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Discrimination of assertive responses in groups varying on level of assertiveness

Mark C. Bordewick

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DISCRIMINATION OF ASSERTIVE RESPONSES IN GROUPS
VARYING ON LEVEL OF ASSERTIVENESS

By
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B. S., University of South Dakota, 1976

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ABSTRACT

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In this study, 75 introductory psychology students were differentiated into high, moderate, and low assertive groups using the Rathus Assertiveness Schedule (RAS) and the Abbreviated-Behavioral Role-Play Test (A-BRAT). A-BRAT performance was assessed on six behavioral components and a global rating of assertiveness. These seven ratings along with the RAS were factor analyzed and correlated with one another. Using the Assertion Discrimination Task (ADT), subjects were tested for discriminability of aggressive, assertive, and nonassertive responses in 15 written assertion vignettes. The ADT responses were evaluated by Likert ratings measuring: level of assertiveness, likelihood of use, comfort of use, and valence of outcome. The findings suggested that reply types were distinguished, with all subjects in agreement on the classification of the responses. For individuals grouped by the RAS, high and moderate assertives showed greater likelihood and comfort in using aggressive and assertive replies than did low assertives. Correlations of the four Likert ratings found strong associations for likelihood, comfort, and valence, but not level of assertiveness.
I wish to express by appreciation for the various person whose efforts contributed to this study and paper. First, to Phil Bornstein, who freely gave his time to read and comment on drafts of this thesis and who supplied encouragement in moments of need, I offer my sincere gratitude. Secondly, I would like to thank my research assistants, Clarissa, Kent, Maria, and Mark, for the many hours they put in working with the subjects and coding data. Also deserving thanks is James Walsh who availed himself for consultation on the statistical procedures. Finally, I wish to recognize the assistance my good friend, Carlo, and wife, Peggy, provided with the production of this manuscript on the "Runoff" computer program.
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I. Introduction

Assertion training has attracted extensive attention in psychology since 1970, as an area rich in clinical application and varied in terms of its research development. This recent focus on assertiveness may be an outgrowth of cultural trends of the preceding decade which placed high value on personal relationships and widened the range of socially acceptable behavior (Lange & Jakubowski, 1976). However, the first major psychological exposition on assertiveness goes back to Andrew Salter's book, Conditioned Reflex Therapy (1949). In his book, Salter referred to assertion as excitatory behavior, a conditioned reflex. He felt that emotionally inhibited individuals could be reconditioned by practicing various behaviors, viz., "feeling talk", deliberate use of the word "I", disagreeing with others, accepting compliments, and trying to improvise in situations. Through these "emotional exercises" one would acquire a general propensity to be assertive. It appeared that Salter regarded assertion as a bipolar trait, with the opposite pole being inhibition.

Specifying Assertive Behavior

Almost a decade passed before assertion training began having an impact in psychology. This period was marked by Joseph Wolpe's advocacy of assertion training as a viable behavioral treatment. In his earlier writings, Wolpe (1958) associated assertion with the expression of anger, but did
not clearly distinguish it from aggression. Later, he regarded it as the direct expression of nearly every emotion, with the exception of anxiety (Wolpe, 1969). Furthermore, Wolpe stated that there were two kinds of assertive responses, either "hostile" responses, those expressing anger and resentment or "commendatory" responses that express praise. Shortcomings of Wolpe's position, namely his endorsement of one-upmanship type games which seem to confuse aggressive responses with assertive responses, have been pointed out by Lazarus (1971, 1973). However, Lazarus's (1971) placement of assertive responses under the rubric of "emotional freedom", while unique, has failed to clarify the definition of assertive behavior.

Current writers have attempted to remove some of the ambiguity in the definition of assertive behavior. They have made even finer distinctions and qualifications regarding what constitutes assertive responses. For example, Lange and Jakubowski (1976) define assertion as, "...standing up for personal rights and expressing thoughts, feelings, and beliefs in direct, honest, and appropriate ways which do not violate another person's rights (p. 7)." Furthermore, assertion has been explicitly contrasted to nonassertion and aggression by a number of authors (Alberti & Emmons, 1974; Cotler & Guerra, 1976; Lange & Jakubowski, 1976). The social interaction intrinsic to assertion has also been focussed on. For example, Cotler and Guerra (1976) view assertion as an interpersonal act which results
in respect and dignity for both the assertor and the recipient. In a recent commentary by Hollandsworth (1977), it was suggested that most of the definitions of assertion either employ behaviorally undefinable criteria or else depend on an a posteriori analysis of the consequences of the response. Even Hollandsworth's behavioral distinctions have been criticized as being too restrictive (Alberti, 1977). Possible reasons for deficient, distinguishing criteria of assertion may be the number of behavioral modalities involved (Eisler, Miller, & Hersen, 1973; Serber, 1972) and the complexity of assessing the appropriateness of a response, e.g. Alberti (1977) specifies four "minimum necessary" criteria of assertive responses.

Etiological Models

As the concept of assertion has expanded, so to have the theories attempting to explain its etiology. Originally assertion was thought to be a conditioned reflex which permeated an individual's manner of expression (Salter, 1949). Then Wolpe (1958, 1969), focussing on assertiveness's relationship to anxiety, proclaimed that assertiveness and anxiety reciprocally inhibit each other. In conjunction with his anxiety inhibition model, Wolpe regarded nonassertive responding to be stimulus specific or situational. This position still seems to be a prevailing view and has research support (Eisler, Hersen, Miller, &
Blanchard, 1975). On the other hand, Alberti and Emmons (1974) maintain that a general, as well as a specific form of nonassertive and aggressive behavior exists. Their position suggests that the situational character of assertion is not a strict either/or proposition. One might infer from this, that in some cases nonassertion, assertion, and aggression are similar to traits. Other authors offer another possible explanation; persons failing to assert themselves, do so as a result of deficient skills. The skills deficit model espoused by McFall and Twentyman (1973), stands in contrast to the anxiety inhibition model of Wolpe (1958, 1969). More recently, both models might be challenged as a result of Schwartz and Gottman's (1976) study. They reported that a major difference between groups high and low in assertiveness was their reported number of positive and negative self-statements, not their knowledge of an assertive response. These findings may lead to a new model, such as covert negative self-evaluation, to explain nonassertiveness. Finally, another model has been advanced by Fiedler and Beach (1978) focusing on decision making. According to the decision making hypothesis, people weigh what they perceive to be the consequences of an act prior to acting, then respond in accordance with their anticipated outcome. While none of the above models may be ruled out by the current research, there is some reason to suspect that some of the distinctions between them may be mainly semantic.
When comparing the skills deficit model to the anxiety inhibition model, one needs to make sure that they are not applying two labels to the same phenomenon. Skill deficits may be classified as primary and secondary deficits. For example, a skills deficit may refer to a primary lack of skill, such as behavior not in one's repertoire under any conditions, or a secondary lack of skill, such as general knowledge of how to perform an act with an inability to actuate the knowledge in vivo, e.g. the inability to think of what to say at the appropriate time, when following the need to respond, one can easily decide what might have been said. However, a secondary skills deficit may refer to the same phenomenon as the anxiety inhibition model, while a primary skills deficit obviously would not. Thus, the skills deficit model is more encompassing and descriptive, while the anxiety inhibition model appears more etiological. A similar analysis of covert negative self-evaluations and the decision making model, which will not be undertaken here, would possibly reveal them to be subspecies of the anxiety inhibition model. Since any of the four models may be an accurate portrayal of an individual's behavioral pattern, research in the near future should begin to assess which model, if any, has the greatest clinical utility for a certain type of nonassertive client.

Clinical Methods
With regard to techniques for remediation, the clinical approach to assertiveness training is multifaceted. For example, modeling, covert modeling, rehearsal, covert rehearsal, role reversal, reinforcement, and coaching have all been subsumed under the rubric of behavioral rehearsal procedures (Lange & Jakubowski, 1976; Rich & Schroeder, 1976). In addition, cognitive approaches towards assertion training have rapidly developed (Cotler & Guerra, 1976; Lange & Jakubowski, 1976; Carmody, Note 1). A comprehensive discussion describing clinical application of therapeutic techniques is beyond the scope of this review. Readers interested in this area are directed to the review by Carmody (Note 1), or to the numerous books on this topic (Alberti & Emmons, 1974; Cotler & Guerra, 1976; Fensterheim & Baer, 1975; Lange & Jakubowski, 1976; Lazarus & Fay, 1975).

II. Literature Review

Behavioral rehearsal, the most extensively employed behavioral technique in assertiveness training, was initially investigated by Lazarus (1966). In an attempt to objectively evaluate three different therapy programs, Lazarus treated 75 nonassertive clients by either behavioral rehearsal, direct advice, or nondirective therapy. After a total of two hours of treatment, a "percentage measure" of the clients that made a noticeable improvement was
calculated. The results suggested that behavioral rehearsal was twice as effective as the other treatments. Two problems should be noted: 1) the criteria for improvement was not specified, therefore the efficacy of behavior rehearsal was difficult to assess, and as Lazarus admitted, 2) the use of his own clients introduced the confounding variables of expectancies and/or demand characteristics. This early research, however, was one of the few between-group studies that employed actual clinical populations who had sought treatment.

Since Lazarus's work, the research literature on assertiveness has expanded dramatically. First of all, there are numerous between group studies which can be separated into individual treatment or group treatment. Two treatment populations, college students and psychiatric patients, have been used with the individual treatment studies. Secondly, there are various case studies covering the following areas: multiple clinical problems, treatment variations, and behavioral components of assertion. Finally, methodological issues include generalization, maintenance and assessment of assertiveness.

