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THE APPLICATION AND EVALUATION OF AN INTERPERSONAL
SKILL TRAINING PROGRAM WITH MENTALLY RETARDED ADULTS

By

Robert G. Rychtarik

B.S., University of South Dakota, 1974

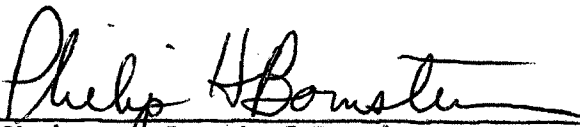
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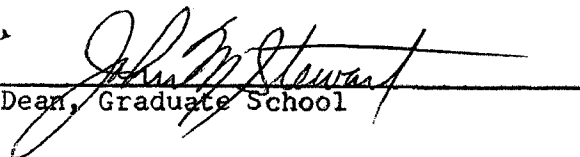
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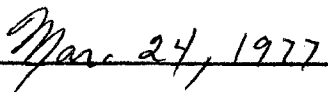
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ABSTRACT

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Psychology

The Application and Evaluation of an Interpersonal Skill Training Program with Mentally Retarded Adults (85 pp.)

Director: Philip H. Bornstein, Ph.D. *PAB*

The value of the skill acquisition model of treatment for remediation of interpersonal deficits in the retarded was evaluated in a program to train conversational skills in three adult, mildly retarded sheltered workshop employees. An individually administered instructional package incorporating instructions, modeling, coaching, behavioral rehearsal, video-feedback, corrective feedback, and social reinforcement was evaluated in a multiple-baseline design across three target behaviors: (1) eye contact, (2) conversational questions, and (3) positive conversational feedback. Training was introduced sequentially for each target behavior over each of three sessions, and assessed across 15 4-min. conversations with unknown, non-retarded adults. The instructional package was highly successful in producing substantial increases in all three target behaviors for one subject and moderately effective across two of the three target behaviors for the other two subjects. Ratings of overall conversational ability showed no noticeable change between baseline and final assessment conversations. It was concluded that: (1) the functional control of the instructional package was clearly demonstrated; (2) the training procedure may have somewhat limited generality across individuals; and (3) the specific nature of the retarded's interpersonal deficits requires further delineation. Directions for future research were discussed.

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CHAPTER I

INTRODUCTION

That social inadequacy is one of the defining characteristics of mental retardation is generally accepted (Doll, 1941; Grossman, 1973; Heber, 1959; Tredgold, 1952). The American Association on Mental Deficiency has stressed that the retarded individual is not only subaverage intellectually but impaired in adaptive behavior as well--behavior encompassing seven subareas: (1) sensory-motor abilities, (2) communication skills, (3) self-help skills, (4) socialization, (5) academic abilities, (6) reasoning and judgment, and (7) social skills (Grossman, 1973). It is with respect to this latter area, in which the retarded person is viewed as especially deficient in interpersonal social abilities that the present investigation was directed.

There is considerable agreement as to the importance of interpersonal functioning on the adjustment and rehabilitation of the mentally retarded. Rockower (1958, p. 12) has stated that,

The retarded group is peculiarly lacking in a readiness to assume work responsibilities for reasons other than job skills per se. Job readiness requires the development of work motivation, proper work habits, the practice of regularity of attendance, and acceptable social relationships with others (author's emphasis).

Likewise, McDaniel (1960, p. 5) noted that one of the primary problems in the vocational rehabilitation of the retarded is the, ". . . chronic lack of basic social skills, social immaturity, insecurity, and ineptness in interpersonal relationships and situations . . ." Empirical support for this notion has been obtained by Stephens (1964), who in a factor analytic study of rehabilitation outcome, determined "interpersonal competence" to be an important predictor variable of rehabilitation success in young adult male retardates.

Despite this agreement, however, few attempts have been made to study the nature of the retarded person's interpersonal deficits, let alone develop and evaluate treatment programs to remediate them. What programs have been developed take one or a combination of three basic approaches: (1) interpersonal growth through group processes, (2) operant conditioning of interpersonal interaction, and (3) direct instruction and behavioral training in appropriate interpersonal skills.

Following a group processes model, McDaniel (1960) evaluated the effect of group psychotherapy incorporating sociodrama on the interpersonal functioning of young mentally retarded adults. While many of the observed sociometric changes in group characteristics were not significant, there was some evidence to suggest increased quality of interpersonal relationships as a result of greater group cohesiveness, socialization, and leadership strength.

Baldwin (1966), and Kazdin and Polster (1973), on the other hand, demonstrated the use of operant conditioning to develop

interpersonal social interactions (i.e., talking with others) in retarded institutionalized individuals. Kazdin and Polster, for example, not only demonstrated the effectiveness of a token economy in increasing such interactions, but also, through intermittent reinforcement, demonstrated the maintenance of these behaviors even during extinction. It is with respect to the third treatment approach, however, in which there is more direct instruction and training in appropriate interpersonal skills that the present study is concerned.

Interpersonal Skill Training

The basis for the skill training approach is a response acquisition model of treatment, which construes maladaptive behavior in terms of the absence of specific response skills, and directs treatment at training in precisely those skills which are lacking. Goldsmith and McFall (1975, p. 51) have recently discussed the background for this model.

It assumes that each individual always does the best he can given his physical limitations and unique learning history, to respond as effectively as possible, in every situation. Thus, when an individual's "best effort" behavior is judged to be maladaptive, this indicates the presence of a situation-specific skill deficit in that individual's repertoire (Mager and Pipe, 1970).

Regardless of the actual origin of this deficit (i.e., faulty learning, lack of experience, biological dysfunction, etc.) it is assumed that through appropriate training in more competent, skillful response alternatives, it can be overcome or at least partially compensated for. Little attention is paid to maladaptive

behaviors in this model, for it is assumed that once new skills have been developed, rehearsed, and reinforced they will replace previous behaviors, and increase self-confidence in one's performance.

While numerous skill acquisition studies have been conducted in such diverse areas as driver education, athletic training, and job training (see Lumsdaine, 1961), only recently has the model been applied to the remediation of more complex interpersonal social skill deficits. Remediation/treatment programs of this nature generally rely upon various combinations of the following sequence of behavior therapy techniques: (a) instructions and coaching in the principles of effective interpersonal skills; (b) modeling, via audio, video, or live presentation of the appropriate interpersonal behaviors; (c) behavioral rehearsal or practice of these behaviors in simulated situations; (d) response feedback allowing the subject to view himself and initiate self-corrective behaviors; (e) corrective verbal feedback from the therapist as to the subject's performance; (f) direct reinforcement of appropriate performance; and (g) practice assignments in the natural environment.

That this skill training approach proves valid has been demonstrated by its successful application across various treatment populations and clinical problems. Prior to discussing the extension of the skill acquisition model to the field of mental retardation, however, a review of the general literature is in order.

Interpersonal Skill Training
In Non-Retarded
Populations

Assertion Training

Perhaps the greatest amount of clinical and research interest in the skill acquisition model has been generated in the area of assertion training. Though clinical, anecdotal, and case study reports have for some time noted the successful application of the behavioral training model to this area (e.g., Alberti and Emmons, 1970; Wolpe and Lazarus, 1955; and Wolpe, 1969), only recently has analogue outcome therapy research attempted to not only delineate the effective treatment components of such training, but determine the actual behavioral components of assertive behavior as well.

In a series of studies, McFall and Marston (1970), McFall and Lillesand (1971), and McFall and Twentyman (1973) attempted to compare the various components of the behavioral training package as it is applied in assertion training programs. Employing a standardized, semi-automated laboratory analogue of assertion training, McFall and Marston (1970) compared behavioral rehearsal, and behavioral rehearsal plus performance feedback with two control conditions on the refusal behavior of nonassertive college students. On the basis of self-report, behavioral, autonomic, and in vivo follow-up measures, they concluded that overt response rehearsal resulted in a therapeutic effect, which response feedback tended to augment.

McFall and Lillesand (1971) made use of a similar analogue technique, and found that both overt rehearsal with modeling and coaching, and covert rehearsal with modeling and coaching were superior to an assessment placebo condition. Covert rehearsal, however, had a tendency to be more effective than the overt. Then, in a final series of experiments, McFall and Twentyman (1973) compared the relative contributions of rehearsal, modeling, and coaching to the assertion training package. Their results indicated that rehearsal and coaching accounted for virtually all of the treatment effect.

In a separate line of research, Eisler, Miller, and Hersen (1973) attempted to delineate the actual component behaviors of assertion. They demonstrated that psychiatric patients judged to be high or low in overall assertiveness could be differentiated on a number of verbal and non-verbal behavioral components. Videotapes of enactments of interpersonal situations revealed that high assertive patients evidenced shorter response latencies, louder speech, lengthier responses, more pronounced affect, less compliance, and significantly more requests for change in the behavior of the interpersonal partner.

With these behavioral components as dependent variables, Eisler, Hersen, and Miller (1974) then compared the effects of modeling with a no-treatment and practice control condition. Modeling produced significant improvement in five of the seven behavioral components, whereas neither control group produced change. This suggests that practice alone is unlikely to improve a behavioral

deficit in assertive behavior. That modeling was effective here and not in the McFall and Twentyman (1973) studies is confusing, though it likely results from differences in treatment populations and/or dependent variables.

In subsequent studies, Hersen, Eisler, Miller, Johnson, and Pinkston (1973), and Hersen, Eisler, and Miller (1974) have respectively demonstrated (1) the superiority of practice, instructions, and modeling in training the components of assertion, and (2) the generalization to the "real" world of gains made in assertion training sessions.

Single-case experimental designs in applied settings have recently added further support for the adequacy of the skill acquisition model in the treatment of assertive behavior deficits. Hersen and Bellack (1976), for example, evaluated the effectiveness of a social skill training program on the positive and negative assertion of two chronic schizophrenics. The component behaviors of the social skill requiring modification were identified individually for each patient by rating videotapes of the patients in role-played interactions. Target behaviors for one subject were: number of compliances, number of requests, seconds of speech duration, and ratio of eye contact to speech duration. For the second subject, appropriate affect, number of compliances, number of appropriate smiles, ratio of speech disruptions to words spoken, and ratio of eye contact to speech duration served as the target behaviors. These behaviors were then treated sequentially and cumulatively in a

multiple baseline design incorporating role-played interactions with instructions and feedback for the first subject, and instructions, feedback, and modeling for the second. Results were positive for all behaviors for both subjects, and corresponded with increased ratings of overall assertiveness. Furthermore, treatment effects were maintained over an 8-week follow-up period.

Employing similar techniques with three chronic schizophrenic patients (2 females, 1 male), Bellack, Hersen, and Turner (1976) found analogous positive training and maintenance effects. Most important, however, they demonstrated the generalization of training from trained to untrained, and from trained to novel role-played interactions. Training was only partially effective for the male patient, however.

Heterosexual Dating Anxiety

The skill acquisition model of treatment has also recently, and increasingly, been applied to problems of heterosexual dating anxiety in college students. Morgan (1969) suggested that dating difficulties originate from unrealistic notions about dating, as well as deficient dating skills. He compared the relative effectiveness of four treatment packages: (1) focused counseling, (2) behavior rehearsal, (3) modeling, and (4) behavior rehearsal with modeling. While no significant group differences emerged in the number of conversations with females or reported number of dates initiated, the results did suggest that college men rehearsing

date-initiating behavior with a girl may subsequently decline in the degree of anxiety they experience in such situations.

Melnick (1973), using a similar population of date-anxious college males, compared the relative effectiveness of modeling alone, modeling plus behavioral rehearsal, modeling plus behavioral rehearsal plus response feedback, and modeling plus behavioral rehearsal plus response feedback plus reinforcement with no treatment and insight oriented control groups. In a simulated, in vivo dating interaction only those groups receiving response feedback were judged significantly greater in skill than the control groups.

MacDonald, Lindquist, Kramer, and McGrath (1975) compared the efficiency of behavioral rehearsal, and behavioral rehearsal with extrasession assignments on the social dating skills of date anxious college students. Both groups improved significantly on rated social dating skill compared to attention placebo or waiting list controls, but did not differ from each other.

Finally, Twentyman and McFall (1975), in an attempt to overcome certain weaknesses of the previous studies (e.g., subject-selection procedures, ambiguously defined treatments and inadequate outcome measures), (1) developed and evaluated a paper and pencil inventory which differentiated high and low dating subjects, (2) explicitly defined treatment components in a subsequent study, and (3) made use of self-report, behavioral, and physiological measures as pre and post indices. Their treatment package of simulated telephone and direct heterosexual interactions made use of covert rehearsal,

modeling, coaching, overt rehearsal and feedback. The results provided strong support for the skill training model by demonstrating that only subjects in the skills training group significantly improved on all dependent measures (i.e., self-report, behavioral, and physiological).

Other social, heterosexual skill training studies, have utilized somewhat different techniques. Martinson and Zerface (1970), for example, compared individual eclectic counseling with a program of arranged interactions between low dating male subjects and untrained female confederates. Following treatment, subjects in the latter condition reported less "specific anxiety" and appeared to be dating more frequently than those of the other group. More recently, Christensen and Arkowitz (1974), and Christensen, Arkowitz, and Anderson (1975) investigated the effect of practice dating, and practice dating plus feedback, with a control condition. In a somewhat similar manner as Martinson and Zerface (1970), these authors used both male and female subjects and arranged dates between them. In the feedback condition each subject received written feedback from the dating partner. The practice dating groups were both significantly superior to the delayed treatment control on self-report, and behavioral measures. There was the suggestion, however, that feedback was to some extent detrimental in the practice condition.

