significantly from any other treatment condition. The results show significantly greater subject satisfaction with the non-verbal/verbal (B-A) and non-verbal (B) treatment conditions based on number of negative reactions as the determining criterion. Table 9 presents a summary of this finding.

Table 9. Summary of t-tests for the IPS: t Values for Negative Reactions.

	A Verbal	A-B Verbal/Non-verbal	B-A Non-verbal/Verbal	B Non-verbal
A	--			
A-B	.951	--		
B-A	.855	1.583*	--	
B	.734	1.629*	.339	--

\*  $p < .10$

## DISCUSSION

### Conclusions

#### Questionnaire: Significant Findings

The subject questionnaire provided mixed support for the research hypotheses. Three of the hypotheses, namely, that the addition of non-verbal procedures would increase subject (1) satisfaction with the group, (2) enjoyment of the group, and (3) perception of the group as a cohesive unit, were partially substantiated by the experiment.

Subject satisfaction (Item 7) with the group was significantly higher in the non-verbal/verbal groups and in the verbal groups than it was in the non-verbal-only groups. In comparison with other first-group meetings (Item 10), the non-verbal/verbal groups were enjoyed significantly more than were the non-verbal-only groups. (However, question 1, "I enjoyed this group experience" showed no significant differences and should be taken into account.) For both hypotheses dealing with satisfaction and enjoyment, the non-verbal condition was the least successful and the combination, non-verbal/verbal was the most successful.

Several factors may account for the exclusively non-verbal condition being the least preferred in terms of satisfaction and enjoyment. First, non-verbal procedures are unusual and unfamiliar to the subject. As such, they are probably more anxiety producing when used exclusively for an introductory group. Since most people become acquainted initially

by talking and primarily verbal behaviors, the solely non-verbal groups would be expected to be less satisfying and enjoyable. Second, the duration of the group was limited to one hour and fifteen minutes. It is possible that with a longer group time, the subjects' comfort with non-verbal procedures would increase. (Variation of length of in-group time presents a possible area for future research.) Third, although the design for all treatment conditions included a minimum of five minutes after each procedure to allow for subject feedback, reactions, and brief discussion, the non-verbal-only groups had the least verbal interaction. It is tenable to suggest that these subjects had less time to verbally process on-going experiences than did subjects in other conditions. This suggestion could be tested by a follow-up study. Perhaps after the experiment, the subjects in the non-verbal-only groups would have continued to process the experience until greater satisfaction was achieved. (This suggestion implies that increased time for information processing yields increased processing which, in turn, yields greater satisfaction.)

The combination of non-verbal procedures followed by verbal procedures produced the highest subject satisfaction and enjoyment. One explanation of this finding is that the variety of experience is simply novel and fun. This is complicated, however, by the fact that the verbal/non-verbal condition was not the second best, as would be expected. Rather, the verbal-only condition produced the second highest ratings for subject satisfaction and enjoyment based on the significant questionnaire items. A better explanation for the success of the non-verbal/verbal condition can be made in terms of the subjects' inner experience.

In this condition, the subject moved from unfamiliar, novel non-verbal procedures to comfortable and familiar verbal interaction. This movement would be expected to decrease anxiety and to increase positive feelings associated with satisfaction and enjoyment. Also, this would help account for the opposite effect for the verbal/non-verbal groups.

To conclude the discussion of questionnaire items associated with subject satisfaction and enjoyment, it must be noted that the verbal-only groups were not significantly different from the non-verbal/verbal groups. However, they were consistently rated by subjects as "second best." This provides subject self-reported support for the use of non-verbal procedures in introductory group meetings. It also supports the traditionally all-verbal groups as close runners-up in terms of subject satisfaction and enjoyment. In the verbal condition, group interaction is in the familiar, comfortable mode and is presumably less threatening to subjects. In light of this consideration, the subjects' preference for groups initiated with non-verbal exercises is an important, though not statistically significant, finding.