**Investigative Research with Individuals**

**Analogue Studies with College Students.** An attempt was made by McFall and colleagues (McFall & Marston, 1970; McFall & Lillesand, 1971; McFall & Twentyman, 1973) to systematize analogue research conducted on assertiveness
training by presenting role-play situations in a standardized, semiautomated format to obtain a behavioral measure of assertiveness within a specific problem area, assertive refusal behavior. In a study using 42 nonassertive college students, McFall and Marston (1970) compared two treatment variations, behavioral rehearsal with feedback and behavioral rehearsal without feedback, to placebo therapy and a no treatment control. (Note: behavioral rehearsal will refer only to verbal practice of responses to situations calling for assertive responses.) Treatment consisted of four one hour sessions over a 2-3 week period with the subjects being seen individually. The Behavioral Role Play Test (BRPT) was devised consisting of 16 audiotaped situations requiring an assertive reply from the subject. Ratings of the subject's taped responses to the situations served as behavioral measures of assertiveness. The results revealed that when the two treatment groups were combined, they were significantly better than the two control procedures on the behavioral task, self-report (Wolpe-Lazarus Assertiveness Questionnaire), and a physiological measure (pulse-rate). An in vivo follow-up measure, a staged telephone conversation with a high pressure salesman, suggested behavioral rehearsal may have had some lasting effect.

Continuing with the investigation to isolate significant components of assertiveness training, McFall and Lillesand (1972) conducted another study which compared:
overt rehearsal plus modeling and coaching, covert rehearsal plus modeling and an coaching, and an assessment control. Additional behavioral measures not included in the previous McFall study were: the Conflict Resolution Inventory (CRI), a 35 item inventory of specific "refusal" situations, and an extended interaction test which involved repeated assertive responding to four preplanned statements that failed to comply with the subject's assertive requests. The findings suggested that both rehearsal groups did significantly better than the control group on trained and untrained role-play items, with the covert rehearsal treatment tending to produce the most improvement. Also, there was a significant overall effect due to treatment on the extended interaction test. However, generalization appeared somewhat limited, as a telephone follow-up yielded no differences between groups. The failure to achieve significant intertreatment differences in the follow-up may have been a function of the length of treatment, two one-hour sessions. McFall and Lillesand (1972), when comparing several response components on the role-play, concluded the treatment seemed to modify the content of the subject's speech rather than the quality of the response.

In a series of experiments, McFall and Twentyman (1973) assessed the relative contributions of various component techniques in assertiveness training and looked at the effects of changing assessment variables. The first investigation focussed on three major components used with
behavioral rehearsal (Alberti & Emmons, 1974): covert rehearsal, modeling, and coaching. By varying combinations of these components within five treatment groups, it was found that the effects of rehearsal and coaching were additive, while modeling failed to increment assertiveness.

The second study found that the CRI differentiated assertive and nonassertive subjects on the BRPT. In addition, a waiting room behavior test, a confederate attempting to obtain the subject's participation in an hour long experiment, provided some evidence that treatment effects were maintained and may have generalized to novel situations; however, the lack of a control group makes this assumption questionable. A check for a time lag effect on the telephone follow-up used in previous studies (McFall & Lillesand, 1971; McFall & Marston, 1970) yielded no main or interactional effects when compared across treatments. Once again, modeling was found to be a negligible contributing treatment component with subjects who received either covert rehearsal plus modeling plus coaching, covert rehearsal plus coaching, or covert rehearsal only. However, other researchers have obtained results using modeling of assertive responses that conflict with these findings (Friedman, 1971; Eisler, Hersen, & Miller, 1973; Eisler, Miller, & Hersen, 1973; Hersen et al., 1973; Young et al., 1973).
The third investigation failed to find significant differences when new, more tactful, less extreme models were compared to the old models used in the previous McFall research. In addition, the study suggested that McFall and Lillesand's (1971) finding that covert rehearsal tended to be more effective than overt rehearsal was probably caused by differences in using recorded feedback, as opposed to covert feedback. When videotaped assertion training stimuli were compared to audiotaped assertion training stimuli in the fourth and last experiment in the report, no noticeable differences occurred in the subject's assertiveness. A modification in the telephone follow-up, extending the interaction so the caller made repeatedly greater demands of the subject, was employed. With this extended measure, significant differences were found between treatment and control subjects.

The effects of providing audiotaped feedback to subassertive students was examined by Melnick and Stocker (1977) using the following groups: a) behavioral rehearsal, b) behavioral rehearsal and knowledge of recording, and c) behavioral rehearsal and knowledge of recording plus provision of playback. The failure to find group differences in the study may have been partially confounded by the dependent measure. Although the actual procedures used were difficult to determine from the report, it appeared that each subject was exposed to two sessions that consisted of nine assessment situations and only five
training situations similar to the assessment items. Since the procedures for the pretest assessment situations was nearly identical to the behavioral rehearsal and knowledge of recording condition, major differences between the treatment manipulations appears to be obscured. Further research is clearly warranted before conclusions may be drawn in this area.

In another college analogue study, Friedman (1971) looked at modeling and role-playing among six different groups; modeling plus role-playing, modeling, directed role-playing, improvised role-playing, assertive script, and nonassertive script. The dependent measure was responding assertively to a lab assistant who was deliberately being disruptive. Friedman found that modeling plus role play produced the greatest overall effect. Moreover, the results suggested that providing assertive material to a person may be a major mediating variable in treatment, a finding at odds with the anxiety model of assertion (Wolpe, 1958, 1969). However, the results may have been only a function of the 8-10 minutes of exposure the subjects had to the training material.

In an additional study employing modeling, Young, Rimm, and Kennedy (1973) found that both modeling and modeling plus reinforcement for appropriate responding resulted in significantly more assertiveness than a placebo therapy and no-treatment control group on trained situations. However,
only the modeling condition was significantly higher than either of the control groups on untrained situations and the combined trained and untrained situations. Unfortunately, the results are seriously confounded by the inclusion of behavioral rehearsal; hence, the treatment effects may not be attributed to modeling alone.

In addition to the efforts to determine treatment gains with modeling, covert modeling (imagined scenes in which a model performed assertively) and modeled reinforcement (favorable consequences following modeled behavior) have also been investigated in assertion research. In two studies directed at these variables, Kazdin (1974, 1976) used subjects obtained by an advertisement for an assertiveness training program. The first clinical analogue (Kazdin, 1974), compared four conditions: covert modeling, covert modeling plus reinforcement, no-modeling, and delayed treatment. Four treatment sessions, presenting a total of 35 modeling situations were conducted (Note: the no-modeling group imagined a model who did not make an assertive response). On a variety of self-report measures of assertiveness, significant differences between the groups varied with both covert modeling plus reinforcement and covert modeling alone, clearly indicating more significant improvements than the controls. On behavioral performance, covert modeling plus reinforcement was rated as more assertive than covert modeling, while both of these treatments were rated as more assertive than the other two.
Kazdin's second study (1976), investigated the hypothesis that multiple models would enhance changes in assertiveness. In the design, four covert modeling conditions were checked against a nonassertive modeling group by varying two dimensions, single v. multiple models and reinforcing v. no reinforcing consequences. The major findings of the study were: covert modeling led to significant increases in assertive behavior on self-report and behavioral measures, both multiple models and reinforcing consequences enhanced performance, and treatment effects generalized to novel situations.

The analogue investigations clearly suggest behavioral changes in assertiveness result from assertion training. Furthermore, with the exception of the equivocal findings for modeling (Friedman, 1973; McFall & Twentyman, 1973; Young, Rimm, & Kennedy, 1973), overt and covert rehearsal, covert modeling, and coaching have all been shown to contribute to increased assertiveness. Manipulations on feedback to the subjects have yielded inconclusive results (McFall & Marston, 1970; Melnick & Stocker, 1977). For the most part, subject self-report and assertion inventory responses have not been found to be consistent with behavioral changes in assertiveness (Heimberg et al., 1977). While the above investigations used mainly college students, research has also been conducted with inpatients and
Analogue Studies with Psychiatric Patients.

Working with hospitalized schizophrenics that were screened to exclude acutely psychotic persons or individuals with evidence of brain damage, Eisler, Miller, and Hersen (1973) attempted to investigate the relationship of component behaviors to assertive responding. They developed the Behavioral Assertiveness Test, 14 simulated real life assertive situations requiring role-played responses. Ratings on the subject's videotaped responses for the following behavioral components were used: duration of looking, smiles, duration of reply, latency of response, loudness of speech, fluency of speech, compliance content, request for new behavior, affect, and overall assertiveness. The patients were divided into high assertiveness and low assertiveness groups on the bases of their overall rated assertion. The high assertiveness group was found to have significantly more requests for new behavior, affect, and loudness in their speech, and significantly less latency of responding and compliance content. However, methodological problems existed. For instance, the judges who rated the components also made the global ratings of assertiveness used to classify the patients into groups. Furthermore, subjects did not clearly reflect persons high and low in assertiveness as the classification was arbitrarily applied to the subject population. However, the intuitive
relationship of many of these components to assertive responding and their extensive use in other studies, tends to substantiate their importance in assessing assertive responding.