The dating skills training approach to heterosexual social anxiety has also been compared with other well established techniques. Curran (1975) found no significant treatment difference between social

skills training and systematic desensitization in its application to heterosexual dating anxiety. However, Curran and Gilbert (1975) found that while dating skills training (incorporating instructions, modeling, behavior rehearsal, response and corrective feedback, homework assignments, and social reinforcement) and systematic desensitization were equally effective in reducing anxiety initially, only the skills training significantly reduced anxiety on follow-up. Furthermore, subjects in the skills training group were rated as significantly more improved on interpersonal abilities than those receiving desensitization.

Such findings have received further support in a study by Bander, Steinke, Allen, and Mosher (1975) who found dating skills training making use of role-playing to hierarchically arranged interpersonal situations with female partners and subsequent feedback from those partners, to be superior to nonspecific treatment, and growth oriented approaches in interpersonal communications. In addition, systematic desensitization failed to enhance the skill training technique.

In the most recent study on heterosexual dating anxiety, Curran, Gilbert, and Little (1976) compared sensitivity training with a behavioral training approach incorporating instruction, observation of an incompetent model, observation of a competent model, behavioral rehearsal, and response and corrective feedback. While no difference was found between the two groups on measures of general social anxiety, the skill training program demonstrated significant treatment

efficacy on measures more specific to heterosexual dating itself (i.e., behavioral ratings and self-report responses to simulated dating interactions).

Modifying Aggressive Outbursts

Uncontrolled case studies have reported the use of social skills training to teach individuals ways of handling interpersonal situations that previously elicited abusive or aggressive behavior (Kaufman and Wagner, 1972; Wallace, Teigen, Liberman, and Baker, 1973). More recently, Foy, Eisler, and Pinkston (1975), in a single-case experimental design, employed behavioral rehearsal, modelling, focused instructions, and feedback to modify specific behavioral deficits associated with abusive episodes in a psychiatric patient. Treatment was effective, and gains were maintained over a six-month follow-up.

Additional support for the application of the skill training model to abusive or aggressive behavior has been obtained by Frederiksen, Jenkins, Foy, and Eisler (1976). In a multiple-baseline design across two subjects, they demonstrated the efficacy of a social skill training program incorporating behavioral rehearsal with modeling, focused instructions, and feedback in the modification of abusive verbal outbursts in two psychiatric patients. Training improved all target behaviors (i.e., looking, irrelevant comments, hostile comments, inappropriate requests, and appropriate requests). Furthermore, training generalized to novel scenes, to individuals not involved in the original training scenes, and to interpersonal situations on the hospital ward.

Class Participation Anxiety

Wright (1976) compared the relative effectiveness of social skill training and systematic desensitization in alleviating hesitant class participation in college students. While both social skills training and desensitization led to significant improvement over a control group, the social skills group was rated significantly higher on the frequency of verbalizations in a simulated class than either the desensitization or control conditions. However, neither treatment yielded changes in ratings of anxiety or verbal performance in the natural environment.

Public Speaking Behavior

The skill acquisition model has also recently been extended to public speaking behavior. Fawcett and Miller (1975) in a multiple baseline design across the speaking behaviors, eye contact, gestures, and "initial" and "closing" behaviors, demonstrated the effectiveness of a training package incorporating written instructions, quizzes, behavioral rehearsal, and feedback on the speaking quality of a college student and three low-income paraprofessional workers. That the increase in speaking behaviors correlated with a subsequent increase in overall speaking performance, suggested that the target behaviors were indeed a socially valid measure of public speaking ability.

Job Interview Behavior

Prazak (1969), following a skill training model, developed a program for teaching critical job interview behaviors to vocational

rehabilitation clients. In an experimental investigation of this program, Venardos and Harris (1973) compared videotape modeling, plus response feedback with role playing alone, on the training of the critical job interview behaviors in a heterogenous group of vocational rehabilitation clients. Both methods were determined to be equally effective in improving interview skill over a control condition.

General Interpersonal Social Skills

While the present discussion has basically centered on the application of the skill training model to situation-specific interpersonal/social deficits (i.e., assertion, heterosexual dating anxiety, etc.), of particular interest to the present investigation is its application to more general interpersonal social skills. Sarason and Ganzer (1969), for example, report the application of a skill training model in their treatment of juvenile delinquents, who by definition are characterized as having meager repertoires of socially appropriate behavior. They discuss the effectiveness of instructions, modeling, behavioral rehearsal and corrective feedback in the training of appropriate responses to a variety of problem situations often encountered by this population (e.g., resisting temptation by peers to engage in antisocial acts).

Goldsmith and McFall (1975) best exemplify the systematic and empirical deprivation of a general interpersonal skill training program for psychiatric inpatients and its subsequent evaluation. They elicited a wide range of problem situations from patients (e.g., dating, making friends, relating to authority, etc.), the

situations were further rated by patients for relevance, and responses to the relevant items obtained from non-patients and subsequently rated for competency. Thus, a list of problematic interpersonal situations emerged, together with a list of competent responses to these situations, a list of the principles governing behavior in these situations, as well as a scoring system for evaluating responses to them. This instrument was subsequently used as part content and part assessment tool in an interpersonal skills training program utilizing behavior rehearsal, modeling, coaching, recorded response feedback and corrective feedback. The results indicated that, on the basis of a number of behavioral and self-report measures as they relate to the training context and more real-life situations, the skill training group was superior to either a pseudo-therapy or no-treatment control group.

In another more general interpersonal skill training program, Jaffe and Carlson (1976) compared the relative effectiveness of (1) modeling plus behavior rehearsal, (2) instructions plus behavior rehearsal, and (3) an attention-control condition on the social behavior of chronic psychiatric patients. Emphasis in training was placed on initiating and/or responding to social interactions. Based on a number of observational measures, and indices of the patients' level of functioning in the hospital, both the modeling and instruction groups were equally effective, and superior to the attention condition.

Other studies on the training of general social skills have attempted to specify the actual behavioral components of adequate

interpersonal behavior. Cooke and Appoloni (1976), for example, trained the social-emotional behaviors of smiling, sharing, positive physical contact, and verbal complimenting in four "learning disabled" children ages 6 - 9 years. In a multiple baseline design across behaviors, instructions, modeling, and the trainer's social praise were employed during the course of a semi-structured play period. Data indicated the development and maintenance of all behaviors but verbal complimenting--which did not generalize. Even the generalized effect of the treatment package on untrained subjects, as a result of their interaction with trained subjects, was evidenced for smiling, sharing, and to some extent positive physical contact.

Edelstein and Eisler (1976) also incorporated a multiple baseline design in their comparison of the relative effectiveness of modeling, and modeling with instructions and feedback on the behavioral components of (1) eye contact, (2) gestures, and (3) affect in the social skills of a hospitalized male schizophrenic. While modeling appeared to increase ratings of affect, it had no influence on duration of eye contact or frequency of gestures. Modeling plus instructions plus feedback, however, tended to increase all target behaviors. Furthermore, these behaviors generalized to non-trained situations.

In the final study to be discussed in this section, Minkin, Braukman, Minkin, Timbers, Timbers, Fixsen, Phillips, and Wolfe (1976) attempted to teach basic social interaction behaviors to predelinquent youth. It was assumed that such behaviors would help the youths

establish and maintain successful relationships with their family, peers, teachers, and the law. In specifying the behavioral components of adequate communication, these authors compared the difference between adults and adolescents on their conversational skills with adult partners. Adult subjects were found to ask more questions and give more positive feedback to an adult conversant than adolescent subjects. From these observations the behavioral definitions of "conversational questions" and "positive conversational feedback" were developed and subsequently shown to be highly correlated with ratings of conversational ability.

A multiple-baseline design across these two behavioral components was then employed to evaluate the effectiveness of a treatment procedure involving written instructions, modeling, practice to criterion, and feedback, with three predelinquent girls. The data indicated that after two 2-hour training sessions, the girls asked more questions and gave more positive feedback. That these behaviors were socially valid was supported by a concomitant increase in the girls' judged conversational competence.

Interpersonal Skill Training With the Retarded

Despite the growing and well documented success of the skill acquisition model to the interpersonal problems of non-retarded populations, its application in the field of mental retardation remains meager, and rather ill defined. A number of programs and

studies with retarded individuals have, however, used a somewhat similar orientation as a means of improving complex interpersonal skill deficits.

Communication Skills Training

Roos (1968) describes a socialization program for mentally retarded, socially inept adolescents. While the program was primarily directed toward change in undesirable social behavior (e.g., tantrums), one segment placed emphasis on the development of communication and social skills through small group discussions, role-playing, field trips, and participation in supervised activities. No systematic evaluation of the program's effectiveness was conducted, however.

Pilkey (1967) evaluated the use of role-playing to train empathic ability in a class of mentally retarded adolescents. Results indicated that individuals in the role-playing groups were somewhat better able to predict the self-ratings of other classmates, though this trend did not appear at a six-month follow-up.

Ault (1971), on the other hand, studied the effect of interpersonal communication training with educable mentally retarded adults. The training program consisted of didactic instruction, role playing, group techniques, modeling, audio and video tapes of appropriate interpersonal communication, audio and video taping of subject participation, and practice dyads. Content of the program centered on: (a) listening intently, (b) discriminating effective responses, (c) communication of empathic understanding, (d) communication of caring or respect for someone, (e) communication of genuineness,

(f) immediacy, (g) specificity, and (h) appropriate self-disclosure. On the basis of judges' ratings on an interpersonal processes scale, the data indicated little difference between treatment and control groups, with the only significant change occurring in the experimental group's ability to verbalize an understanding of content and/or affect through their responses to stimulus statements.

Social Signal Decoding

In a separate line of research, Edmonson, Leland, de Jung, and Leach (1967) hypothesized that the retardate's inadequate social and interpersonal skills resulted from the slowness and inaccuracy with which he detects and reads the customary social signals or cues.

In contrast with the approach of the same aged non-retarded, whose system of social classification facilitates rapid decoding and generalization, the retardate's tendency is to describe what he sees in an enumerative way before he gets the point--if indeed he does (Edmonson, et al., 1967, p. 1917).

From this assumption, Edmonson, et al., designed and evaluated an experimental curriculum aimed at teaching social signal decoding and thus improving the inferential abilities of retarded adolescents in social situations. The curriculum primarily consisted of viewing and discussing slides illustrative of social signals, although role-playing and field trips were also incorporated. Effectiveness of the program was evaluated using the Test of Social Inference (TSI), a paper and pencil measure of the comprehension of social cues (Edmonson, et al., 1966), and teacher behavioral ratings of each student's "social visibility," "social acceptance," "social

relationships," "social range," and "attentiveness." While a significant treatment effect was obtained on the TSI, data from behavioral ratings was unreliable and less clear. Results did, however, suggest that the social perceptual deficit of retarded adolescents is at least to some extent remediable.

Assertion and Heterosexual Skills

Dial (1968) describes the use of group instruction in social skills to improve the heterosexual adjustment of mentally retarded females in a vocational rehabilitation program. Design of the program involved (1) instruction in appropriate social skills, (2) sex and drug education, and (3) group psychotherapy. No systematic evaluation of the program was conducted, though fewer individuals were reportedly returned from the community because of heterosexual difficulties in the five years following the program than in the two years preceding it (i.e., 2 vs. 9 respectively).

A program incorporating role-playing with retarded adolescent girls in a vocational training center has been reported by Robinson (1970). In this program, participants role-played problem situations which occurred on the job or which might occur while attempting to secure a job, and received subsequent group feedback on their performance. Situations role-played included those of handling aggression, being persuaded, etc. Again, no evaluation was provided as to its effectiveness.

Seeley (1971) attempted to assess the effects of sociodrama on specific problem solving behaviors in retarded adolescents. In

a post-test only randomized control group design, the dependent variable was ratings of subjects' behavior as they role-played a series of "real life" social conflict situations. Results indicated the superiority of the experimental group on the role-playing task, suggesting sociodrama as an appropriate technique for facilitating the development of social problem-solving skills in retarded adolescent males.

Zisfein and Rosen (1973, 1974) have developed and attempted to evaluate a group counseling program for institutionalized retarded persons entitled Personal Adjustment Training (PAT). Part of this program centered on training in assertion and heterosexual skills by means of modeling, role-playing, and response and corrective feedback. Evaluation of the program with mild to borderline mental retardates, indicated that despite clinical impressions and anecdotal reports of therapeutic effect, objective indices including self-report and behavioral ratings failed, for the most part, to demonstrate greater change in persons receiving PAT than in a no-treatment control group. There were some serious methodological problems with this study, however, most noticeable being the discrepant group sizes. The treatment condition contained 19 subjects while the control had only six.