The only significant sex-treatment interaction effect resulted from the question (Item 15) tapping the subjects' perception of the group as a cohesive unit. The data analysis provided partial support for the hypothesis that the addition of non-verbal procedures would enhance perception of the group as a cohesive unit. This item showed the only significant sex difference: females reported the verbal/non-verbal condition as the best producer of cohesion and the verbal-only condition as producing the least amount of group cohesion; males

reported just the opposite. The difference between the two conditions (verbal/non-verbal versus verbal) based on sex was significant in both cases. Two factors could explain this difference. First, the leader of all groups was female. If it is assumed that non-verbal procedures are more threatening to the subject, it is possible that this anxiety was lessened for the female subjects by the presence of a female leader. The female leader is presented here as a model with whom female subjects would identify more readily than would male subjects. Given this assumption, the male subjects would be expected to perceive greater group cohesion in the verbal-only condition. However, this explanation has two serious drawbacks: (1) the group leader was rated high equally by both males and females (Item 8), and (2) the non-verbal-only condition would logically be expected to be the least cohesive for males, as is not the case. A second explanation considers the effects of social training on the different sexes. Men are given less permission to display unacceptable non-verbal, affective behaviors than are women in our society. It can be argued that men would initially prefer verbal interaction more than would women. This preference would affect the subjects' perception of the cohesiveness of the group. There are problems with this explanation, too. Namely, the fact that both males and females reported the non-verbal/verbal groups as the second best producers of group cohesion. It is evident that more research is needed in the area of group cohesion and sex differences in order to provide a clear-cut interpretation of the results.

The non-verbal/verbal condition produced the greatest perception of the group as a cohesive unit when data from both sexes were combined. This condition received the second best place for both sexes. This suggests it is the best condition for producing cohesiveness in both sexes on the first group meeting.

According to the three significant questionnaire items, the non-verbal/verbal groups were rated consistently higher than the other treatment conditions. This finding supports three research hypotheses, that the addition of non-verbal procedures in the first group meeting would increase subject satisfaction, enjoyment, and enhance group cohesion. Suggested variables affecting this outcome are (1) that non-verbal exercises are ice-breakers, providing novelty, variety, and fun; (2) that this condition provides movement from the unusual and uncomfortable to the usual and comfortable; and (3) that it allows for verbal interaction following the non-verbal activities which enhances processing of the non-verbal procedures. The non-verbal-only condition was the least successful based on the subject questionnaire. It is clear that caution must be used in generalizing from the results of this study: only three questions reached significance ( $\alpha = .05$ ) and the less-favored verbal condition was not significantly different from the non-verbal/verbal. More research is needed in this area.

#### Questionnaire: Non-significant Findings

Four of the hypotheses were not supported. The addition of non-verbal procedures to the first group meeting did not (1) reduce anxiety, (2) enhance acquaintance with group members, (3) aid in the

development of group safety, or (4) add to the meaningfulness of group procedures. These non-significant findings were partially attributable to the fact that all subjects rated all groups highly and favorably in the first place. Second, the leader was a homogeneous variable who could be conceptualized as having positive stimulus value to all subjects in all conditions. Satisfaction with the group leader was rated very highly (on Question #8, rated on a 1 to 10 scale where 1 = high satisfaction;  $\bar{x} = 1.203$ ; female subjects  $\bar{x} = 1.17$ ; male subjects  $\bar{x} = 1.22$ ). It can be argued that this homogeneous factor influenced the paucity of significant findings, since all subjects "liked" the leader. Third, this experiment was less aversive and more pleasurable than the "average" psychology experiment. This may have also influenced the high ratings across the board by leaving the subject with positive feelings.

Finally, the non-significance of most questionnaire items, while not supporting the present research hypotheses, does support the use of non-verbal procedures indirectly. Since the groups using non-verbal procedures were shown to differ insignificantly from solely verbal groups for the majority of the questionnaire items, it follows that groups including non-verbal procedures are at least as successful as verbal groups for the first group meeting. This finding refutes the idea that non-verbal activities are less effective than verbal interaction for the initial meeting of a group. The reader is cautioned in generalizing from these findings, however, until further research is conducted.

Bales' IPS

The behavioral observations rated on Bales' (1970) Interaction Process Scale (IPS) provided support for the hypothesis that the addition of non-verbal activities would increase subject satisfaction with the first group meeting. Bales' criteria for comparative satisfaction consists of increased number of Positive Reactions, increased number of Attempted Answers, decreased number of Questions, and decreased number of Negative Reactions. On all criteria, either a mixture of verbal and non-verbal activities (A-B, B-A) or solely non-verbal (B) groups were scored higher than the verbal-only (A) groups.

Most of the t-tests (20 out of 24) were not statistically significant. None of the means for Positive Reactions or Attempted Answers were significant. Significance was blocked in most analyses by one or two disparate individual groups in each treatment condition which resulted in a large error term for computational purposes. As with the questionnaire, the mean outcomes were in the expected direction, despite the small number of significant differences.