The effects of modeling on assertive behavior was investigated in several studies by Eisler, Hersen, Miller, and others. Hersen, Eisler, Miller, Johnson, and Pinkston (1973) compared test-retest, practice-control, instructions, modeling, and modeling plus instructions on the Behavioral Assertiveness Test. After exposure to training material over three days, the modeling plus instruction group was superior or equal to modeling alone and instructions alone on five of seven behavioral components. In a similar study, Eisler, Hersen, and Miller (1973) compared modeling to practice-control and test-retest. The findings were that modeling resulted in significantly greater change scores than the two other groups on five of eight behavioral measures. A third study (Hersen, Eisler, Miller, 1974) checked for generalization of training to untrained testing situations. Practice-control and modeling plus instructions were each compared both with and without generalization instructions along with a test-retest control. Results indicated that modeling plus instructions regardless of the generalization manipulation effected the greatest change on both trained and untrained situations. However, there was less improvement on untrained items and generalization instructions appeared to slightly hamper treatment gains.
Work by Goldstein et al. (1973) with modeling of independent (assertive) behavior supported Eisler, Hersen, and Miller's (1973) finding that modeling alone produces changes in assertive behavior.

In contrast to the above mentioned inpatient studies, assertive training was found to be an ineffective treatment with schizophrenics by Serber and Nelson, (1971). In their brief report, Serber and Nelson stated only two of fourteen patients receiving a maximum of 18 hours of assertion training showed improvement at a 6 month follow-up. However, the sketchy description of the training and lack of specification of assessment criteria seriously undermines the finding. Still, the study does point out the need for evaluating maintenance of treatment effects.

Analytic Studies

Besides looking at treatment variables, several studies have attempted to investigate determinates of assertive behavior. The diversity of assertive vignettes was demonstrated, for example, by Eisler, Hersen, Miller, and Blanchard (1975) in a study involving 60 male inpatients who were administered thirty-two assertive situations via role-playing. The interpersonal context of the situations was varied on familiarity, sex of the recipient, and positive v. negative response. There were considerable differences between groups high and low in assertiveness, as well as interactional effects. For example, greater
assertion was elicited from females for both positive and negative responding, and unfamiliar individuals, particularly in positive context, elicited greater assertiveness than familiar persons. The results paralleled several cultural stereotypes and supported a stimulus specific theory of assertiveness (Wolpe, 1958, 1969).

An innovative approach to the experimental investigation of assertiveness was undertaken by Schwartz and Gottman (1976). Conducting a task analysis of assertive behavior, they divided college students into groups of high, moderate, and low assertiveness using McFall and Lillesand's (1971) Conflict Resolution Inventory. All of the subjects were tested on role-playing assertive responses, knowledge of assertive responses, and hypothetical delivery of assertive responses. Of the three tests, only the role-play significantly differentiated the low assertives from the moderate and high assertives. While higher self-perceived tension was found among the low assertives, there was a failure to confirm previous findings of a difference in pulse rate between the groups (McFall & Marston, 1970). A major finding was the greater number of negative self-statements and lesser number of positive self-statements reported in the low assertion group. The results may have important implications regarding the response deficit of nonassertive persons; namely, they may have a performance deficit rather than a learning deficit. Yet, it is necessary to establish if the differences between
the groups' self-statements were a function of the subjects' responses on the self-report inventory used to classify them, as opposed to *in vivo* assertion. Furthermore, the study needs additional validation and evaluation before McFall and Twentyman's (1973) skills deficit model might be rejected.

In support of the decision making theory, Fiedler and Beach (1978) attempted to determine what variables may be influencing the decision to be assertive. Using Subjective Expected Utility (SEU) as the dependent measure (the rated desirability of a consequence times the rated probability of the consequence summed over ten possible consequences and nine vignettes), they found differences between groups high and low in Behavioral Intent (number of self-report refusals for nine vignettes divided by nine), while a group moderate in Behavioral Intent was not significantly different from either group. Differences were also found for the type of student (psychology or dental hygiene), method of presentation (video-taped or written), status of the antagonist (authority or peer), and sex of the antagonist. While the findings are interesting, Behavioral Intent was not correlated to an assertiveness inventory (Rathus Assertiveness Schedule), no significant differences were found for the RAS, and behavioral performance was never assessed. Clearly, no conclusions for assertiveness follow directly from this study, however, it does suggest that further research on decision making and assertion is
In summary, while it was noted earlier that modeling was unproven for assertive training with college students, it resulted in increased assertiveness with psychiatric patients (Eisler, Hersen, & Miller; 1973; Goldstein et al., 1973; Hersen, Eisler, & Miller, 1974; Hersen, Eisler, Miller, Johnson, & Pinkston, 1973). Heimberg et al. (1977) suggested that the differences between college student and psychiatric patients when using modeling may reflect the greater skill and more response alternatives possessed by the college students. In other studies, assertive behavior was divided into components (Eisler, Miller, & Hersen, 1973) and situational determinents were shown to be related to responding (Eisler et al., 1975; Feidler & Beach, 1978). It was also found that covert self-statements were an important variable in nonassertive responding and low assertive subjects did not differ from high assertive subjects in knowledge of assertive responses (Schwartz & Gottman, 1976).

Studies Involving Assertion Training in Groups

Assertion training, unlike many clinical treatments, can be conducted efficiently in a group setting if the participants have been carefully screened to exclude those individuals whose problems or psychological status requires special clinical attention (Lange & Jakubowski, 1976). Furthermore, many advantages accrue from the group process:
a ready access to a large pool of partners in behavioral rehearsal, exposure to a variety of perspectives on the rights of the individual, and lower cost for treatment (Albert & Emmons, 1974). For many pragmatic reasons, assertiveness groups may help an individual overcome his expressive difficulties. Furthermore, group programs have been shown to be therapeutic for psychiatric patients, as well as community members. For example, Lomont et al. (1969) found behavioral assertiveness training to result in a significant decrease in the sum of the MMPI clinical scales while insight therapy did not. Weinman et al. (1972) showed that older schizophrenic patients were more assertive following a socioenvironmental treatment than following systematic desensitization or relaxation training, although younger patients were unchanged. Work by Field and Test (1975) found that training on the test items produced more assertive behavior than training on nontest items. Their finding seemed to suggest that generalization of treatment to untrained items was not extensive with a psychiatric population.

In addition to psychiatric populations, college students frequently have been used to evaluate various group treatments. One such study, conducted by Hedquist and Weinhold (1970), compared behavioral rehearsal, social learning (subjects agreed to rules of honesty, responsibility, helpfulness, and action in discussing their problems), and a control group (general discussions of
topics related to teaching). The results indicated that both treatment groups demonstrated significantly more verbal assertive behavior as determined by recordings in their behavioral diary. However, none of the groups were different at a six week follow-up. Joanning (1976) also failed to find differential treatment effects when he compared behavioral rehearsal to eclectic nonrehearsal, although both groups were more improved than a no treatment control. A problem common to both of the studies was their lack of an adequately discriminating behavioral measure of assertiveness. Furthermore, the second study relied almost exclusively on self-report measures of assertiveness to demonstrate improvements.

Behavioral assertiveness, however, has been adequately assessed in several other studies. Multiple experimental and control groups were employed by Galassi, Galassi, and Litz (1974) in an investigation of group assertion training compared to no-treatment controls. Extensive training procedures were used (videotaped modeling, behavioral rehearsal, video, peer, and trainer feedback, bibliotherapy, assignments, and social pressure and support), and all subjects were rated on role-playing situations. A Solomon Four-Group Design (Campbell & Stanley, 1963) was used and some evidence for a significant post-test effect appeared. In general, the experimental groups were superior on self-report and behavioral measures of assertion. These results were maintained at a one-year follow-up (Galassi,
Kosta, & Galassi, 1975).

Covert modeling with and without reply training (effective responding to initial noncompliance) was compared to a placebo and a no-treatment control by Nietzel, Martorano, and Melnick (1977). The covert modeling with reply training was significantly greater in changes of behavioral assertiveness on trained and untrained items while covert modeling without reply training and placebo control were more improved than no-treatment control, but did not themselves differ. Besides being the most improved on the Rathus Assertiveness Schedule, covert modeling with reply training did the best on an extended interaction test, although none of the groups were different at a four month telephone follow-up measure.

Rathus (1972, 1973b) has investigated assertion training that has centered around Salter's "excitatory exercises" (1949). In the first study, Rathus (1972) compared an assertion and a discussion group with a no-treatment control. The subjects were 57 college women taken from the experimenter's class who had indicated they would like to be more assertive. Besides Salter's exercises, the assertion group also was given homework assignments. The assertion group was significantly different from the discussion and control groups on a self-report measure of assertiveness, although not on an external rating of assertion and it was less fearful than
only the control group at posttesting. In the second study (Rathus, 1973b), the same procedures were employed except assertive training subjects observed videotape-mediated assertive models and placebo group watched videoetapes of women discussing and being desensitized to fear. The assertive training group showed more self-reported and externally rated assertion, although not more fear reduction, than both the placebo and no treatment control groups. The studies have been criticized, however, because the subjects were taken from the experimenter's class (Hersen, Eisler, & Miller, 1973).