General Interpersonal Interactions

The final study to be described best documents the application of the skill acquisition model to interpersonal deficits in the

retarded. In a single-subject design, Nelson, Gibson, and Cutting (1973) trained three social responses in a mildly retarded 7-year-old boy. Target social behaviors were: (1) the use of grammatically correct forms of questions; (2) smiling in the presence of appropriate stimuli; and (3) speaking on appropriate topics (the subject tended to persevere on inappropriate topics such as numbers, people's names, etc.). In a modified multiple baseline design each of the three target behaviors were taught sequentially, with training for each behavior occurring within three consecutive 15 min. sessions which incorporated three respective training procedures: modeling, instructions plus social reinforcement, and modeling plus instructions plus social reinforcement. There were a total of nine such training sessions (three per target behavior) -- each followed by a 5 min. test interaction with the same 8-year-old male confederate. Results showed significant increases in all three target behaviors during the subject's interactions with the confederate and the maintenance of correct questions and smiling for a three and one half month follow-up. Thus the study demonstrated the feasibility of modifying social behaviors in a moderately retarded child.

Summary and Purpose

From the above discussion and review, the following conclusions can be made:

- (1) Remediating interpersonal skill deficits is an important ingredient in the rehabilitation of mentally retarded persons.
- (2) The successful application of the skill acquisition treatment model to interpersonal deficits across a variety of non-retarded populations has been well documented.
- (3) The application of the skill acquisition model to complex interpersonal deficits in mentally retarded persons has been meager, and where applied, in most cases, poorly evaluated.

It is, therefore, the purpose of the present investigation to further extend and evaluate the application of the skill acquisition model to interpersonal deficits in mentally retarded adults. More specifically, the study is an attempt to train retarded adults in three conversational behaviors previously determined as important components of interpersonal adequacy: (1) eye contact (Eisler, Miller, and Hersen, 1973; Edelstein and Eisler, 1976; and Hersen and Bellack, 1976); (2) "conversational questions" (Minkin, et al., 1976); and (3) "positive conversational feedback" (Minkin, et al., 1976). It was hypothesized that a skill training program,

incorporating the elements of instruction, modeling, coaching, behavioral rehearsal, response feedback, corrective feedback, and social reinforcement, would evidence an increase in the target behaviors, and subsequently increase the rated overall conversational competence of the subjects as well.

In addition, the present study attempted to eliminate certain methodological problems apparent in previous studies of a similar nature (i.e. Nelson, et al., 1973; and Minkin, et al., 1976). In these investigations, the possible effects of confederate behavior on the increase or maintenance of subject target behaviors was not addressed. The present study attempted to control and monitor the behavior of confederates so as to rule out the possibility that individual differences between confederates, or unknown verbal contingencies between confederates and subjects could account for any observed initial increase in or maintenance of target behaviors.

CHAPTER II

METHODS

Subjects

Three mildly retarded sheltered workshop employees from the Opportunity School Foundation Sheltered Workshop, Missoula, Montana served as subjects for the present study. They were recruited on the basis of (1) mild mental retardation, (2) staff reports of general interpersonal skill deficits, and (3) judged favorable responsivity to social reinforcement. Subjects were informed that they would be participating in a program to increase their ability to "talk with other people."

Subject 1 was a 23-year-old caucasian female with epilepsy, who had been employed at the workshop for approximately three years. On the Wechsler Adult Intelligence Scale (WAIS) she obtained a Verbal IQ of 60, a Performance IQ of 66, and a Full Scale IQ of 61. Staff described her as a good worker, and pleasant, but noted a strong proclivity to talk solely about herself. She rarely maintained eye contact.

Subject 2 was a 33-year-old caucasian female with a slight speech impediment. Testing on the WAIS revealed a Verbal IQ of 55, a Performance IQ of 64, and a Full Scale IQ of 56. She had been

attending the workshop for approximately six months, having previously resided in a state hospital. Staff described her as shy, dependent, and unsure of herself.

Subject 3 was a 31-year-old caucasian male who had been a long term employee at the workshop. Testing on the WAIS indicated a Verbal IQ of 55, a Performance IQ of 64, and a Full Scale IQ of 56. Staff described him as having generally higher interpersonal skills than the previous two subjects.

Design and Procedure

The general experimental design and procedure are presented in Figure 1. Following the initial baseline period of Day 1, each subject was individually administered an instructional package designed to increase eye contact, conversational questions, and positive conversational feedback. Each of the above target behaviors was sequentially introduced during three 1 1/2-hour training sessions, held on consecutive days. The order in which subjects were trained on any one day was counterbalanced, such that no subject received training during the same time period across the three days of training. A 4-minute conversation with a specially trained, unknown, non-retarded adult conversant served as the framework within which target behaviors were observed and the training package assessed. Each subject participated in a total of 15 such conversations-- 3 baseline, and 4 over the course of each training session.

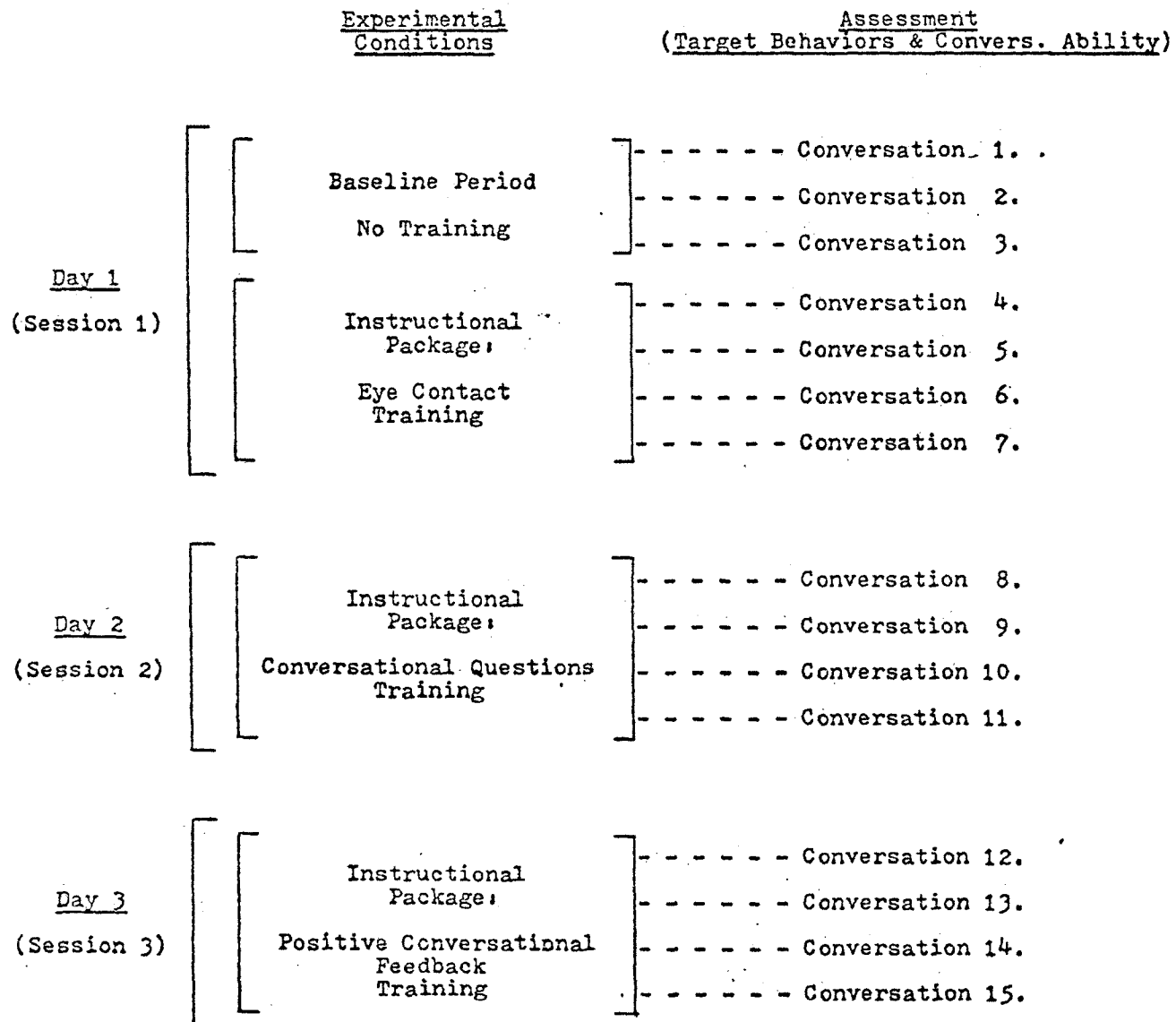


Figure 1.
General Experimental Design and Procedure

Setting and Apparatus

Sessions were conducted at the Clinical Psychology Center on the University of Montana campus, with the author serving as trainer. The setting was a 4.0 by 6.0 m room that contained two chairs positioned at an angle of 45 degrees with respect to one another. A microphone was placed within the angle of the two chairs, and a video camera protruded from the window of an adjoining room approximately 1.75 m directly in front of the subject. Both were connected to a Sony 2200 videotape recorder positioned on a small table to the left of the trainer's chair. A monitor used for modeling and videotape feedback sequences was positioned directly behind the trainer on an elevated stand. All equipment was in full view of the subject. Figure 2 presents a schematic representation of the training setting.

Instructional Package

An instructional package (incorporating instructions, coaching, modeling, behavioral rehearsal, and response and corrective feedback with social reinforcement) was developed to train subjects in appropriate conversational skills. An instructional manual used by the trainer (See Appendix A, Trainer's Manual) consisted of three training units--one for each of the respective target behaviors (i.e. eye contact, conversational questions, and positive conversational feedback)--and set forth rationales, behavioral specifications, and examples. A training unit consisted of the following sequence: (a) the trainer orally instructed the subject as to the importance

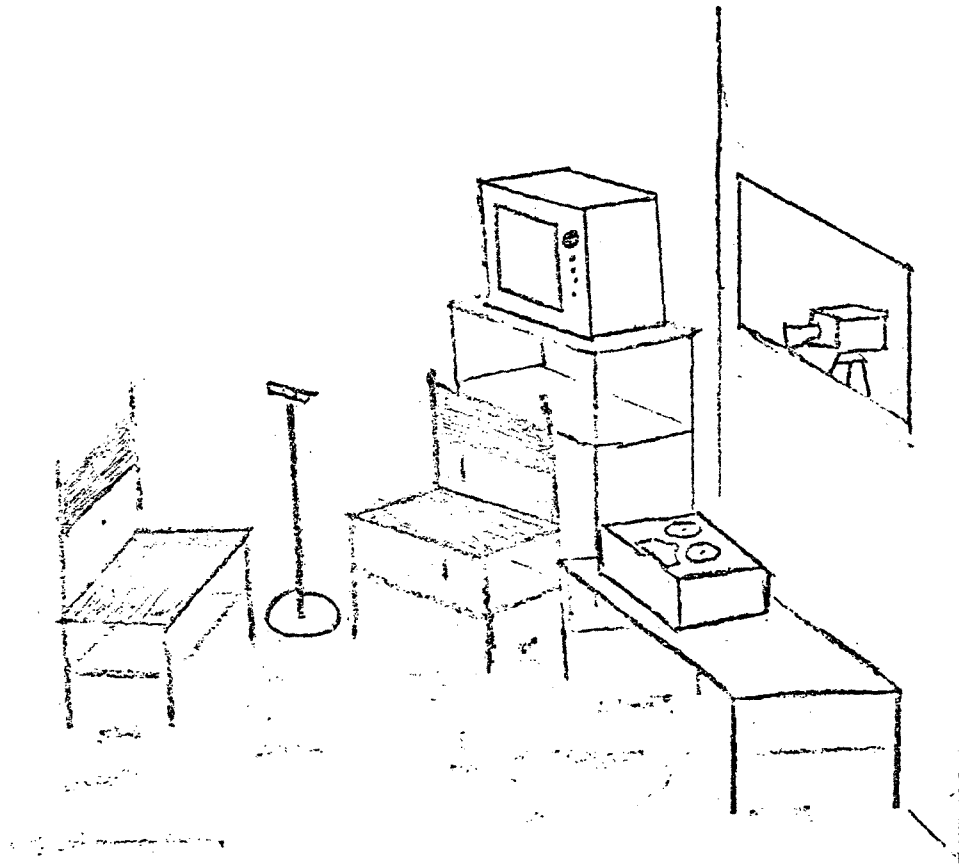


Figure 2.
Training Setting

of and definition of the particular target behavior; (b) the subject observed a competent model on videotape, with attention directed at the target behavior; (c) he/she heard a review and summary of the training material as it related to the model's performance; (d) the trainer ascertained through oral quizzing that the subject knew and understood the training material; (e) the subject rehearsed the target behavior with the trainer and his/her behavior over the 4-minute practice conversation was videotaped; (f) the subject viewed his/her performance in the practice conversation; (g) he/she received corrective feedback and social reinforcement from the trainer regarding his/her performance; and (h) was instructed to practice what he/she had learned when he/she talks to the conversant to be brought into the room at this point. Steps "e" through "h" were repeated three more times during each session. A 21-year-old caucasian female, who was an undergraduate university student, served as the model in the training sequence. Transcripts of the modeling dialogues are presented in Appendix B.