Four t-tests in the Question and Negative Reaction categories reached significance in support of the research hypotheses. The non-verbal/verbal and solely non-verbal groups produced significantly fewer negative reactions than did the verbal/non-verbal groups. The cause of the high number of negative reactions for the latter condition is unclear. One suggestion is that it reflects the disparity between males and females on perceived group cohesion for the verbal/non-verbal groups. This significant sex difference may have resulted in the high number of

Negative Reactions scored for this condition, since the sexes' perceptions of group cohesion were in conflict.

On the other hand, both combination groups (non-verbal/verbal, B-A, and verbal/non-verbal, A-B) produced significantly fewer questions than did the non-verbal-only (B) condition. Since the solely non-verbal groups were more unusual than the other conditions, this could account for the larger number of questions. In both cases, the verbal-only condition did not differ significantly from any other group.

Using Bales' criteria for satisfied groups, it was shown that the non-verbal/verbal groups were the most satisfied. This treatment condition had the highest mean number of Attempted Answers, the lowest mean number of Negative Reactions (significant), a mean score nearly identical to the highest condition (non-verbal-only) in Positive Reactions, and a mean score nearly identical to the lowest condition (verbal/non-verbal) in number of Questions. Clearly, the behavioral observations indicate greatest satisfaction on the first group meeting when non-verbal procedures are used initially and are followed by verbal interaction.

The least successful groups according to the IPS were in the verbal-only condition. This condition was rated lowest on Positive Reactions, next to the lowest in Attempted Answers, next to the highest in number of Questions, and next to the highest in number of Negative Reactions. Although the verbal groups did not differ significantly from other conditions, all of the verbal means were in an unfavorable direction.

### Summary

When both dependent measures are examined together, the non-verbal/verbal condition emerges as the best condition for the first group meeting. The subjects in these groups were more satisfied than subjects in other conditions. This was supported by the questionnaire results and by the IPS data. Second, the subjects in the non-verbal/verbal condition enjoyed the groups more than did the subjects in other conditions. Third, subjects reported perceiving the group as a cohesive unit following the non-verbal/verbal groups when data from both sexes was combined.

For the first group meeting, this study shows that non-verbal procedures should not be used exclusively. The non-verbal-only condition was consistently rated comparatively low on the subject questionnaire and lowest on two categories on Bales' IPS.

The verbal-only and verbal/non-verbal conditions seem to be neither the best nor the worst according to the dependent measures used. The major difficulty is the reported sex difference in perceived group cohesion following these two conditions.

In view of the small number of significant, albeit consistent, differences, caution is again advised in generalizing from this research.

### Recommendations for Future Research

More research in the field of groups and the utility of non-verbal procedures in group meetings is strongly recommended. The use of a subject questionnaire to obtain direct subjective feedback from participants is advised. The continued use of Bales' IPS is also

recommended. At this point in time, this researcher believes it is more important to experiment with a variety of methods to assess the impact of groups than it is to strive for statistical significance alone. A perfected method for assessing groups is not yet available; simple questionnaires still provide useful data. Bales' IPS has been used for over 20 years with considerable success (Hare et al. 1965, Gurman and Bass 1961, Borgatta and Bales 1953). The main drawback is the time-consuming task of training reliable raters to use the scales. It is recommended that future researchers train the IPS raters to a higher level of reliability than did the present study ( $r = .70$ ). This would add more weight to the findings. On the whole, continued use of the present dependent measures is suggested, despite the limited number of significant findings.

It would be interesting to conduct the experiment with longer group times. One-hour groups are very short. Two-hour groups would be close to actual group duration for contemporary encounter or therapy groups. More significant differences might well emerge following manipulation of the group time.

More research is definitely needed on the issue of group cohesion. There is no clear explanation for the male-female differences on this dimension. Future studies might consider varying sex of the leader and sex composition of the groups. It would help to clarify the issue by studying what constitutes a perception of group cohesion for males and for females. Many possibilities lie in this area.

It is also suggested that this research design be applied to on-going therapy groups. It is suggested that correlations between treatment condition and therapeutic outcome might appear.

Finally, research on the comparable level of difficulty of verbal and non-verbal procedures used is recommended. In addition, investigation of the use of alternative exercises is encouraged. It is suggested that procedures vary in terms of the type and amount of impact on the subject, as well as in terms of their level of difficulty.