Ellis's Rational Emotive Therapy (1962) has become a growing part of assertion training (Cotier & Guerra, 1976; Lange & Jakubowski, 1976) and has been compared to other assertive treatments (Wolfe & Fodor, 1977; Carmody, Note 1). In a study of assertive behavior in women, Wolfe and Fodor (1977) used three treatment conditions: modeling plus behavioral rehearsal (BT), modeling plus behavioral rehearsal plus rational therapy (RBT), and consciousness raising (CR). A waiting list control (WL) was also included. After two 2 hour sessions, both BT and RBT showed significant improvement on treated and untreated situations, indicating that generalization occurred. No significant changes occurred on self-report inventories, but RBT showed a significant reduction on self-reported anxiety. At least with the brief treatment, CR appeared to be ineffective.
Multiple dependent variables were used in a study by Carmody (note 1) comparing three treatment programs to a waiting list control: Rational-Emotive Assertive Training (REAT), Self-Instructional Assertive Training (SIAT), and Behavioral Assertive Training (BAT). Dependent measures of assertiveness were self-report measures of social anxiety, assertiveness, unproductive self-statements, and behavioral role-play responses. Carmody found that the three treatment groups were not significantly different from each other on short-term effectiveness, self-reported assertiveness and anxiety, or behavioral changes in assertiveness. However, REAT was significantly more improved than the two other treatments on self-report measures of unproductive thinking. Generalization was evidenced most strongly for REAT and BAT, while all three groups showed that gains were maintained at a three month follow-up. Except for the unproductive thinking, the findings suggested that there was little difference in the treatment effects. Thus, both Wolfe (1977) and Carmody's (Note 1) findings suggest cognitive approaches to assertive training achieve comparable results to behavioral treatments such as rehearsal, etc. However, more research of cognitive and behavioral changes with comparable assertiveness treatments is needed.

Almost exclusive attention has been paid to using nonassertive subjects in assertion research even though overly aggressive individuals are reportably treatable by assertive training (Alberti & Emmons, 1974; Lange &
Jakubowski 1976; Foy, Eisler, & Pinkston, 1975; Wallace et al., 1973). So far, the only study to recruit subjects who express anger inappropriately was conducted by Rimm et al. (1974). An assertive training group (predominantly behavioral rehearsal) was compared to an attention-placebo group (insight oriented). On objective ratings of assertiveness and comfort in responding, assertive training was improved over the control. Self-ratings of discomfort and anger when responding showed significantly more improvement for the treatment group. One problem with the study was that the treatment group had greater exposure to the test items which may have lead to an interaction between conditions and testing (Campbell & Stanley, 1963). Assessment of untrained items was needed in order to help substantiate treatment effects.

In general, group studies have made the following findings. Assertion training seems to benefit psychiatric populations (Lomont et al., 1969; Percell et al., 1974; Weinman et al., 1972), although generalized assertiveness is probably not extensive (Field & Test, 1975) and maintenance has not been assessed. Comparisons of alternative treatment programs for assertion have not found major differences between viable approaches (Hedquist & Weinhold, 1970; Joanning, 1976; Wolfe & Fodor, 1977; Carmody, Note 1). Reply training increased generalization (Nietzel et al., 1977) and gains in assertiveness have been maintained up to a full year (Galassi, Kostka, & Galassi, 1975).
Methodological problems pointed out by Heimberg et al. (1977) included using single groups per condition and utilizing a single therapist for all conditions.

Clinical Case Studies and Single Subject Studies.

Historically, Salter (1949) and Wolpe (1958, 1969) based their theories on assertiveness almost exclusively on their own clinical experience. Eventually experimental investigations were relied on to determine treatment effects and etiology of nonassertiveness. While research studies often are limited to a rigid format to meet empirical demands, in actual practice, treatment may be geared to the specific needs of the client or to the particular skills, orientation, and insights of the therapist. Thus, clinical studies cover areas such as the following: nonassertion with other clinical problems, treatment variations, and training components of assertive behavior.

Nonassertion with other clinical problems. A wide range of clinical problems have been treated with assertiveness training as reported in case studies. For example, Fensterheim (1972) applied assertiveness methods with a couple, a 33 year old male and a 30 year old female, married for six years. Their communication breakdown, not knowing how each other felt, was remedied by the use of role-reversal and Salter's feeling talk at graduated levels. Marital interaction was altered by Eisler, Miller, Hersen, and Alford (1974) when passive males were given four
sessions of assertive training. However, in this case report, when training was conducted on situations unrelated to marital problems, the husband's spouse did not appreciably change in response to his improvements in assertiveness. Excessive crying has also been successfully treated by assertion training (Patterson, 1972; Rimm, 1967). In working with a client who engaged in homosexual pedophilia of a 10 year duration, Edwards (1972) had marked success using thought stopping and assertion training. The patient, a forty year old physician, worked on becoming more assertive with his wife. Pedophilic contacts were completely eliminated and the patient's marriage improved dramatically. In another case study, a 20 year old male diagnosed as a paranoid schizophrenic was treated by Nydegger (1972) who used verbal conditioning (social attention contingent on appropriate verbal expression) of auditory hallucinations and assertion training. Wallace et al. (1973) treated an assaultive male by combining contingency contracting with behavior rehearsal. Although assertion training should not be regarded as a panacea, the reports suggested that it can be a valuable clinical approach to treating debilitating problems.

Treatment variations. The most commonly reported assertion training techniques are behavioral, such as modeling, rehearsal, instruction, feedback and coaching (Edwards, 1972; Eisler, Hersen, Miller, 1974; Eisler, Miller, Hersen, & Alford, 1974; Fensterheim, 1972; Rimm,
Other procedures have been used, such as physical play with children (Patterson, 1972). Furthermore, using a conditioning paradigm supportive of Wolpe's anxiety inhibition theory (1958, 1969), Goldstein, Serber, and Piaget (1970) had clients pair anger arousing images, accompanied by appropriate vocal and motor responses, with anxiety producing situations. When applied in vivo, anxiety was successfully reduced in six out of ten cases where previous efforts employing systematic desensitization had failed. Another interesting approach, operant conditioning, was taken by MacPherson (1972). Her patient, a 45 year old housewife who was unassertive with her mother and aggressive with her husband, was given electric shocks following inappropriate verbal responses and verbal reinforcement for assertive responses as she and the therapist rehearsed typical problem situations. Although novel, this technique does not seem very pragmatic given less extreme methods are available to deal with the problems.

Training components of assertive behavior. While most research focuses on training persons to give general assertive responses, several therapists have conducted component analysis programs for developing assertive responding (Eisler, Hersen, & Miller, 1974; Foy, Eisler, & Pinkston, 1973; Serber, 1972), an approach which is consistent with a skills deficit model (McFall & Marston, 1970). The program usually involves assessing the
components from a videotape of the person responding to provided situations, a procedure which is comparable to direct observation (Eisler, Hersen, & Agras, 1973b). Furthermore, Serber (1972) argued for the use of videotaped feedback to help shape selected nonverbal behaviors. However, research has suggested that focused instruction, a variation in feedback, might be implemented in place of videotaped feedback without loss of efficiency (Eisler, Hersen, & Agras, 1973a). In Serber's treatment program (1972), six component behaviors were considered: 1) loudness of voice, 2) fluency of spoken words, 3) eye contact, 4) facial expression, 5) body position, and 6) interpersonal distance. Serber recommended evaluating all of these components, finding strengths and weaknesses, then modifying those behaviors that are most deficient. Because discrete component behaviors are dealt with, multiple baseline procedures have been employed to assess training effectiveness (Eisler, Hersen, & Miller, 1974; Foy, Eisler, & Pinkston, 1972). Foy et al. (1972) investigated training by modeling and modeling plus instruction while Eisler, Hersen, and Miller (1974) used a miniature receiver (bug-in-the-ear technique) to supply their subjects instructions and feedback. Thus, it is apparent that a variety of procedures are available to use with different problems.
Generalization and Maintenance.

There have been very few studies, particularly among the college analogue investigations, that have satisfactorily demonstrated generalization of treatment effects. The checks for generalization usually have involved looking at items similar to, but not the same as the trained items and extending the interaction required of the subjects (Kazdin, 1974, 1976; Kirschner, 1976; McFall & Lillesand, 1971; McFall & Marston, 1970; McFall & Twentyman, 1973; Nietzel et al., 1977; Young et al., 1973; Wolfe & Fodor, 1977). Follow-up measures generally have been patterned after McFall and Marston (1970) and rarely have yielded significant findings (McFall & Twentyman, 1973). Occasionally self-report inventories have also been used in assessing long-term treatment gains. In group studies, the most extensive checks for generalization and maintenance was conducted by Carmody (Note 1) and Galassi, Kosta, & Galassi (1975) with only a handful of less extensive others (Field & Test, 1975; Hedquist & Weinhold, 1970; Joanning, 1976).

All in all, the findings on generalization of treatment to untrained items have been unimpressive in experimental studies. Rarely were gains reported to other kinds of assertive behavior that were not trained, and even more rare was a demonstration of a lasting effect when generalization was indicated at a posttest. Furthermore, not one analogue
study has established generalization to the natural environment. Since case studies reported that treatment gains were maintained and extended beyond the work carried on in therapy, it remains an empirical question what changes in the client accounted for the improvements. Several issues pertinent to the problem are: was the research poorly designed to assess generalization and maintenance, were the subjects unrepresentative of a clinical population, was the treatment unrepresentative of actual clinical practice, and was a relevant treatment variable not included? Additional considerations include: what actual changes occur with different behavioral techniques, do attitudinal changes result from assertive training, and if so how relevant are they to generalization and maintenance, and finally, how may treatment gains be reliably and validly assessed in non-laboratory settings?