Conversants

Thirteen female and three male undergraduate university students volunteered to serve as confederate conversants in the present study. They received experimental credit for their participation. The order of the conversants was balanced such that only one male conversant participated in a conversation during each training session. Furthermore, conversations were arranged such that no subject

conversed with the same confederate conversant twice, and each conversant participated in three conversations--one per subject.

Prior to their participation, conversants were trained to remain acquiescent during the conversations--allowing for, and freely responding to, the initiations of the subjects. More specifically, they were instructed to: (1) ask no questions; (2) make no initiations; (3) limit responses to questions to 15 sec. or less; (4) keep relatively constant eye contact; and (5) limit head nods and "mm hmm" statements to no more than six each per conversation (See Appendix C, Conversant Instructions).

Upon entering the training room, conversants were asked to be seated next to the subject, and the trainer provided the following instructions:

"I'd like the two of you to talk with each other for a short period of time. You may talk about anything you wish. I will tell you when to begin talking, and then when to stop. Any questions?"

The videotape unit was then turned on. The trainer said, "OK, you may begin now" and left the room. At the end of the 4 min. the trainer re-entered the room saying, "Good, you can stop now," and subsequently turned off the video unit. The conversant was thanked for participating and either reminded of his/her next scheduled conversation or (having completed all three) given experimental credit.

Experimental Conditions

The effect of the instructional package was analyzed by a multiple baseline design across the three target behaviors (Baer,

Wolf, and Risley, 1968). The four experimental conditions were as follows:

(1) Baseline: During the first 30-minutes of session 1 each subject participated in three 4-minute conversations with unknown conversants. Subjects were instructed to "talk to" the conversant in each conversation--that by practicing they could improve their ability to talk to and get to know others.

(2) Eye Contact Training: Upon termination of baseline (after the third conversation of session 1), each subject was administered the training unit for eye contact, and subsequently participated in four conversations with unknown confederate conversants--each conversation was separated by additional behavioral training using the instructional package.

(3) Conversational Questions Training: At the initiation of the second session (Day 2), each subject was administered the instructional training unit for conversational questions. Corrective feedback in this unit was provided for both eye contact and conversational questions. Again, each subject participated in four conversations separated by additional behavioral training.

(4) Positive Conversational Feedback Training: Starting with the third and final training session (Day 3), each subject was given the training unit for positive conversational feedback. Subsequent corrective feedback was provided for eye contact, conversational questions, and positive conversational feedback. As in the previous

sessions, each subject participated in four conversations with unknown adult conversants, and received further training with the instructional package between each of the conversations.

Target Behaviors

All 4-minute conversations between subjects and conversants were videotaped for subsequent recording of the following conversational behaviors:

(1) Eye Contact. Defined as any instance (1 sec. or greater) of the subject's head, face, and eyes directed towards the conversant. Observers time-sampled the occurrence or nonoccurrence of eye contact in 10-second intervals throughout the 4-minute conversational period. An audiotape, which signalled the beginning and end of each 10-second interval, was synchronized with the videotape for each conversation. An occurrence was scored in each interval in which eye contact was observed (See Appendix D, Eye Contact Recording Sheet).

(2) Conversational Questions. These were defined to include the following behaviors:

- (a) Any command by the subject (e.g., "Tell me more about that.")
- (b) Any question by the subject (e.g., "How long have you been here?")
- (c) Any question of clarification (e.g., "Oh, really?" or "You do?")
- (d) Any statement by the subject that in effect functions as a question (e.g., "So you are in college.")

The frequency of conversational questions occurring within a 4-minute conversation period was recorded by observers (See Appendix E, Question and Feedback Recording Sheet).

(3) Positive Conversational Feedback. Defined as a brief utterance (no more than 3 words) which indicates that the subject either a) approves, b) concurs, or c) understands what the other conversant is saying or has just said. Included here are such comments as, "That's nice," "good," "I agree," "Oh," etc. Again, observers recorded the frequency of feedback statements occurring within each conversational period. (See Appendix E, Question and Feedback Recording Sheet).

Reliability

The 45 conversations resulting from training (i.e., 15 conversations per subject) were arranged in random order, with the provision that no subject would appear in two consecutive conversational sequences. Then all conversations were transcribed onto three videotapes, each containing 15 conversations in the randomly determined order. Using these tapes, a trained observer recorded all target behaviors, while the experimenter/trainer independently recorded behaviors in a random sample of 1/3 of the conversations (i.e., 5 per videotape). The observer was aware that reliability checks were to be made, but was not present during the checks, and was unaware of the conversations in the experimenter's sample.

Experimenter-observer reliability was calculated for eye contact by dividing the total number of agreements by the number of agreements plus disagreements and multiplying by 100. Reliabilities for conversational questions and positive conversational feedback were calculated by dividing the smaller frequency by the larger frequency and multiplying by 100.

Conversational Ability Ratings

A group of four raters, consisting of staff members of the Opportunity Workshop who were relatively naive as to the exact nature of the study, viewed and rated the randomized conversations for overall conversational ability. Raters were instructed to rate each subject in each conversation by making a mark along a seven-point (0 - 6) bi-polar semantic differential scale (Osgood, Suci, and Tannenbaum, 1957) with the poles labeled "excellent" and "poor" (See Appendix F, Conversational Ability Rating Instructions and Recording Sheets). The raters were instructed to rate independently, to avoid being influenced by a subject's age, physical appearance, speech defects, etc., and to avoid basing ratings on direct comparisons between subjects being rated.

CHAPTER III

RESULTS

Reliability

The overall mean experimenter-observer reliability estimate across subjects and experimental conditions was 89% for eye contact, 98% for conversational questions, and 95% for positive conversational feedback. Individual mean reliabilities for subjects 1, 2, and 3 respectively were: 81%, 87%, and 100% for eye contact; 98%, 97%, and 98% for conversational questions; and 97%, 95%, and 92% for positive conversational feedback.

Target Behaviors

The results of training are presented in Figure 3 (for subject 1), Figure 4 (for subject 2), and Figure 5 (for subject 3).

In baseline conversations, subject 1 evidenced eye contact in an average of 9 of the 24 intervals, in each conversation asked an average of .57 questions, and gave an average of 3.72 positive feedbacks. In posttraining conversations, eye contact was recorded in an average of 17.92 intervals. She asked an average of 14 questions per conversation, and gave positive conversational feedback on the average, 20.25 times.

For subject 2, baseline conversations indicated the presence of eye contact in an average of 16.33 intervals. An average of 1.86

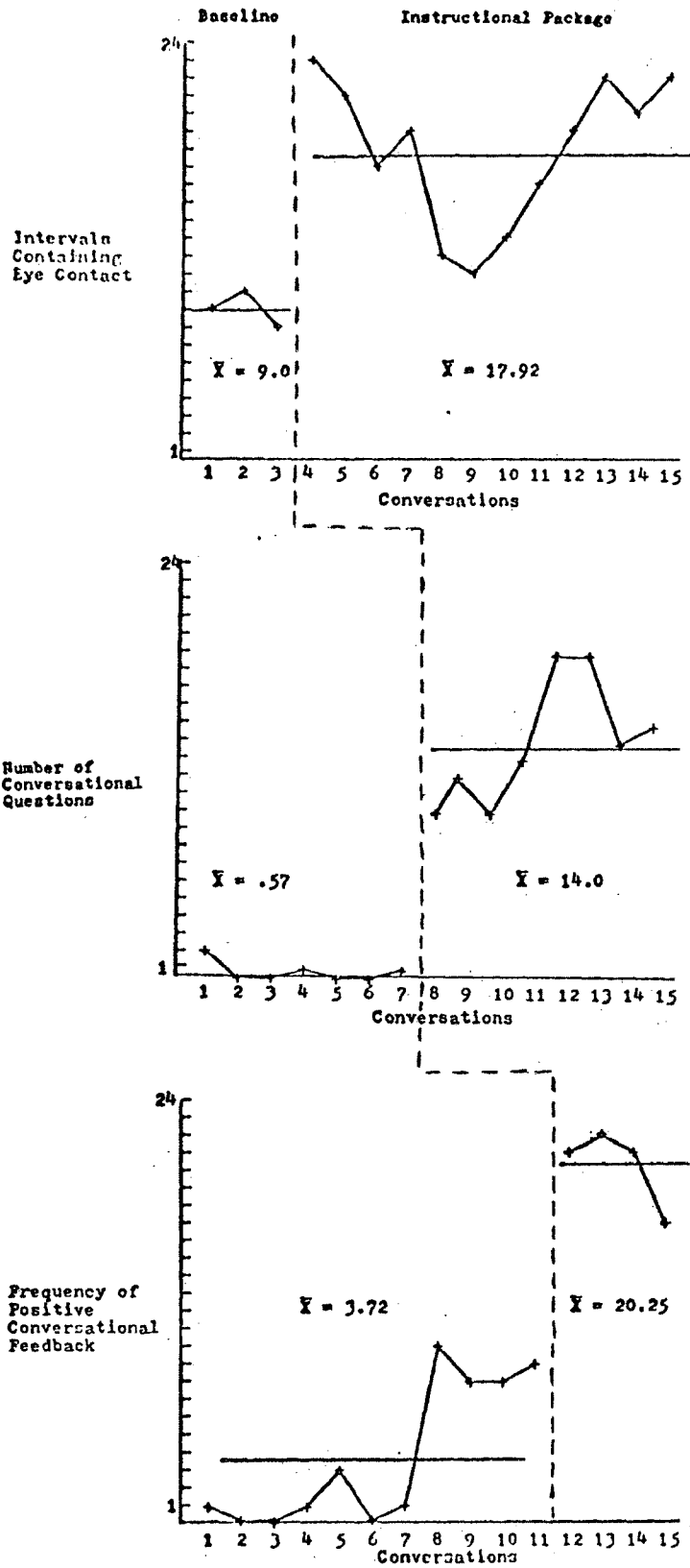


Figure 3. Subject 1: Number of intervals containing eye contact, the frequency of questions, and the frequency of positive feedback across conversations and treatment conditions.

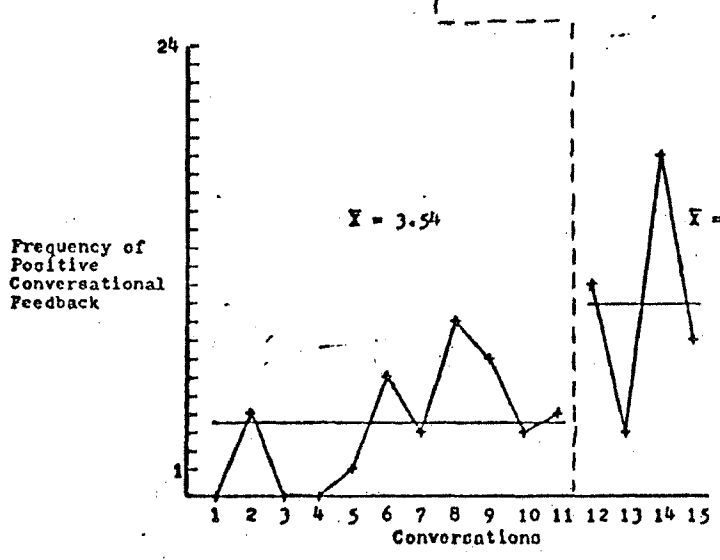
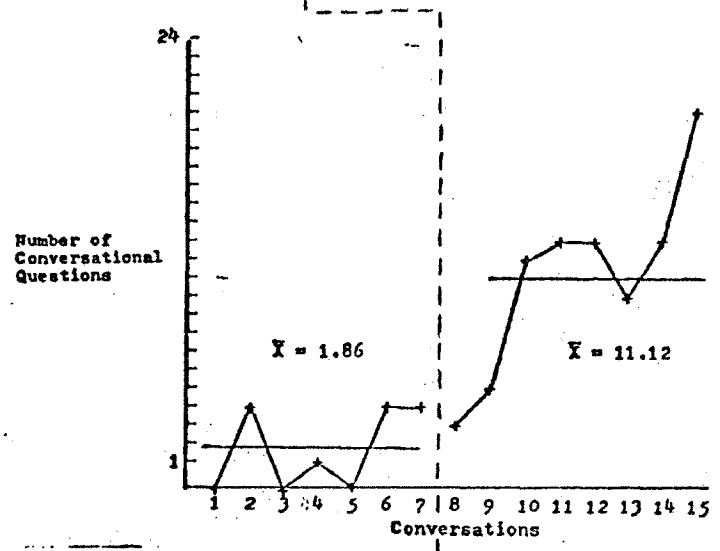
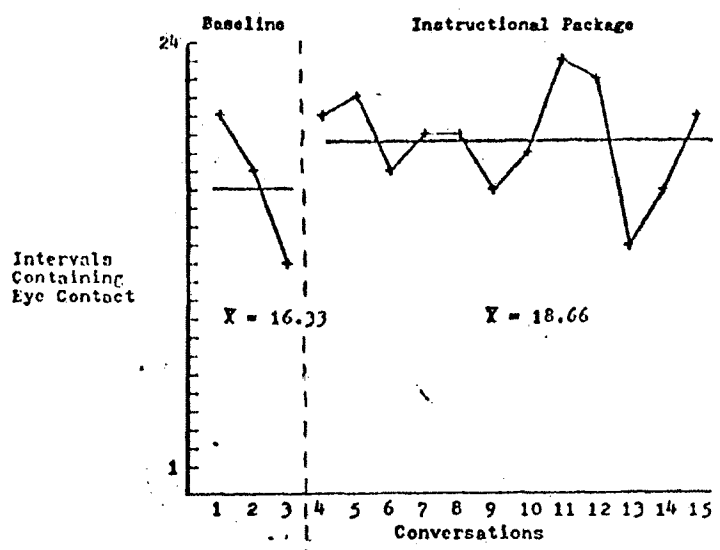


Figure 4. Subject 2: Number of intervals containing eye contact, the frequency of questions, and the frequency of positive feedback across conversations and treatment conditions.