For this study, the selected procedures were designed to maintain interaction at a pleasant, somewhat superficial level. This was necessary to assure the subjects' welfare and to comply with the 1974 APA ethical standards for group research. It would have been unethical to initiate deeply meaningful or therapeutic interaction with volunteer, one-time-only subjects. In superficial interaction with strangers, verbal communication is the familiar mode. (This is another explanation for subjects' preferences for the verbal condition as second best to the non-verbal/verbal condition.) This researcher predicts significantly greater satisfaction with non-verbal/verbal groups than with verbal groups if the subjects interact on a deeper level. In on-going encounter or therapy groups, for example, procedures are used which are designed to facilitate deep, intimate interaction and heightened self-awareness. Non-verbal activities in which the individual places himself physically in relation to every other group member depending on his feelings for the others, or dances how he feels right now, or experiences a guided fantasy trip back to his childhood self are much more meaningful to the

participant and produce stronger reactions. Refer to Schutz (1967) and Stevens (1971) for more examples of advanced non-verbal exercises. The superficiality of the exercises should be taken into account when the reader interprets the insignificance of the majority of the statistical tests. Since this study used a small, non-randomized set of techniques, more research needs to be done to assess the impact of specific procedures on the group member.

It is hoped that this study will be of heuristic value and that further research in the area will be stimulated by this beginning.

APPENDIX A

PROCEDURES USED IN TREATMENT CONDITIONS

Treatment A: Verbal

1. Name chaining (10 min).
2. Self-introduction (20 min).
3. Dyads (15 min).
4. Choose-a-color (15 min).
5. Evaluation/Wrap-up (15 min).

Treatment A-B: Verbal/Non-verbal

1. Name chaining (10 min).
2. Self-introduction (20 min).
3. Milling without contact (15 min).
4. Milling with contact (15 min).
5. Evaluation/Wrap-up (15 min).

Treatment B-A: Non-verbal/Verbal

1. Milling without contact (15 min).
2. Milling with contact (15 min).
3. Name chaining (10 min).
4. Self-introduction (20 min).
5. Evaluation/Wrap-up (15 min).

Treatment B: Non-verbal

1. Milling without contact (15 min).
2. Milling with contact (15 min).
3. Blind walk (20 min).
4. Relaxation technique (10 min).
5. Evaluation/Wrap-up (15 min).

## APPENDIX B

### SUBJECT QUESTIONNAIRE

Instructions: Please put a mark (X) on a scale from 1 to 10 which you think best describes you in relation to each question.

1. I enjoyed this group experience.
2. I would be interested in participating in more groups like this one.
3. I enjoyed the verbal procedures.
4. I found the verbal procedures to be meaningful.
5. I enjoyed the non-verbal procedures.
6. I found the non-verbal procedures to be meaningful.
- \* 7. I feel satisfied with this group meeting.
8. I was satisfied with the group leader.
9. I feel that I was included by the group in its activities.
- \*10. In comparison with other "first meeting of a group" situations, I liked this group situation very much.
11. I feel less anxious now than I did when the experiment began.
12. I feel that I am now acquainted with the other students present.
13. I feel safe with these people now.
14. I feel that I can trust the group now.
- \*15. I perceived our group as a cohesive unit by the end of the hour.

\* Significant items.

## APPENDIX C

### BALES' SYSTEM OF OBSERVATIONAL CATEGORIES (IPS)\*

#### Positive Reactions

1. Seems Friendly: raises other's status, gives help, reward.
2. Dramatizes: fantasies, jokes, laughs, shows satisfaction.
3. Agrees: shows passive acceptance, understands, concurs, complies.

#### Attempted Answers

4. Gives Suggestion: direction, implying autonomy for other.
5. Gives Opinion: evaluation, analysis, expresses feeling, wish.
6. Gives Information: information, repeats, clarifies, confirms.

#### Questions

7. Asks for Information: information, repetition, confirmation.
8. Asks for Opinion: evaluation, analysis, expression of feeling.
9. Asks for Suggestion: direction, possible ways of action.

#### Negative Reactions

10. Disagrees: shows passive rejection, formality, withholds help.
11. Shows Tension: asks for help, withdraws out of field.
12. Seems Unfriendly: deflates other's status, defends or asserts self.

\* Taken from Bales (1970, p. 93).

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