Assessment Instruments and Issues

Recently there have been a number of behaviorally geared inventories of assertiveness developed for research. In several studies, these inventories have been compared with scales of anxiety (Hollandsworth, 1976; Percell, Berwick, & Beigel, 1974; Orenstein, Orenstein, & Carr, 1975). A complete, critical evaluation of recently developed scales is found in Rich and Schroeder's (1976) review. In brief summary of major scales, Bates and Zimmerman (1971) developed a 37 item scale that measured
constriction (nonassertion) from an original pool of 200 items. This scale was found to correlate with a pencil and paper trait measure, yet concurrent validity with behavioral criteria was lacking. Galassi, DeLo, Galassi, and Bastein (1974) developed the College Self-Expression Scale (CSES), a 50 item instrument designed to measure assertiveness among college students. The scale proposed to assess three response classes of assertiveness: positive assertive expression, negative assertive expression, and self-denial. Test-retest reliability was respectable, .89 and .90 for two samples, yet concurrent behavioral validation was absent also. A later study by Galassi et al. (1976) found that groups low, moderate, and high on the CSES were shown to differ behaviorally on role-play situations, adding some credibility to the inventory. However, research by Cummins, Holombo, and Holte (1977) suggested that the CSES has low predictive power for specific situations and the scale may be differentially valid for males and females. The Rathus Assertiveness Schedule (Rathus, 1973a) is a 30 item schedule developed from several previous scales. Test-retest reliability was .78 after eight weeks while split-half reliability was .77. Furthermore, RAS scores for 47 coeds were compared to ratings of their responses to five questions for which assertive replies would be profitable, and a correlation of .70 was obtained. Rathus (in press) also sampled 1401 respondents from colleges and universities from all regions of the United States and obtained normative data
for men and women. The Goldfried and D'Zurilla (1969) empirical approach to inventory construction was undertaken by McFall and Lillesand (1971) in developing the 35 item Conflict Resolution Inventory (CRI). Correlations between the CRI and behavioral assessment procedures were .69 and .63 for pretest and post-test respectively. Rather than a global measure of assertion, however, the CRI only assesses one response type, refusals. On the other hand, Gambrill and Richey's (1976) Assertion Inventory (AI) measures turning down requests, expression of personal limitation, initiation of social contacts, expression of positive feelings, handling criticism, differing with others, assertion in service situations, and giving negative feedback. In addition, both discomfort and response probability are assessed and have been found to have a test-retest reliability of .87 and .81 respectively. But as of yet, the AI has not been validated by behavioral measures of assertiveness, although such studies are likely in the future.

While several of the inventories seem promising, they all are limited in that they were developed with college populations. Their validity with the general population needs to be assessed. Another criticism of the construction is that concurrent validation has always been limited to role-play situations in an experimental setting. Hence, concurrent validation has depended on contrived, laboratory assessment and virtually no research addressing possible
demand effects or faking has been undertaken. Future consideration should be given to obtaining in vivo measures of assertiveness to compare to the inventories.

Besides self-report inventories, behavioral devices for assessment of assertive behavior have been developed. Frequently standardized role-play scenes are used for this purpose, such as the Behavioral Role-Play Assessment Task developed by McFall and Marston (1970) or the Behavioral Assertiveness Test developed by Eisler, Miller, and Hersen (1973). Essentially, both of these tests consist of setting up a vignette where an assertive response is called for. Then the character making the request addresses the subject, and the subject is supposed to role-play his or her response as if he or she were in the real life situation. Either audio or videotapes of the subject's responses are rated by trained observers. McFall and Marston (1970) rated the responses on overall assertiveness, while Eisler, Hersen, and Miller (1973) break the behavior into components, each with their own rating. Rathus (1972, 1973b) varied the behavioral assessment procedure be setting up the situations and simply asking the subjects what their response would be. The relationship of this latter procedure to in vivo seems dubious. Moreover, all the role-playing procedures described above have never been established to correspond with naturally occurring assertive responding.
The most desirable approach to behavioral assessment would be to sample a person's assertive responding in non-experimental environments. The keeping of a behavioral diary, such as used by Hedquist and Weinhold (1970), is one way of providing a record of behavior in the naturalistic setting. Its use is hampered, though, by authenticating the reports. Furthermore, as noted by Rich and Schroeder (1976), it is virtually impossible to establish the quality and effectiveness of the subject's responses with this method. Finally, it seems likely that because of the difficulty determining effective responding, this procedure would be highly susceptible to demand characteristics.

Unobtrusive measures, another assessment possibility, have not been widely used or particularly successful. Besides being limited as a "one-shot" appraisal of assertion, most surreptitious measures, particularly telephone contacts (McFall & Twentyman, 1973), have failed to detect assumed differences between individuals. This problem may be partially remedied by patterning the call after the extended interaction used by McFall and Twentyman (1973). Another alternative would be to conduct research aimed at developing additional measures such as that used by Cummins et al. (1977). In this study, the subject had to ask a stranger (confederate) to remove his feet from a chair, or either not sit in a chair, or else lift two armfuls of material off a second chair.
Persons in institutional environments are much more easily accessible for naturalistic observation. In addition, situations may be standardized by the use of confederates. Weinman et al., (1972) developed such situations which were called the Behavioral Critical Situations Scale. But, since the scoring varied from nonsense ramblings to an appropriate response and the situations dealt with such tasks as working insoluble puzzles, concurrent validity of the instrument with other established criteria of assertiveness was needed. Also, it should to be noted that further research using unobtrusive measures needs to follow current ethical considerations.

Looking at assessment procedures in general, both self-report inventories and behavior role-play assessment have been used extensively without validation with external criteria. Furthermore, investigations assessing the nature of non-assertiveness have been rare. Probably the most notable exception was a recent study by Schwartz and Gottman (1976). In this investigation, three new procedures were employed to distinguish ways in which different assertive groups vary. First, knowledge of content was assessed by presenting unreasonable requests in written form and requiring written refusal responses to determine the subject's ability to specify an assertive response on the Assertiveness Knowledge Inventory. The second device, the Hypothetical Behavioral Role-Play Assertion Test, presented situations on audiotape for which an oral response was
called. The subjects were told to imagine that they were modeling an assertive response, as if for a friend, and an attempt was made to make the situation unrealistic. Besides using a shortened form of the Behavioral Role-Play Test, the Assertiveness Self-Statement Test, a 34 item inventory consisting of positive and negative self-statements, was employed. Essentially, the findings were that the groups were not different, either on knowledge of an assertive response or in hypothetical delivery. The major differences were on cognitive self-statements and behavioral role-play.

**Purpose of the Proposed Study.**

Schwartz and Gottman's (1976) task analysis investigation of assertive behavior clearly points out the need for further research on variables relevant to nonassertive and assertive individuals. In particular, cognitive variables appear important in light of their findings. Further research attempting to assess subject differences is needed. Hypothetically, one might assume that the difference in positive and negative self-statements found in the above study may also be reflected in the subject's perception of various assertive and nonassertive responses. Thus, low assertive subjects may perceive responses as tending to be more aggressive than would highly assertive subjects. Even though Schwartz and Gottman (1976) found that low assertive subjects could provide assertive responses, subject's evaluation of the responses were not
investigated. The purpose of the proposed study was, therefore, to determine if persons high, moderate, or low in assertiveness evaluate aggressive, assertive, and nonassertive responses differently from one another.

Classification of subjects into high, moderate and low assertive groups was based on self-report and behavioral criteria. Inadequacies of either criterion used singly has been pointed out earlier. Assessment of behavioral performance was patterned after Eisler, Miller and Hersen (1973) and McFall and Marston (1970). Since the Rathus Assertiveness Schedule has acceptable reliability and national norms (Rathus, 1973a; in press), it was employed. The dependent measures will assess the following: evaluation of the aggressiveness/assertiveness/nonassertiveness of various responses, level of comfort in using the responses, probability of using the responses, and the perceived outcome of using the responses. Assessment of these variables is important for evaluating a person's anxiety level and basis for determining the type of response he or she uses when responding to assertive situations.

Hypotheses.

The focus of this study was to specify some of the variables that persons of various levels of assertiveness differ on. The major questions being investigated are: Do people of different levels of assertiveness a)
differentially rate the types of responses, b) vary in likelihood of giving each type of response, c) differ in level of comfort in giving each type of response, and d) differentially rate the perceived positive or negative consequences of giving each type of response? In addition, comparisons may be made between all four of these variables.

The hypothesis under investigation is that groups varying in level of assertiveness differ in their perception of assertive and unassertive responses. Corollary hypotheses are as follows: 1) High assertive subjects will rate aggressive responses as less aggressive than will low assertive subjects, and the opposite will be true with regard to nonassertive responses, i.e. low assertive subjects will rate nonassertive responses as less nonassertive. 2) High assertive subjects will be more likely than the other groups to give aggressive responses. 3) High assertive subjects will be more comfortable giving an aggressive response than the moderate and low assertive subjects. 4) High assertive subjects will perceive the consequences of aggressive responses as being less negative than the other groups.
Method

Subject Selection

Approximately 250 students in an introductory psychology class at the University of Montana were administered the Rathus Assertiveness Schedule (RAS, See appendix A). On the basis of their responses, the students were classified as either high, moderate, or low RAS-assertive. Cutting scores for each group were based on the RAS Percentile Ranks for college women and men (Rathus, in press). The RAS scores for women and men at the 33 1/3 percentile and 66 2/3 percentile were used to determine the three RAS-assertiveness levels. Because the percentile ranks of women's scores differ from men's scores, separate cutting scores were employed for each sex. The groups were determined as follows: men's scores equal to or over 21 and women's scores equal to or over 18 were high RAS-assertive, men's scores from 20 and 3 inclusive and women's scores from 17 and -1 inclusive were moderate RAS-assertive, and men's scores equal to or less than 2 and women's scores equal to or less than -2 were low RAS-assertive. After classification, students randomly selected within each RAS-assertiveness level were contacted by telephone and asked to participate in a study on social behavior for 1 hour of credit toward the experimental requirements of the introductory psychology class.
A total of 75 subjects, 25 from each RAS-assertiveness level, were recruited. All subjects were behaviorally assessed for assertiveness by an abbreviated form of McFall and Marston's (1970) Behavioral Rehearsal Assertion Test (A-BRAT). Each subject's performance on the A-BRAT was audiotaped and rated on 6 behavioral components of assertiveness and a global rating of assertion (Eisler, Miller, & Hersen, 1973; Hersen, Eisler, & Miller, 1974). Factor scores on the A-BRAT were rank-ordered and the top, middle, and bottom thirds of the rank determined the high, moderate, and low A-BRAT levels respectively.