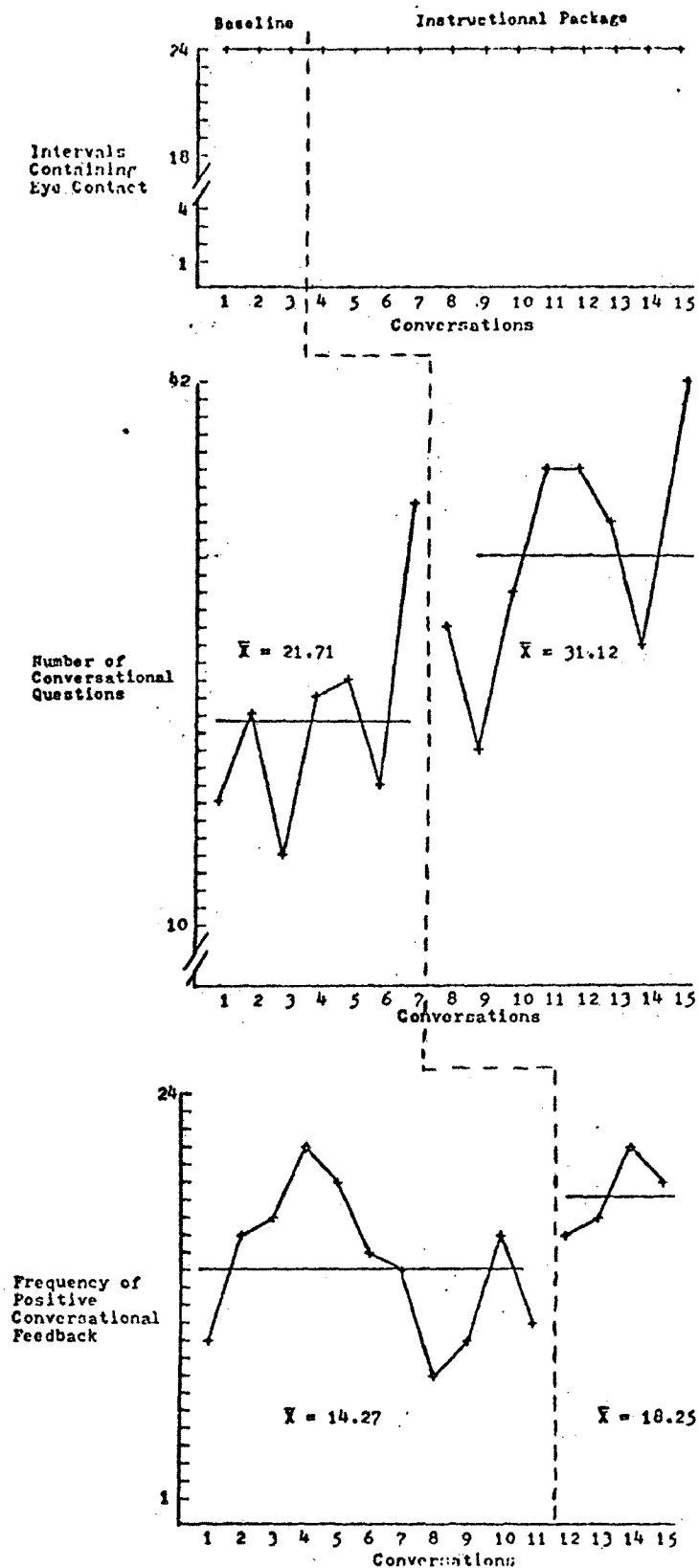


Figure 5. Subject J: Number of intervals containing eye contact, the frequency of questions, and the frequency of positive feedback across conversations and treatment conditions.

questions were asked, and positive feedback was given on the average, 3.54 times. In posttraining conversations, eye contact was recorded in an average of 18.66 intervals. She asked on the average, 11.12 questions, and averaged 10.0 occasions of positive feedback.

Subject 3 evidenced 100% eye contact during baseline and throughout the training procedures. During baseline conversations he asked an average of 21.71 questions, and gave positive feedback on the average, 14.27 times. Posttraining conversations indicated an average of 31.12 questions, and 18.25 positive feedbacks per conversation.

The composite results of the intervention program, collapsed across the three subjects, are summarized in Figure 6. The mean number of intervals containing eye contact increased from an average of 16.44 during baseline, to an average of 20.22 intervals during posttraining conversations. The mean number of conversational questions increased from a baseline mean of 8.04 to a posttraining average of 18.74, while positive conversational feedback increased from a mean of 7.09 to 16.16.

Conversational Ability Ratings

The Kendall coefficient of concordance (W) was employed to determine the extent of interjudge agreement or reliability (Siegel, 1956). In using this test, rankings of all 45 conversations were obtained from each judge by rank ordering the conversations from highest rated to lowest rated by that judge. As a result, a W of

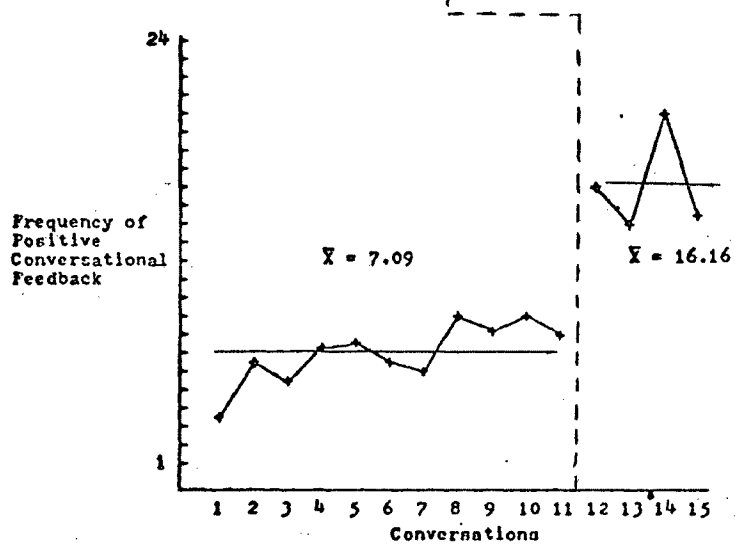
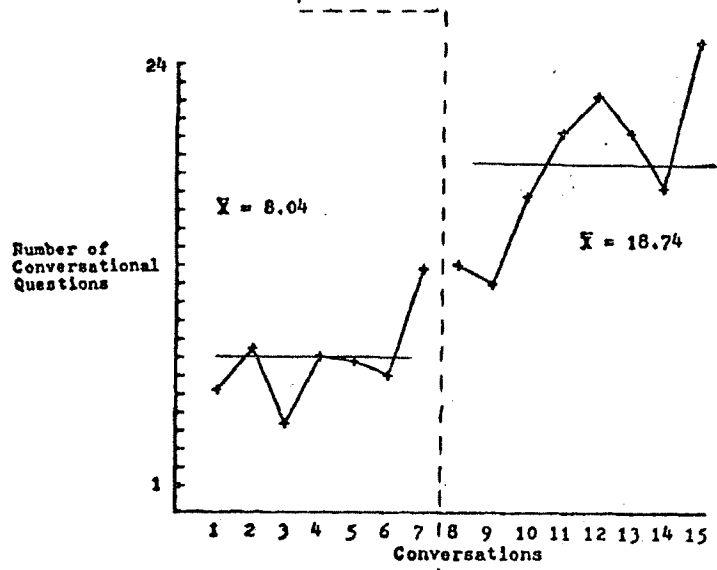
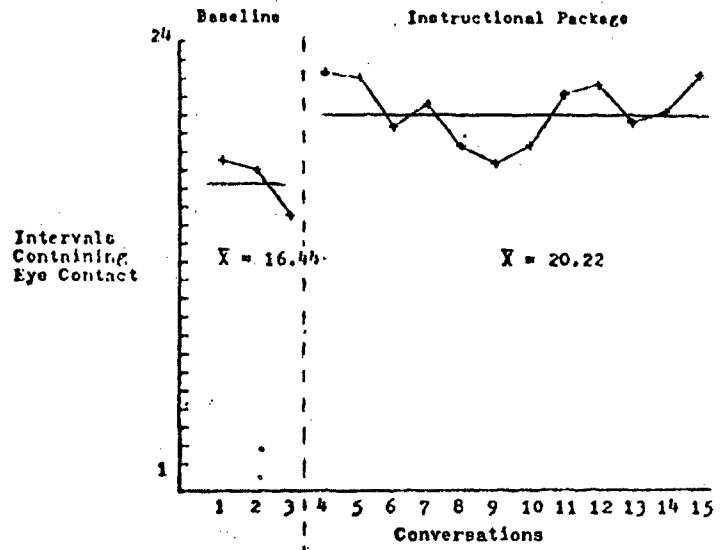


Figure 6. Mean number of intervals of eye contact, mean number of questions, and mean frequency of positive feedback across conversations and treatment conditions for subjects combined.

0.75 was obtained, which is significant at the .001 level. This can be interpreted to mean that there was fairly high agreement among the judges as to the ratings of the respective conversations.

Figure 7 presents the mean judged rating of conversational ability for each subject per conversation. To obtain equivalent measures of comparison from baseline to training, the overall mean ratings of conversational ability across the three initial baseline conversations of day one and the last three conversations of day three were computed. Subject 1 maintained a mean rating of 2.33 for both baseline and final conversations. Subject 2 evidenced a slight increase from a mean rating of .92 during baseline to 2.0 during final conversations, while Subject 3 increased slightly from 4.91 to 5.16.

Check on Conversant Behaviors

The following conversant behaviors were recorded: (1) elaborations greater than 15 seconds; (2) number of questions; (3) number of initiations; (4) frequency of "mm hmm"; and (5) the frequency of "other" feedback (i.e., "yeah," or "I see"). Results indicated that, in general, conversants followed instructions quite well. Only in two conversations did a conversant elaborate for greater than 15 seconds, and neither of these exceeded 17 seconds. There were 5 conversations in which one question was asked, and three in which two were asked. Questions seemed primarily of the clarification type (e.g., "Oh, really?"). One initiation was recorded in 4 conversations,

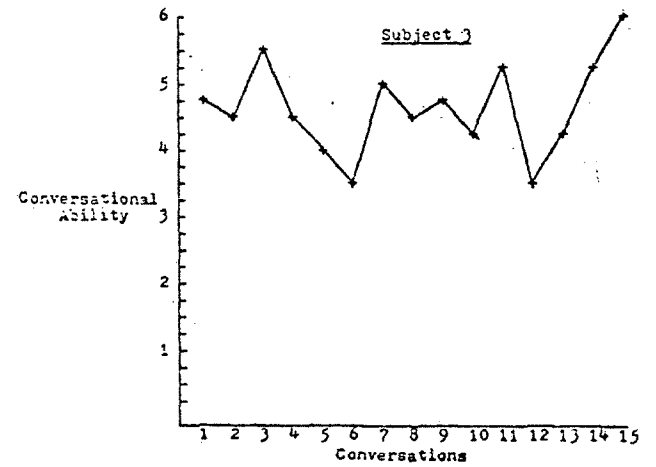
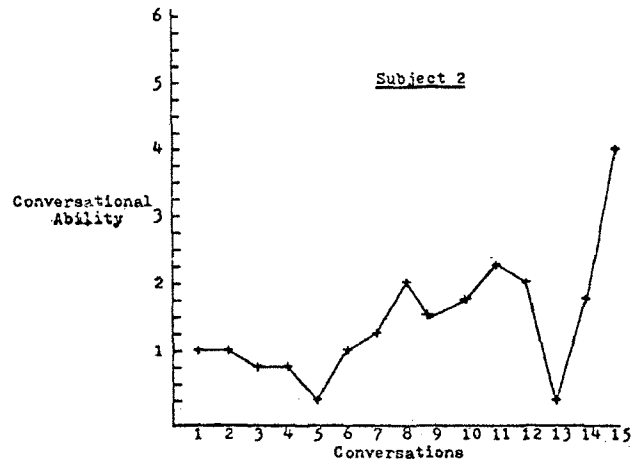
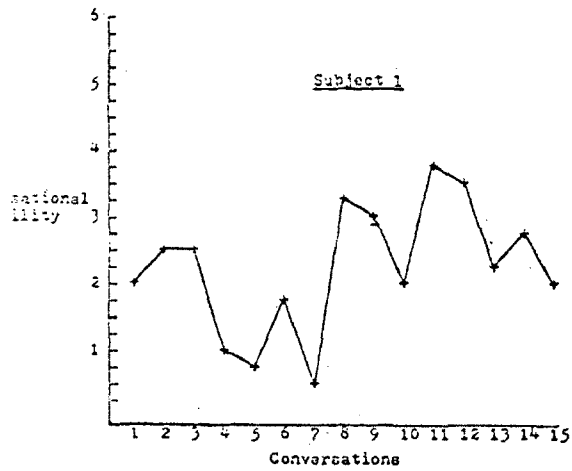


Figure 7. Mean ratings of conversational ability across conversations for Subjects 1, 2, and 3 respectively.

while two were recorded in another. In no conversation did the number of "mm hmm's" exceed six. As a result, other types of feedback (e.g., "oh," "yea," etc.) were combined with the frequency of "mm hmm's" to obtain a total measure of feedback. Only in five conversations did the frequency of total feedback exceed six (range 7 to 12). These instances were spread quite evenly across subjects and experimental conditions.