All subjects were classified on assertiveness twice; once by the RAS and once by the A-BRAT. Originally, only subjects falling into the same level of assertiveness for both instruments were intended to be used in the study. However, this became unrealistic because of the low correspondence between RAS and A-BRAT scores. The dependent measures were consequently analysed for both systems of subject classification.

Audiotape Ratings

All behavioral ratings were independently made by two judges. The judges each received over 15 hours of training with the rating system. Ratings were made in random order, varying the RAS level and the seven behavioral measures, to avoid possible rater bias stemming from response set. The
behavioral components (Eisler, Miller, & Hersen, 1973; Hersen, Eisler, Miller, Johnson, & Pinkston, 1973; Carmody, Note 1; See appendix B) were defined as follows:

1) Duration of reply: Length of time subject spoke to the assistant following the prompt was rated on a five-point scale.
2) Loudness: Loudness of subjects speech for each scene was rated on a five-point scale from 1 (very low) to 5 (very loud).
3) Affect or firmness: Affect or firmness of subjects speech for each scene was rated on a five-point scale from 1 (flat affect) to 5 (extremely firm and convincing).
4) Latency: The time elapsed from the end of the prompt to the beginning of the subject's reply was rated on a five-point scale.
5) Compliance: Compliance of verbal content was rated on a dichotomous occurrence or non-occurrence basis for each scene.
6) Request for a change in behavior: Verbal content with respect to requesting, by specific mention, a change of behavior was scored on an occurrence or non-occurrence basis. This needed to be more than mere noncompliance.
7) Overall assertiveness: The judges read descriptions of assertive behavior (from descriptions of assertive behavior in appendix E) and rated the audiotaped scenes for overall assertiveness on a five-point scale, with 1 indicating very unassertive and 5 indicating very assertive.

The interrelatedness of the seven behavioral ratings were assessed by factor analysis using principle components with a verimax rotation. Only one factor emerged and the rotation was later dropped. Factor scores were used as indications of overall role-play performance of each subject. Pearson's product-moment correlations were also computed for all seven ratings and the RAS.
Reliability of Behavioral Measures

A primary and secondary judge were used for the behavioral ratings. Twenty-five subjects were rated by both judges for a reliability check while the remaining 50 subjects were divided evenly between the judges. Thus, each judge rated 50 subjects (approximately 17 subjects from each RAS level). Although the judges were informed that their ratings would be randomly assessed for reliability, they had no knowledge which subjects the interrater reliability would be checked on (Taplin & Reid, 1973). Percentage of agreement for Compliance and Requests for Change in Behavior was computed by dividing total number of interjudge agreements by total number of agreements and disagreements. On all the remaining measures a Pearson product-moment correlation was computed for the two sets of ratings. Only the primary judge's ratings were used for the subjects involved in the reliability check.

Procedures

When the subject arrived, he/she was told that the purpose of the study is to find out more about how people respond in social situations. They were also informed that the study consisted of two short parts. In the first part, their responses to social vignettes would be recorded and in the second half, they would make ratings of replies provided for similar vignettes. Immediately following the
introduction, the instructions for the A-BRAT were presented, followed by the task itself. (See appendix C). After completing the A-BRAT, the subject was administered the Assertion Discrimination Test (ADT, See appendix D). On the ADT each subject was required to rate the appropriateness of replies to a variety of assertive situations. Three types of replies were used; aggressive, assertive, and nonassertive; but only one reply was provided for each situation. Four dependent measures were employed: 1) degree of assertiveness/aggressiveness/nonassertiveness, 2) likelihood of personal use, 3) comfort with personal use, and 4) valence of outcome. An analysis of variance was conducted for the three assertiveness groups (A's) and three response types (B's) for each dependent measure in a split-plot factorial ANOVA. There was one within group factor with three levels (A_1,B_j;A_2,B_j;A_3,B_j) and one between group factor with three levels (B_1,A_i;B_2,A_i;B_3,A_i). A Pearson product-moment correlation was conducted to assess the degree of association between all of the dependent measures.

Once both the A-BRAT and ADT were completed, the subject was asked to fill out a debriefing questionnaire. The questionnaire was intended to provide a check for subject reactivity on the A-BRAT stemming from the prior administration of the RAS. Since the RAS did not provide the subject with an obvious indication of their overall score, or, what their pattern of responses would suggest
behaviorally, it is felt that there probably was not a deliberate attempt to "fake good" or "fake bad" on the behavioral role-play in order to remain consistent on both measures. However, it was believed that if a large percentage of persons associated the A-BRAT with the RAS, it may bias their "natural" responses to the scenes. Consequently, the subjects were asked the following questions: "Did you think today's experiment was in any way related to previous experiments in Psychology 110? If so, which ones? If so, what did you think was the purpose of today's experiment?"

**Assertion Discrimination Test (ADT)**

The Assertion Discrimination Test (ADT) is based on a modified version of the Conflict Resolution Inventory (McFall & Lillesand, 1971) in which 15 assertion vignettes with replies, worded to correspond to locations familiar to the university population (Carmody, Note 1), were presented in random order. Of the total 15 replies, five were aggressive, five were assertive, and five were nonassertive. The classification of each reply was based on categorial agreement of five judges, persons having clinical and/or research experience with assertiveness training. The judges were also provided with criteria for each response type developed from various authors (Alberti & Emmons, 1974; Lange & Jakubowski, 1976; Hollandsworth, 1977; See appendix E). For each vignette and reply, the judges were
asked to determine the category the reply fell under, i.e. aggressive, assertive, or nonassertive. When there was at least 80% agreement (four out of five judges agree) on the response type, the vignette and response was used in the ADT.

Each vignette and response was followed by four nine-point Likert scales. The scales rated the following: 1) How aggressive, assertive, or nonassertive did the response seem to you? (-4 = aggressive, 0 = assertive, and 4 = nonassertive); 2) How likely is it that you would make a response similar to the one provided if you were actually in the same situation? (-4 = very unlikely and 4 = very likely); 3) How comfortable would you be making a response similar to the one provided? (-4 = very uncomfortable and 4 = very comfortable); and 4) How positive or negative would you expect the outcome to be after making the response provided in the scene (-4 = very positive and 4 = very negative).
Results

Interrater Reliability on A-BRAT

A Pearson Product Moment correlation yielded high interjudge agreement on the behavioral ratings. The results were as follows: duration of reply, .99; loudness, .84; affect or firmness, .75; latency, .94; and assertiveness, .86. Following Johnson and Bolstad's (1973) recommendation to use the Spearman-Brown correction in assessing reliability for all observations, the correlations in their respective order were .99, .94, .90, .98, and .95. Percent agreement on compliance and requests for new behavior was 92% for both measures. The high consistency obtained between raters was comparable to other studies in the literature and established reliability of the measures for the subsequent factor analysis.

Subject Selection

In devising selection criteria of level of assertiveness, factor analysis was conducted on all seven A-BRAT measures alone, and also in combination with the RAS. The results, presented in Table 1, showed that analyses with and without the RAS were nearly the same. Only one signifi-

Insert Table 1 about here

cant factor emerged; RAS had only a moderate loading on the
factor (.41). Consequently, the weighted factor scores obtained from analysis of the A-BRAT components without the RAS were used for a second selection criteria, with the first criteria being the RAS scores. From table 1, the highest factor loadings were for assertiveness, requests for new behavior, affect or firmness, and compliance; response components that intuitively appear to be strong determinates of assertive replies.

All seven A-BRAT measures and the RAS were assessed for their degree of relatedness, presented in Table 2. From this table, the strongest correlations were overall assertiveness with affect or firmness, requests for new behavior, and compliance. Compliance and requests for new behavior were also highly correlated with each other. The assertiveness questionnaire, the RAS, was moderately correlated with only the following A-BRAT components: compliance, overall assertiveness, and requests for new behavior. This finding suggested that although the subjects' performance on the RAS was reflected in behavioral components with high factor loadings, it still was not strongly related to role-played responses on the A-BRAT.
ANOVA on the ADT Measures

The analysis of variance conducted for assertiveness, likelihood, comfort, and valence on the ADT is presented in Tables 3 and 4, based on classification by the RAS and the weighted factor scores respectively. As was expected, the two tables show significant within groups treatment effects (the type of reply rated, e.g., aggressive or assertive or nonassertive) for all four dependent measures of the ADT. This signifies that all subjects tended to distinguish between the different types of social replies presented. It should be noted that the within groups analysis for the A-BRAT essentially repeats the within groups analysis conducted for the RAS. For this reason, mean comparisons for the within group treatments will be presented for only the RAS data.

Ratings on assertiveness. Contrary to prediction, no significant between group treatment or interaction effects were obtained. On the within groups scores, Newman-Keuls analysis revealed that all comparisons of means were significant at $p < .01$ (see Table 5).

Insert Tables 3 and 4 about here

Insert Tables 5 and 6 about here
Ratings on likelihood of giving the reply. As is represented in Table 3, there were significant within groups, between groups, and interaction effects for rating of likelihood of giving the reply on RAS-assertive subjects. While mean comparisons by Newman-Keuls for the between groups effect failed to reach significance at $p < .05$, the within groups mean comparisons, presented in Table 5, reveal that assertive replies were significantly more likely to be given than nonassertive replies, which were more likely to be given than aggressive replies, $p < .01$. Of primary importance, however, was the marked differences between means in the interaction of the types of replies with the level of RAS-assertiveness.

Shown in Table 6, high and moderate RAS-assertives rated themselves as more likely to give assertive replies than did low RAS-assertives, $p < .01$ and $p < .05$; although, the two higher groups did not significantly differ. Low RAS-assertives did not differ in their likelihood of responding with an assertive, rather than a nonassertive reply; yet, both moderate and high RAS-assertives did significantly vary on those replies, $p < .01$. However, this finding is attributed to the much greater likelihood of giving assertive replies for the higher levels, as the three RAS-assertive levels failed to differ significantly from each other on likelihood of using the nonassertive replies. Again from Table 6, the high RAS-assertive's likeliness to use nonassertive opposed to aggressive replies failed to
reach significance. In contrast, the moderate and low RAS-assertive groups were more likely to use nonassertive replies than aggressive replies, $p < .01$. Finally, the aggressive replies yielded the most variance between groups as the low RAS-assertives were significantly less likely to respond aggressively than the moderate RAS-assertives, $p < .01$, who themselves were less likely to reply aggressively than the high RAS-assertives, $p < .05$. Hence, the prediction that high assertives would be more likely to give aggressive replies than low assertives was supported.

**Comfort in giving replies.** From Table 3, significant F ratios were obtained for between group, within group, and interaction effects. Once again, Newman-Keuls comparison failed to yield significant mean differences on between groups comparisons. Table 5 illustrates that within group differences in comfort of giving the reply existed with aggressive replies yielding more discomfort than assertive or nonassertive replies. The latter two types of replies did not vary significantly from each other, $p > .10$.

Several interesting findings emerged from analysis of the interaction. Presented in Table 7, the high and moderate RAS-assertive groups reported they would feel more comfortable giving an assertive response than did low
RAS-assertives, $p < .01$ and $p < .05$ respectfully. The high RAS-assertives were the only persons to be significantly more comfortable using assertive rather than nonassertive replies, $p < .01$. Neither high or moderate or low RAS-assertives varied much from each other on comfort for nonassertive replies. However, the low RAS-assertives differed significantly from the high RAS-assertives in comfort when giving aggressive replies, $p < .05$. Finally, the aggressive replies were always rated more uncomfortable to give than any combination of assertive or nonassertive reply with the RAS levels of assertiveness, $p < .01$.

The ANOVA on the A-BRAT in Table 4 also contained a significant interaction for rated comfort in giving the replies, $F(2, 72) = 3.02$, Hotelling's $T$ statistic with $p < .05$. The means are presented in Table 8. The Newman-Keuls results were similar for that of the RAS ratings, although they contained fewer significant differences. One parallel was aggressive replies for high, moderate, and low A-BRAT-assertives significantly differed from all possible comparisons involving assertive and nonassertive replies, $p < .01$. The remaining findings were that high A-BRAT-assertives rated themselves as more comfortable giving assertive replies than nonassertives replies, $p < .05$,
and they were significantly more comfortable giving assertive replies than were low A-BRAT-assertives, $p < .05$. No other comparisons were significant.

Valence of outcome. The only factor to achieve significance, on the valence of the outcome for the replies, was the within groups treatment. As reported in Table 5, aggressive replies were given more negative outcomes than either assertive or nonassertive replies, $p < .01$. The latter two types of reply failed to significantly vary.

Correlation of ADT Ratings

Because the assertiveness ratings varied from aggressive (-4) to assertive (0) to nonassertive (4) with extreme high and low ratings regarded as less desirable replies, measurement error from the scaling was added into the correlation of assertiveness with the other dependent measures. To minimize the scaling error and provide more information, the degree of relatedness between all four ratings (assertiveness, likelihood, comfort, and valence) was compared for each type of reply. The scaling error would be highest on assertive replies as they are more likely to elicit both positive and negative ratings from the subjects, opposed to the predominately positive and negative ratings expected for nonassertive and aggressive replies respectively.
An overall appraisal of Table 9 suggests that correlations remained relatively consistent between aggressive, assertive, and nonassertive replies. The rated level of assertiveness of the aggressive replies remained practically unrelated to likelihood, comfort, or valence. On assertive replies, the same comparisons yielded a slight positive correlation. Because a high rating indicated a very nonassertive reply, a negative correlation was obtained for nonassertive replies when assertiveness was checked against likelihood. Likelihood was strongly correlated with comfort and moderately correlated with valence for all three types or replies. Finally, comfort and valence were slightly correlated for aggressive and assertive replies and moderately correlated for nonassertive replies.

**Questionnaire Results**

Of the 75 subjects in the study, seven persons correctly associated the study with the RAS, 30 persons incorrectly associated it with other things, and 38 persons did not feel the study was related to other experiments. None of the seven "correct" subjects suggested the purpose of the investigation was to check the accuracy of the RAS against their role-play performance, a belief which may have biased their A-BRAT responses.
Discussion

The results of the present investigation reveal differential response types (i.e., aggressive, assertive, and nonassertive) were clearly distinguishable among all subjects. Contrary to prediction, however, it appears that individuals differentiated on the basis of assertiveness reach wide agreement regarding response classification. Thus, the hypothesis that persons differing in assertive behavior would judge aggressive and nonassertive replies differently failed to be supported. Moreover, neither subject classification by a self-report inventory nor by behavioral role-play (two standard procedures for assessing assertiveness) produced the predicted outcome. Consequently, the current results further extend findings of Schwartz and Gottman (1976). That is, persons differentiated on assertiveness not only know what constitutes assertive responses, but also aggressive and nonassertive responses as well. Furthermore, this study looked at the interrelation of several variables that relate to assertive responding.

When differentiated by the RAS, low assertives demonstrated greater discomfort and less likelihood in giving aggressive and assertive replies than the other groups. Similar findings were observed by Eisler, Frederikson, and Patterson (1978) who found that high assertives tended to use more aggressive and assertive
responses than did low assertives. In this study, moderate and high assertives differed only by the former being less likely to give an aggressive reply. While all subjects identified aggressive responses, the high and moderate assertives indicated more willingness to employ the harsher, stronger responses than the low assertives. However, aggressive responses were the most uncomfortable and least likely to be given reply of any of the three types. Interestingly, the greater disparity between aggressive-assertive replies as opposed to assertive-nonassertive replies tends to call into question the frequent layman assumption (Lange & Jakubowski, 1976) that assertive and aggressive responses are quite similar. The confusion appears to be semantic rather than conceptual, however, as aggressive and assertive responses were clearly distinguished in the present research. Finally, low assertives were distinct in that use of nonassertive responses and assertive replies were comparable; however, all subjects' reported similar likelihood of using nonassertive responses. The failure to differentiate low assertives on nonassertive replies may reflect a reluctance to attribute high occurrence and comfort to a reply that has been identified as relatively undesirable. It could also reflect less accuracy in predicting hypothetical responding among low assertives, as was found by Eisler et al. (1978).
Results indicated a strong likelihood-comfort relationship, an association consistent with the inhibition model (Wolpe, 1958, 1969). The correlations varied only slightly regardless of the type of reply on which the computation was based. Both likelihood and comfort showed little association to the rated level of assertiveness. This may have been an artifact due to scaling of aggressive, assertive, and nonassertive responses, however. Similarly, valence was correlated with both likelihood and comfort, but not with level of assertiveness. Yet, all groups agreed on the valence of each type of reply. Thus, the significance of valence as a cognitive variable contributing to assertiveness differences appears diminished. The seeming contradiction with previous research (Fiedler & Beach, 1978; Schwartz & Gottman, 1976), however, may indicate differences in the evaluation of how one is likely to be perceived by others versus what effect one's reply will have upon others behavior. In other words, high and low assertives may be in agreement on the outcome of using the reply, (i.e., the effect on the other person's immediate behavior), but their beliefs of how another person will evaluate them may differ. Thus, assertion training may need to place greater emphasis on overcoming fear of negative evaluation in their client population when the individual works on assertive responding within a problem area. Although correlational, the overall findings suggest that comfort in responding may be a strong determinate of type of response emitted. Caution needs to
be used in drawing conclusions, however, as comfort is broad in meaning and needs further experimental analysis.