CHAPTER IV

DISCUSSION

The results of the present investigation provide added support for the successful application of the skill training model to interpersonal deficits in the retarded. Training was highly successful in producing substantial increases in all three target behaviors for Subject 1, and moderately effective across two of the three target behaviors for Subjects 2 and 3. Support for the hypothesis that training alone accounted for this treatment effect was demonstrated by the sequential increase of eye contact, conversational questions, and positive conversational feedback respectively as the training procedure was applied. Furthermore, the control of conversant behavior appears to preclude the possibility that individual differences among conversants, or verbal contingencies between conversants and subjects could have accounted for either the initial increase or maintenance of target behaviors.

Training was most effective with Subject 1, who evidenced substantial increases in each target behavior as the instructional package was applied. It is interesting to note, however, that for this subject, there did not appear to be complete independence among the target behaviors. That is, the effects of training in conversational

questions appeared to influence the amount of eye contact and positive conversational feedback as well. For example, during training for conversational questions, there was a slight increase in the frequency of positive conversational feedback. Intuitively this is not too surprising, given the fact that with more questions there are more responses and thus a greater opportunity and probability for feedback statements to occur. However, this increase in feedback does not appear to interfere with the interpretation of results, since with the initiation of positive conversational feedback training, there was an additional and substantial increase in feedback above and beyond the level already attained.

Also during the question training period for Subject 1, there was a steep decline in the amount of eye contact from previous levels. Such a decline may have resulted from what Catania (1966) referred to as local interaction of incompatible concurrent operants (i.e. eye contact vs. conversational questions). But rather than the two behaviors being necessarily incompatible, one might hypothesize that the subject's concentration on the use of questions interfered with the maintenance of gains in eye contact. Any interference of this nature was only temporary, however, since previous levels of eye contact were regained with continued training.

Individual results for Subjects 2 and 3, revealed partial effectiveness of the training program. While Subject 2 showed a substantial increase in the number of conversational questions, and a moderate, though variable, increase in the frequency of positive

conversational feedback, there was little change in the amount of observed eye contact. One can only hypothesize possible causal factors for such findings. For example, Subject 2's baseline rate of eye contact was initially quite high. Perhaps a ceiling effect prevented further gains from occurring. With regard to the rather moderate gains made in the amount of positive conversational feedback, it is interesting to speculate that with continued training the frequency may have become more consistent and substantial. That is, one might expect a similar trend as that observed in the increase of conversational questions, where only with continued training did the number of questions markedly increase.

Subject 3, who's baseline rates for all target behaviors were high, showed the least effect of training. Eye contact instruction for this subject was obviously inappropriate, given his already optimum level. Of the other target behaviors, only the number of questions showed considerable increase, though the amount of positive conversational feedback increased somewhat as well. It must be pointed out, however, that the baseline for positive conversational feedback was very unstable, and that training in this target behavior increased the amount of feedback from immediately preceding conversations but not from earlier conversations in the sequence. Furthermore, the general linear increase in questions from baseline through training makes the exact effect of the training package on this target behavior somewhat difficult to interpret. That is, one cannot confidently rule out alternative hypotheses for this increase. For example, perhaps

as Subject 3 participated in more conversations he became more comfortable, and thus felt more relaxed about asking questions. Additional explanations regarding the variability of the effect of the training program across subjects will be discussed shortly.

Despite substantial increase in all target behaviors for Subject 1, and increase in questions and feedback for Subject 2, ratings of conversational ability showed no notable, practical increase from baseline to final training conversations. There is some suggestion of a positive effect in Subject 2, however, as noted by the markedly higher mean rating of the very last conversation of the sequence. Nevertheless, the overall results are contrary to the findings of Minkin, et al., (1976), who found increases in the frequency of conversational questions and positive conversational feedback in pre-delinquent adolescents to correspond with generally higher ratings of conversational ability. It is likely that this failure to obtain notable change in overall ability ratings as target behaviors increased resulted from (1) the nature of the target population, (2) absence of training in other important interpersonal skills, and/or (3) the brevity of the training program--emphasizing quantity as opposed to quality.

With respect to points (1) and (2), no assessment was conducted in the present investigation, nor was an attempt made to determine those behaviors in the retarded which are correlated with conversational ability. Logically, noting the numerous behavioral deficits of the retarded, it is not too surprising that retarded adults would be

deficient in more conversational behaviors than normal individuals. Additional interpersonal behaviors which should receive attention in the future are suggested by social skill training programs with psychiatric patients. For example, among a number of behaviors trained in such programs are: the number of smiles (Bellack, Hersen, and Turner, 1976; Hersen and Bellack, 1976), appropriate affect or intonation (Bellack, Hersen, and Turner, 1976; Hersen and Bellack, 1976; Edelstein and Eisler, 1976), and gestures (Edelstein and Eisler, 1976). That training in such behaviors may have been appropriate for the present study is suggested by raters' comments noting the "artificiality" of the subjects' questions and feedback. Future investigations will be required, a la Minkin, et al (1976), to assess the nature of the retarded individuals' interpersonal skill deficits with respect to specific behavioral referents.

The "artificiality" of the subjects' behavior, as reported by conversational ability raters, may also have resulted from the relative brevity of the training program, and thus the subsequent emphasis on the quantity as opposed to the quality of behaviors. That inadequate attention was directed at the quality dimension of responses is evidenced in raters' comments regarding the "inappropriateness" of questions or the repetitive use of the same feedback statement. While modeling sequences and the trainer's instructions provided examples of appropriate questions, emphasis in training was placed on asking more questions, not necessarily appropriate kinds of questions. With lengthier programs, more time can be allotted to

training in the quality of conversational behaviors. The three 1 1/2-hour training sessions in the present study are minimal compared to those of recent social skill training programs reported in the literature. For example, Hersen and Bellack (1976), in their work with chronic schizophrenics spread training for one subject across 4 or 5 weeks with five to six 30- to 90-min. sessions per week.

A prominent issue in the field of behavior therapy and behavior modification, and more specifically in behavioral approaches to mental retardation (Kazdin, 1973), is that of the generalization and maintenance of training gains. This is primarily concerned with three major aspects: (1) the extent to which behaviors are maintained following training; (2) the extent to which increases in behavior are evident in situations outside the training environment; and (3) the extent to which the results can be interpreted to be valid for individuals other than those specifically involved in the training program.

The first two aspects regarding generalization were not addressed in the present investigation. They are left for future study. An attempt was made, however, to address the third aspect by incorporating three subjects into the study's design, and thus provide for three replications of the experimental procedure. While behavioral increases were evidenced for the composite scores collapsed across subjects, individual results for the three subjects were somewhat inconsistent. Thus, while a clear functional relationship was demonstrated between the training procedure and increases in

target behaviors, the training procedure appears to have as yet, somewhat limited generality across subjects. The task remains, as Hersen and Barlow (1976) have pointed out, of pinpointing those subject differences which contribute to the limitations on subject generality.

Some possible reasons for the inconsistency observed across subjects have already been discussed (e.g. poor assessment, ceiling effects, etc.). However, other more qualitative, unique differences between subjects were noted by the trainer. For example, Subject 1 was extremely enthusiastic and self-confident regarding the training program, as evidenced in her concerted effort to remember and perform the specified behaviors. Subject 3, on the other hand, was least interested and often had a rather nonchalant, unconcerned attitude. Subject 2 was more interested than Subject 3, but she easily became confused and gave up quickly in attempts to increase the target behaviors--noting that she just could not do it. Given the description of Subjects 2 and 3, one might speculate that the use of more concrete reinforcement methods (e.g. candy, or money), together with more direct feedback information (e.g. graphing of behavior frequencies) could have provided for greater incentive, and perhaps greater training effects. Future studies to investigate these variables remain to be done.

The present investigation was concerned with training discrete conversational behaviors in retarded adults as they applied to conversational sequences with unknown, non-retarded adult conversants. The retarded individual's social skill deficits,

however, are obviously not limited to conversational behaviors. Rather, they cover a wide range of situations at work, at home, and during recreation. Research in the future must address not only the assessment of those specific, discrete social behaviors for which the retarded are lacking, but it must also attempt to define those social situations for which the retarded must cope and have difficulty doing so. The behavioral-analytic method of assessing competence as outlined by Goldfriend and D'Zurilla (1969) provides the groundwork for such investigations. Methods of this nature as applied to the retarded would involve: (1) the delineation of those meaningful situations with which retarded individuals must cope effectively and have difficulty doing so; (2) enumeration of possible competent responses to these situations; (3) the judging of these responses by "significant others" in their environment; and (4) subsequent formulation of assessment measures and content from these situations and responses, for future training programs.

Many questions remain to be answered regarding the applicability of the skill training model to interpersonal deficits in the retarded. The results of the present study provide the impetus for future investigations with better assessment procedures, lengthier treatments, generalization measures, and alternative treatment components. Though one cannot expect social skill training programs to make the retarded normal, the evidence suggests that the retarded can be taught important interpersonal skills enabling them to live at

least somewhat more independently and normally in their social environment. As Birnbrauer (1976, p. 396) has noted:

. . .in that retarded persons treated with behavior modification techniques are still retarded, the results are disappointing. In that strides have been made in developing ways of working with the retarded and an unprecedented amount of information has been accumulated, the results are encouraging indeed.

CHAPTER V

SUMMARY

Despite the successful application of the social skill training model to interpersonal deficits in normal and psychiatric populations, its use with retarded individuals has been meager, and where applied poorly evaluated. It was the purpose of the present investigation to further extend and evaluate the application of the skill training model to interpersonal deficits in three adult, mildly retarded, sheltered workshop employees.

An instructional package, incorporating instructions, modeling, coaching, behavioral rehearsal, video feedback, corrective feedback, and social reinforcement was developed to train three conversational behaviors: (1) eye contact, (2) conversational questions, and (3) positive conversational feedback. The effect of the treatment package was evaluated in a multiple-baseline design across behaviors, with the sequential introduction of training for eye contact, conversational questions, and positive conversational feedback respectively, over each of three sessions, on each of three consecutive days.

A 4-minute conversation with a specially trained, unknown non-retarded adult served as the framework within which target behaviors were observed, and training assessed. Each subject participated in

15 such conversations--3 baseline, and 4 over the course of each training session. All conversations were videotaped, edited in random order, and subsequently scored by a trained observer. Independent, unobtrusive reliability checks were made by the experimenter. Ratings of overall conversational ability were made independently by an additional group of four judges.

Reliable measures on all behaviors were obtained. The results of training for the three subjects were presented in Figures 1, 2, and 3 respectively. Training was highly successful in increasing all behaviors for Subject 1, partially successful with Subject 2, and less so for Subject 3, who's baseline rates were already quite high. Ratings of conversational ability showed no increase from baseline to final training conversations across the subjects.

Results provide added support for the successful application of the skill training approach to the interpersonal deficits in the retarded. The failure to obtain change in overall rating of ability as behaviors increased likely resulted from (1) the nature of the target population, (2) absence of training in other important interpersonal skills, and (3) the brevity of treatment--emphasizing quantity as opposed to quality. The present study provides impetus for future investigations with better assessment procedures, lengthier treatments, generalization measures, and more concrete reinforcement methods. The role of individual differences requires assessment as well.

APPENDIX

APPENDIX A

Trainer's Manual:

Conversational Skills Training

Introduction (Day 1)

The S is seated and given the following instructions:

"Today and in the next two days we will be meeting here for a couple of hours, and you will be learning how to talk with people whom you don't know, or haven't met before. When you are away from home, or out on a job you will have to meet and talk to people whom you haven't ever seen before. Because of this, it is important that you know how to speak with them in the right way. Starting today, I'd like you to practice talking to people whom you don't know. To do this, I will bring people into the room here, one at a time, and will ask you to talk to them. By practicing with these people you can learn to talk with others much, much better. Do you have any questions? I'm sure you'll begin to understand better as we begin."

Baseline (Day 1)

"Ok, (S's Name), I'm going to bring in a person whom I'd like you to speak with for a short period of time. You can talk about anything you wish. I will tell you when to begin and when to stop. Any questions? Do you understand?" (E makes sure the S understands and if felt necessary makes the S repeat the instructions.)

E leaves to get the conversant, and re-enters with him/her (C) and instructs him to sit in the chair to the right of the S at a 45 degree angle to the S. The following instructions are given:

"I'd like the two of you to talk with each other for a short period of time. You may talk about anything you wish. I will tell you when to begin talking, and then when to stop. Any questions? Good!"

E turns on the video-tape equipment, allowing it to operate for approximately 5 sec. before instructing:

"Ok, you may begin now."

E immediately exits. At the end of the 4-min. period E re-enters the room and says:

"Good. You can stop now."

E turns off the equipment.

"____ (S) _____, wait here a minute while I show _____ (C) _____ out, and then I'll come back with another person you can talk to."

The E follows the same procedure for the second and third conversants, reminding each conversant of the next scheduled time he/she is to come in. For the second and third conversations the same instructions are given as above, the conversations recorded, and the C led from the room. Following the third conversation and the exit of C the E re-enters and begins training unit one.

Training Unit 1 (Day 1) -- Eye Contact

Instructions:

"Ok, _____ (Name) _____, now we are going to talk about some of the things that are very important to do when you talk with other people. For example, it is really important that you look at the person you're talking to. By 'looking at' the other person, I mean that you turn your head and face so that you're looking at the other person's face and eyes. Just like I'm doing with you right now. The reason it's important to look at the other person is because, (1) you let him know that you're interested in him/her and what he says; (2) you keep his/her attention and the person will listen to what you are saying; and (3) you show the other person that you aren't bashful or shy and that you are proud of yourself. Do you understand? Any questions? (E repeats the instructions at least once more, or until the S appears to understand)."

Viewing Model:

"Good! Now, _____ (Name) _____, I want you to watch the television set right here, and see how the person who is talking looks at the other person--she's very good at it and you can become that good too." (E turns on the video equipment with volume down).

"Watch the screen now. (Pause) Notice how she is looking right at the other person. (E points to model on the screen.) She has her head and face turned and is looking at the other person right in the eye when she talks and even when she listens to the other person. She glances away sometimes, but most of the time she's looking right at the other person. It's good to glance away every now and then. In a few minutes I'm going to ask you to do just like this lady." At the completion of the modeling sequence, E turns off the video equipment).

Review and Quizzing:

Let's talk about what we saw on the television and what we talked about before. Remember, we talked about how important it was to look at the person we're talking to. You saw how the lady was looking at the other person most of the time that she was talking--that's just how you're supposed to do it. She's very good. She kept her head and face towards the other person and looked right in her eye. Like we said, it's important to look right at the other person so that you (1) let him know that you're interested in him and that you like him; (2) you keep the person's attention when you look at him so that he will really listen to what you're saying; and (3) you show the person that you aren't bashful or shy but that you are really proud of yourself." (Following this review, the E quizzes the S to determine if he/she understands. If the S does not fully understand and cannot repeat the basic instructions and reasons the E should continue to review until the S can or does understand and repeat them.)

"Now (Name), let's see how much you can remember about what we talked about just now and what you saw on the television. What is very important to do when we talk to other people? (Pause--E waits for response and corrects if the response is wrong or if there is no response) Good! Now but what does it mean to look at the other person? Mm-hmm, right. Ok, now what are the three reasons that we should look at the other person when we talk? Very good!" (In all cases, if the S is wrong or partially wrong she should be corrected, and made to repeat the correct answer without prompts.)

Rehearsal:

"That's very good (Name). You know that very well. Now, I'm going to pretend as though I'm a person whom you don't know, and I'd like you to talk with me. But when you talk with me, remember what you just learned. Remember to turn your head and face towards me and look at me right in

the eye as you talk or listen--just like the lady you saw on the television. You can talk about anything you like. I'll tell you when to begin and then when to stop. Any questions? (E turns on the video equipment and returns to his seat) You can begin now. (The conversation continues for 4-min. at which time the E says: "Ok, we can stop now." and rewinds the tape and plays it) Now, we can watch what just happened and see how you did.

Viewing Performance and Feedback:

(E and S view the performance with E providing corrective feedback and positive social reinforcement. Examples of such feedback are:) "Look! You really did well. You looked at me almost all the time. That was very good."

"You were really trying to look at me alot--that's good. Next time maybe you could even do better by turning your head and face towards me more like this (E demonstrates)."

Conversation:

"Ok, very good (Name). I'm going to bring in another person for you to talk with now, and I want you to practice and use what you just learned. Remember to look at the person just like we talked about and practiced. Wait here and I'll get him. (E leaves and returns with a C who takes a seat similar to that during baseline conversations. E gives the following instructions:)

"I'd like the two of you to talk with each other for a short period of time. You may talk about anything you wish. I will tell you when to begin talking, and then when to stop. Any questions? Good." (E turns on the video equipment and after waiting 5 sec. says, "Ok, you can begin now" and leaves the room. At the end of the 4-min. period E re-enters saying, "Good, you can stop now," and turns off the equipment.)

(E leads the C out, reminds him of his next appointment time, and returns to the S saying:) "How did it go? Let's practice some more. Again, I'm going to pretend as though I'm . . ."
(The sequence of Rehearsal, Viewing Performance and Feedback, and Conversation is then repeated three more times.)

(Following the last (fourth) conversation of this training unit, E returns to the S and says: "That will be all for today. We will meet again tomorrow and learn some other things. Thank you, you did very well today and are really learning fast."

(The remaining training units follow the same basic pattern and/or sequence and therefore are not as detailed as the above in this manual.)

Training Unit 2-(Day 2) --Conversational Questions

Instructions:

"Remember what you learned yesterday? (See if S can remember. If S can't, very briefly review yesterday's material) Well today we're going to talk about something else which is very important to do when you talk with other people. That is, it's very important for you to ask questions. Ask questions that will help you to get to know others better. People always like to answer questions you ask them about themselves. When we talk to other people whom we don't know, we want to be able to find out all about them--we want them to tell us about themselves. You can find out about them by asking them questions about themselves. Today we're going to talk about and practice using different kinds of questions that you can and should use when talking to people you don't know."

"First of all there are short, simple questions that you should ask a person. Examples of this kind of question are things like, 'Do you have a job?' or 'Where do you live?' Other examples are: 'What's your favorite food?' 'How long have you lived in Missoula?' See if you can think of some. (E has S think of questions and gives feedback as to whether they are of the type being discussed). Good."

"After you have asked a simple question and the other person has answered (e.g. "I don't work at a job, I go to school at the University."), you can find out more about him and his school work by one of three ways: (1) you can give a very polite command for him to tell you more about what he said. For example, you could say, 'Tell me more about your school work,' or 'Tell me more about what you do at the University.'"

(2) Another way to find out more of what a person said is to ask a 'making clear' question. A 'making clear' question lets the person know that you would like him to tell you more, but you don't really command him to. For example, when he tells you that he goes to the University you could say, "Oh, really," or another thing you could say is "Oh, you do?" or "Here in Missoula?"

(3) Finally, you can make short little statements which really aren't questions, but which still cause the person to usually tell us more about him or his work. To make a statement all you have to do is just repeat what the person has said, though you can use your own words. For example, you could say, "So you go to the University." or "You are a student at the University."

"There's alot to remember isn't there. Let's go over it again and we can talk about some more examples. Listen carefully so that you can remember this." (E repeats the above instructions, giving more examples).

Model Viewing

"Now I'd like you to watch the television set as you did yesterday, and we can watch a person who not only looks at the person she's talking to, but also uses the questions we just talked about." (The procedure is similar to that in training unit 1. E points out the different questions the model uses).

Review and Quizzing:

(Same procedure as in Training Unit 1. Major points for the S to know are (1) the reason for questions; (2) the different types of questions (i.e. simple questions, commands, making-clear, and statements).

Rehearsal

(Same as Training Unit 1, though subject is also reminded to look at the E during the conversation along with asking questions).

Viewing Performance and Feedback

(Same procedure as in training unit 1. Besides questions, S is also given feedback on his looking as well).

Conversation

(Same procedure as in Training Unit 1. S is reminded to both look at the person and to use questions).

(After the initial conversation in this unit, the sequence of Rehearsal, Viewing Performance and Feedback, and Conversation is repeated three more times. Following the last (fourth)

conversation of this training unit, E returns to the S and says: "That will be all for today. We will meet again tomorrow and learn some other things. You did very well today and are really coming along.")

Training Unit 3 (Day 3)--Positive Conversational Feedback

"In our sessions during the last two days we talked about (1) looking at the person we're talking to, and (2) asking the other person appropriate questions to find out as much about him as possible. Today we are going to talk about letting the person know that we are interested in him and what he says by giving him some friendly and positive feedback. By 'positive feedback' we mean that you let the other person know that you either (1) approve of what he said, (2) agree with what he said, or (3) understand what he is saying. You just have to use three words or less when giving this kind of feedback to the other person. For example, if the other person were to say, 'I think blue is the best color,' examples of approving would be: 'That's nice,' 'Good,' or 'Interesting;' examples of agreeing would be, 'I agree,' 'I know,' 'mm-hmm,' or simply saying 'Oh,' 'Hmm, blue.'" (E repeats these instructions again, giving more examples).

Model Viewing

(Same procedure as in previous training units, though S's attention is also brought on the looking and question behavior of the model. Emphasis is however on the model's use of feedback.)

Review and Quizzing

(Same procedure as previously. Major points for the S to know are (1) the reason for feedback, and (2) the three different types of feedback and how to use them. The E may make a statement and ask the S to give him a particular type of feedback (e.g., "Now give me an approving response.")).

Rehearsal

(Same procedure as previously with emphasis on feedback, though S is also reminded to look at C and to ask questions as well.)

Viewing Performance and Feedback

(Same as previous procedure. Besides feedback, S is also given feedback on his looking and asking questions as well.)

Conversation

(Same as previous procedures. S is reminded to (1) look at the other person, (2) ask questions, and (3) give feedback).

(After the initial conversation in the unit, the sequence of Rehearsal, Viewing Performance and Feedback, and Conversation is repeated three more times. Following the last (fourth) conversation, E returns to the S and says: "(Name) you've done very well during the past few days, and have learned alot and how to speak well with others. This is our last day of meeting so we are finished. Remember to use what you learned in here when you meet other people when you are at work or home.")

APPENDIX B

Modeling Dialogues

Conversational Questions:

M = Model

C = Conversant

M: Hi, my name is Jenny. What's your name?

C: Georgia.

M: . . . and your last name?

C: Payton.

M: What do you do Georgia?

C: I'm a student at the University and I also work as a secretary in the Pharmacy Department on campus.

M: Oh you do?

C: Yes, I've been there two years.

M: So you take classes, you go to school too?

C: Ah, yeah, I just started this summer.

M: Then you haven't been going to school that long.

C: No, just this summer. I'm taking two classes.

M: Tell me about your classes.

C: I'm taking one in sociology about juvenile delinquency.

M: Oh, really?

C: Yes, and then another in psychology.

M: How long have you been going to school?

C: Um, just this summer, here.

M: How do you like school?

C: Oh, I like it ok. It's pretty interesting.

M: You must keep awfully busy, going to school and having a job too.

C: Yeah, I do. But it's good to keep busy. It does cause some problems though. I don't have as much free time.

M: You live in Missoula now Georgia?

C: Yes I do, I lived here four years.

M: Oh, you have?

C: Uh huh.

M: Where are you from originally?

C: Spokane, Washington.

M: Oh, what brought you to Missoula?

C: Oh, um, I guess I just wanted to see some different country.

M: Well, how do you like Montana?

C: Really well. There's some very beautiful country here.

M: You've been able to see other parts of Montana?

C: Yes, I've been as far east as Billings, and ah, have traveled around Western Montana quite a bit.

M: Tell me about some of the places you've seen.

C: I've been to Yellowstone and Glacier National Park, and Flathead Lake.

M: So you've seen quite a bit.

C: Uh huh.

(Brief Pause)

M: It sure is a nice day, isn't it.

C: It certainly is.

M: Tell me, what do you like to do on days like today? When you're not working or going to school.

C: I enjoy hiking, um and fishing, and driving around in the mountains.

M: Oh, you like hiking.

C: Yea but I don't do that much. Um, I don't do any back-packing or overnight hiking, just short day hikes.

- M: Where do you go hiking?
- C: Mostly in the Rock Creek area. There are old mines there and I like to hike to them and look around.
- M: Tell me about some of your other hobbies.
- C: Oh, I enjoy painting pictures, and I do some reading.
- M: What do you usually paint pictures of?
- C: Mostly mountains or some natural scene.
- M: How about music? Do you play any musical instrument?
- C: No, I don't play any musical instrument, but I do have a stereo that I like to listen to.
- M: Georgia, you said you lived right here in Missoula, didn't you?
- C: Yes, I do.
- M: Whereabouts in Missoula do you live?
- C: I live in a trailer court near Russell and 3rd Street.
- M: That's quite a ways from where I live--on campus. Do you live alone, or with friends.
- C: I live alone, but I have a dog and a cat.
- M: Oh you do? What are your pets' names.
- C: Um my dog's name is Rover and the cat's name is Sam.
- M: I have a dog too, his name is Wilson. I imagine your pets must be pretty good company for you.
- C: Oh yes, I enjoy them. I enjoy having them around--most of the time.
- M: Do you have any plans for vacation this summer?
- C: Yes I'm planning to go to Seattle.
- M: Oh really?
- C: Uh huh, a friend of mine and I are going salmon fishing.
- M: Oh you are? Have you been to Seattle before?
- C: Yes I was there last year. We drove around the peninsula.
- M: Do you have any relatives out there?
- C: No, just friends.

M: What do you think of Seattle? Do you like it better than Missoula?

C: Oh, it's a nice place to visit, but that's all.

END

Conversational Questions + Pos. Conv. Feedback:

M: Hi, my name is Jenny. What's your name?

C: Georgia.

M: Oh. (pause) And your last name?

C: Payton.

M: Um hum. What do you do Georgia?

C: I'm a student at the University . . .

M: Oh.

C: . . . and I also work as a secretary at the Pharmacy Department on campus.

M: Oh you do? That's interesting.

C: Yes, I've been there two years.

M: Oh. Um hum. You take classes, you go to school too?

C: Yes I've just started taking classes this summer.

M: I see. So you haven't been going to school that long.

C: No, only this summer. I'm just taking two classes.

M: Um hum. Tell me about your classes.

C: Um, I taking one in sociology. . .

M: Oh.

C: . . . on juvenile delinquency.

M: Um hum.

C: And then I'm taking another in psychology.

M: Oh. It sounds interesting. How do you like school?

C: Oh, it's alright.

M: Um hum. You live in Missoula then, Georgia?

C: Yes, I've lived here four years.

M: Oh you have? Where are you from originally?

C: Spokane, Washington.

M: Oh you're from Spokane. What brought you to Missoula?

C: Ah, I guess I just wanted to see something different.

M: Um hum. Well how do you like Montana?

C: Really well. There's some beautiful country here.

M: There sure is. You've been able to see other parts of Montana?

C: Yes, I've been as far east as Billings.

M: Oh.

C: And, ah, I've seen most of Western Montana.

M: Um hum. Tell me about some of the places you've seen.

C: I've been to Yellowstone . . .

M: Uh huh.

C: . . . Glacier National Park . . .

M: Mm.

C: . . . and Flathead Lake.

M: Mm. Sounds as though you've seen alot.

C: Yeah, quite a bit.

M: That's good. (Pause) It sure is a nice day, isn't it?

C: Yes it certainly is.

M: Tell me, what do you like to do on days like today? When you're not working or going to school.

C: Ah, I enjoy hiking . . .

M: Oh.

C: . . . or fishing.

M: Um hum.

C: And just driving around in the mountains.

- M: Mm. You said you enjoyed hiking.
- C: Yes but I don't do a whole lot. I don't go on backpack trips or overnight hikes. Mostly just short day hikes.
- M: I see. Where do you hike to?
- C: Oh, mostly in the Rock Creek area. I hike up to mines there and hike around.
- M: That sounds interesting. Tell me about some of your other hobbies.
- C: Well, I enjoy painting pictures. . .
- M: Oh.
- C: . . . and I do some reading.
- M: Um hum. What kinds of pictures do you paint?
- C: Mostly of the mountains . . .
- M: Mm.
- C: . . . and other natural scenes.
- M: Um hum. Do you enjoy music? Do you play any musical instrument?
- C: I don't play any instrument, but I have a stereo that I listen to in the evenings.
- M: That sounds nice. I enjoy listening to music too.
(Pause) Georgia, you said you lived right here in Missoula, didn't you?
- C: Yes, I do.
- M: Where in Missoula do you live?
- C: I live in a trailer court near Russell and 3rd Street.
- M: Oh, I see. That's quite a ways from where I live, I live on campus. Do you live alone or with friends?
- C: I live alone, but I have a dog and a cat.
- M: Oh. What are your pets' names?
- C: My dog's name is Rover and my cat's name is Sam.
- M: Uh huh. That's neat. I have a dog too. His name is Wilson. (Slight Pause) Ah, do you have any vacation plans this summer, Georgia?

C: Yes, I'm planning to go to Seattle . . .

M: Oh.

C: . . . and I'm going Salmon fishing with a friend.

M: Neat! Have you ever been to Seattle before?

C: Ah, yes I was there last year, Um hum, and we drove around the peninsula.

M: Un hum, do you have any relatives out there?

C: No, just friends.

M: I see. What do you think of Seattle? Do you like it better than Missoula?

C: Oh, it's a nice place to visit, but I think that's all.

END

APPENDIX C

CONVERSANT INSTRUCTIONS

You will be helping out in a study in communicative skills of retarded adults. You will converse with 3 persons, one at a time for a period of 4 minutes each. Your job is to listen to them and be responsive to any questions they ask. Make rather short responses to statements they make. The subject will be the initiator of all questions and clarifications. You will be watched to be sure you are doing what you have been told to do.

You will be seated next to the person in front of a video-tape camera and listen to and respond to comments they make with rather brief, open answers to any questions or clarifications they make, taking care not to elaborate longer than 15 seconds after you begin talking.

The subjects may ask leading or indirect questions rather than direct. For example, they may say, "So you go the University" and you could answer, "Yes, I'm taking classes at the University". Treat indirect and leading questions as direct questions.

It is very important that while you are in the conversation that you do the following:

1. Make no initiation on your own part, i.e., don't ask questions. You are only to respond to the subjects' questions and initiations.
2. You should keep constant eye contact throughout all conversations. Don't stare. You can glance away at times, but in general keep eye contact with the subject. There will be times when you may begin to feel uncomfortable as the subject blocks and is having difficulty talking. In such instances, remain silent but continue to keep eye contact, glancing away at times, always looking back to the subject.
3. The situation is more like an interview as opposed to an actual conversation. Do not over react to the subject's initiations, i.e., limit the number of mm hmm's and head nods to no more than six each, throughout the conversation.

4. It is important that you act naturally, be relaxed, but remember, the above instructions. Conversations will be video taped and your performance monitored. Although you may feel like it, it is not your job to help out the subject when he or she is in a bind. You are just to respond to the subject's questions and clarifications. The reason for this is that the design of the study requires all of you to follow similar guidelines, that all of you respond similarly to the subjects. If there are any big differences, it could jeopardize the whole purpose of the investigation. We are putting a lot of responsibility on you.

So remember, make no initiation on your own part.
keep constant eye contact, without staring.
limit mm humm's and head nods to six (6) per
conversation.
act natural and relaxed.

We'll role play a few conversations in order for you to better understand what we want.

(Call someone from the group and role play with me as subject).

We'll need each of you to come into the clinic 3 times one day only for the conversations. The first person would come in at _____, again at _____, and again at _____.

I need to know which times you would have available Monday, Tuesday, or Wednesday, so you can be scheduled for time to be here. It is essential that you be here at the designated times.

NOTE

Conversant: Just to refresh your memory, remember the following points as you take part in the conversations.

- (1) Make no initiations on your own part--don't ask questions. You are only to respond to the subject's questions and clarifications.
- (2) Keep constant eye contact, but don't stare.
- (3) You can elaborate on a response but take care not to elaborate longer than 15 sec. after you begin talking.
- (4) Make sure to limit solitary head nods, and mm-hmms, to no more than 6 per conversation.
- (5) Remain natural and relaxed.

Following your third conversation today you will be given a card for credit in your Psychology class.

Your help and assistance is really appreciated.

Thanks,

Bob Rychtarik

APPENDIX D

Eye Contact Recording Sheet

Observer's Name: _____ Date: _____

Eye Contact Definition: Any instance (1 sec. or greater) within a 10 sec. interval, of the subject's head, face, and eyes directed towards the conversant.

Instructions: Place a Check (✓) ⁱⁿ the box corresponding to the 10 sec. interval in which eye contact is observed. Leave the boxes which correspond to intervals in which there is no eye contact blank.

Conversation # _____

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24		

Conversation # _____

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24		

Conversation # _____

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24		

Conversation # _____

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24		

APPENDIX E

Question and Feedback Recording Sheet

Conversation # _____

Questions

Feedback

Total _____

Total _____

Conversation # _____

Questions

Feedback

Total _____

Total _____

Conversation # _____

Questions

Feedback

Total _____

Total _____

Conversation # _____

Questions

Feedback

Total _____

Total _____

APPENDIX F

CONVERSATIONAL ABILITY RATINGS

Rater's Name: _____

Date: _____

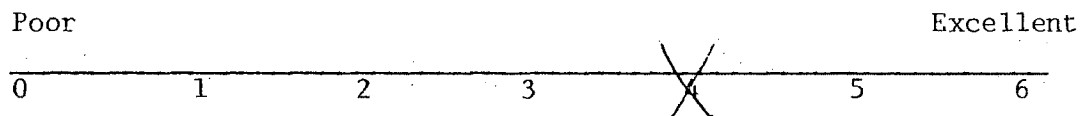
Instructions:

You will be viewing a series of 45 conversations on videotape. In each conversation, the two participants have never met before-- they are only now meeting for the first time. Based on this situation, for each conversation, you are to rate the conversational ability of the person facing you on the screen. Remember, you are only to rate the conversational ability of the person facing you on the screen. The people you will be rating have been diagnosed as mentally retarded, therefore, your ratings should be based on your own professional knowledge and experience with mentally retarded adults. Do not let age, physical appearance, dress, or speech defects influence your ratings. In rating the conversations, you might ask yourself, "In meeting a person for the first time, what is required on one's part to make for a good conversation." While talking is obviously a necessity, we generally agree that simply talking a lot is not equal to good conversational ability. It is the form and nature of this talking which is of concern in rating conversational ability. One could rattle on forever and yet still be poor in conversational ability. Obviously, a good conversation takes input from two people. In this sense you will probably find the present conversations rather limited. The people in the conversations whom you will not be rating were instructed to limit their input to a certain extent. Nevertheless, you are not to be rating the conversation as a whole, but rather simply the conversational ability of the person facing you on the screen. There is a difference!

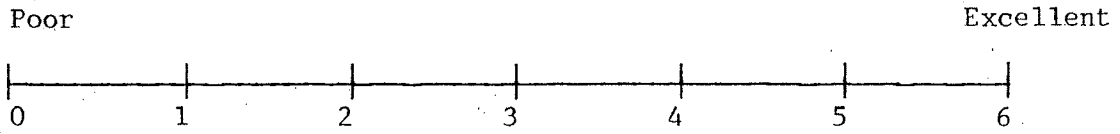
You will be viewing and rating the same three people over and over again in different conversations. The conversations are in random order on the videotapes (that is, they are not in the order in which they initially occurred). Because of this, it is very important that you base your judgement/rating solely on the performance of the person in the particular conversation you are viewing. In other words, do not base your ratings on comparisons between the different people being rated, nor on the performance of the same individual in a previous conversation. Rather, base your ratings on each conversation alone, on its own merits-- independent of any conversations preceding it, and independent of

what the rater next to you is putting down. Do not consult amongst yourselves regarding the ratings of particular conversations.

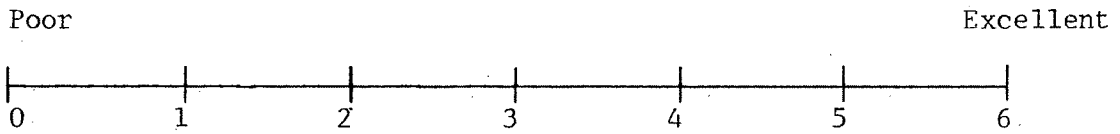
A conversation begins when you hear the conversants instructed to ". . .begin talking now." and ends when you hear the instruction for them to stop. Your rating should be made at the end of a conversation. There is a brief time between conversations for this to be done. Conversational ability is rated by placing an "X" along a seven-point scale which is provided for each conversation. Place an "X" across the number on the scale which best corresponds with the ability of the person being rated. For example:



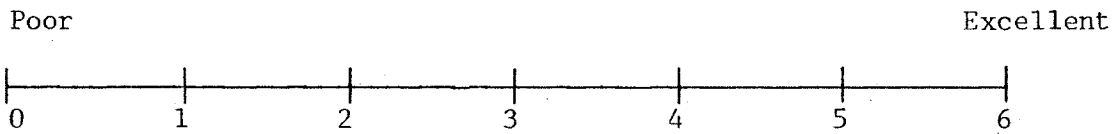
Conversation # _____



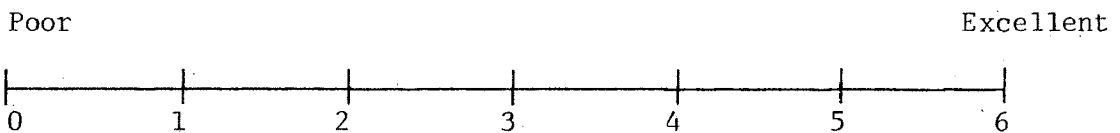
Conversation # _____



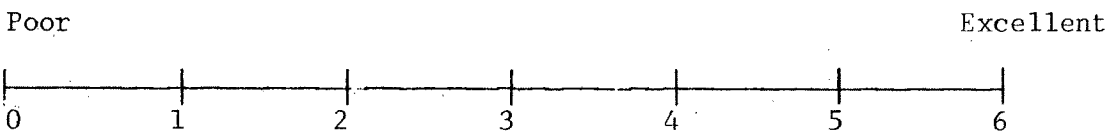
Conversation # _____



Conversation # _____



Conversation # _____



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