Based on the factor analysis and correlation matrix, the RAS and the A-BRAT failed to correspond highly as assessment instruments of "assertion." This raises serious questions regarding instrument validity and variations in administration upon subject performance (Bellack, Hersen, & Turner, 1978; Cone, 1978; Curren, 1978; Nietzel & Bernstein, 1976). First, the RAS and A-BRAT were administered under different experimental conditions then previously reported in the literature. Within the current research, subjects were essentially naive regarding the topic under investigation (i.e., assertiveness) and the relationship among RAS and A-BRAT measures. This was purposely employed so as to reduce the potential for bias from expectancy factors and/or demand characteristics. Unfortunately, it is not possible, based upon the data here and elsewhere, to determine if isolating the administration of self-report and behavioral role-play instruments actually decreases the correspondence between the two measures. Nonetheless, the failure of the RAS to load highly on the assertion factor of the A-BRAT and its mediocre correlation with the separate behavioral components of assertiveness lends support to the critics expressing a need to examine the parameters of behavioral assessment instruments (Cone, 1978). Secondly, in an effort to maximize the external validity of subject performance, A-BRAT instructions
stressed responding as naturally as possible. Yet, no operationally defined criteria of role adoption is currently available to ensure adequate internal validity (Spencer, 1978). Thus, even with this instructional set, the external validity of role-playing, particularly in social skills research, has yet to be adequately demonstrated (Bellack, Hersen, & Turner, 1978; Curran, 1978).

While conclusions are not possible concerning internal and external validity of role-played responses, evidence from the ADT suggests the RAS may have greater classification utility than the other instrument. More specifically, one might expect groups differing in assertive behavior to be differentiated by their rated likelihood of giving assertive replies. Classification by the RAS resulted in such differentiation while classification by the A-BRAT did not. It is recognized that arguing for the accuracy of a classification procedure on the basis of a dependent measure is extremely risky and often unjustified; however, the reason for such a claim, coupled with the fact that likelihood of giving assertive replies was not relevant to the experimental hypotheses, suggests greater validity of the RAS as a screening instrument for this study. Further research is necessary, however, so as to assess the parameters of assertiveness in relation to each of the above instruments. Consideration needs to be given to suggestions by Cone (1976), that the mode of assessment corresponds best with the same mode of behavior under investigation.
However, in the absence of such studies, the results are interpreted here based primarily on the RAS analyses. This incidently follows current practice of differentiating assertion in college students via self-report instruments.

Diverging from comparisons of the selection processes, the factor analysis of the behavioral components essentially corroborated the findings of Packman, Foy, Massey, and Eisler (1978). Packman et al. (1978) found response latency formed a separate factor from the remaining behavioral components they explored. Although no second factor emerged here, latency clearly was set off from the other components. It appears that while response latency may have some value below which the pause is detrimental to the quality of a response, latency is not a unilateral variable to be used with other component behaviors. High correlations existed with the overall rating of assertiveness and the individual components, as was found by Packman et al. (1978). Consequently, future investigators may wish to weigh the efficacy of using multiple ratings versus a singular global rating of assertive behavior. For example, multiple rating may be demanded in treatment programs to ascertain individual subject's areas of weakness (Serber, 1972); however, there appears some justification for the practice of using individual global ratings in those situations assessing role-play performance.
Several findings of this research merit brief comment. First, perceptual differences were not evidenced for response types. As this was the first study explicitly testing perceptual variability across a wide range of responses, more research is needed to confirm the results obtained here. Although tentative, the study's findings suggest that differential assertive behavior may be attributed mainly to inhibitory mechanisms in the responding individual. At present, fear of negative evaluation has been identified as a likely inhibition variable (Fiedler & Beach, 1978, Schwartz & Gottman, 1976); however, further research is needed to closely examine other possible sources of inhibition (e.g., low self-concept, internal-external locus of control, characteristics of the respondent, and physiological arousal). Secondly, this investigation suggested that procedural variations and assertion assessment instruments may be of differential utility in the evaluation of assertive behavior. Considering the sundry assertion assessment instruments available (Rich & Schroeder, 1976), it would be very desirable for investigators to identify the parameters and validity of the most widely used devices. This would help to standardize research procedures and specify more clearly the generalizability of findings to the client populations under study.
Summary

In this investigation, 75 introductory psychology students were differentiated into high, moderate, and low assertion groups using the Rathus Assertiveness Schedule (RAS) and the Abbreviated-Behavioral Role-Play Test (A-BRAT). A-BRAT performance was assessed on six behavioral components and a global rating of assertiveness. These seven ratings along with the RAS were factor analyzed and correlated with one another. It was found that the behavioral components formed a single factor with the global rating having the highest loading. Furthermore, the RAS showed only small relatedness to the A-BRAT ratings. Using the Assertion Discrimination Task (ADT), subjects were tested for discriminability of a wide range of responses to 15 written assertion vignettes, the Assertion Discrimination Task (ADT). The ADT consisted of aggressive, assertive, and nonassertive responses evaluated by Likert scales measuring: level of assertiveness, likelihood of use, comfort of use, and valence of outcome.

The findings suggested that reply types were distinguished, with all subjects in agreement on the classification of the responses. For individuals grouped by the RAS, high and moderate assertives showed greater likelihood and comfort in using aggressive and assertive replies than did low assertives. High assertives were also more likely to employ aggressive responses than were
moderate assertives. The subjects were in agreement on valence of the response outcome. Correlations of the four Likert ratings found strong association for likelihood, comfort, and valence, but not level of assertiveness. From the results, it appeared that comfort in responding may be a strong determinate of differential assertive behavior. Low correspondence for the RAS and A-BRAT suggested more research is needed evaluating the validity and parameters of these instruments.
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APPENDIX A

Rathus Assertiveness Schedule

Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

+3 very characteristic of me, extremely descriptive
+2 rather characteristic of me, quite descriptive
+1 somewhat characteristic of me, slightly descriptive
-1 somewhat uncharacteristic of me, slightly nondescriptive
-2 rather uncharacteristic of me, quite nondescriptive
-3 very uncharacteristic of me, extremely nondescriptive

___1. Most people seem to be more aggressive and assertive than I am.
___2. I have hesitated to make or accept dates because of "shyness."
___3. When the food served at restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.
___4. I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.
___5. If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time in saying "No."
___6. When I am asked to do something, I insist upon knowing why.
___7. There are times when I look for a good, vigorous argument.
___8. I strive to get ahead as well as most people in my position.
___9. To be honest, people often take advantage of me.
___10. I enjoy starting conversations with new acquaintances and strangers.
___11. I often don't know what to say to attractive persons of the opposite sex.
___12. I will hesitate to make phone calls to business establishments and institutions.
___13. I would rather apply for a job or for admission to a college by writing letters than by going through with personal interviews.
___14. I find it embarrassing to return merchandise.
___15. If a close and respected relative were annoying me, I would smother my feelings rather than express my
annoyance.

_16. I have avoided asking questions for fear of sounding stupid._

_17. During an argument I am sometimes afraid that I will get so upset that I will shake all over._

_18. If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well._

_19. I avoid arguing over prices with clerks and salesmen._

_20. When I have done something important or worthwhile, I manage to let others know about it._

_21. I am open and frank about my feelings._

_22. If someone has been spreading false and bad stories about me, I see him/her as soon as possible to "have a talk" about it._

_23. I often have a hard time saying "no."_

_24. I tend to bottle up my emotions rather than make a scene._

_25. I complain about poor service in a restaurant and elsewhere._

_26. When I am given a compliment, I sometimes just don't know what to say._

_27. If a couple near me in a theater or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere._

_28. Anyone attempting to push ahead of me in a line is in for a good battle._

_29. I am quick to express my opinion._

_30. There are times when I just can't say anything._
APPENDIX B

CRITERIA FOR BEHAVIORAL RATINGS*

1. **Duration of reply** (seconds)
   Record total time elapsed during the subject's reply.

   **Scoring Categories:**
   - 1 - 0.0 - 1.9
   - 2 - 2.0 - 3.9
   - 3 - 4.0 - 6.9
   - 4 - 7.0 - 8.9
   - 5 - 9.0 - and above

2. **Loudness**
   Using the following 5-point scale:
   - 1 - extremely low, inaudible
   - 2 - very low, barely audible
   - 3 - average volume
   - 4 - louder than average volume
   - 5 - extremely loud

3. **Affect or Firmness**
   Using the following 5-point scale:
   - 1 - flat affect, unemotional, unconvincing
   - 2 - less convincing than average
   - 3 - average emotionality
   - 4 - more emotional and firm
   - 5 - extremely firm and convincing, very lively presentation.

4. **Latency** (seconds)
   Record the time elapsed from the end of the target person's statement to the beginning of the subject's reply.

   **Scoring Categories:**
   - 1 - over 2.4 sec.
   - 2 - 1.6 - 2.4 sec.
   - 3 - 1.0 - 1.5 sec.
   - 4 - 0.5 - 0.9 sec.
   - 5 - 0.0 - 0.4 sec.
5. **Compliance**  
   Scoring Categories:  
   1 - no compliance  
   2 - compliance

6. **Request for Change in Unreasonable Behavior**  
   Scoring Categories:  
   1 - request made  
   2 - request not made

7. **Overall Assertiveness**  
   Scoring Categories:  
   1 - very sub-assertive  
   2 - less assertive than average  
   3 - reasonably assertive  
   4 - more assertive than average  
   5 - very effectively assertive

*Taken from Carmody, (Note 1; appendix Z)
APPENDIX C

Abbreviated Behavioral Role-play Assertiveness Test

Procedure and Instructions for A-BRAT*

Participants were introduced to the research assistant and reassured about confidentiality regarding the audiotaping procedures.

Instructions: "We would like to find out how you normally reply in various social situations. To do this, we will be recording your response to five brief scenes. We will also give you one practice scene to familiarize you with the procedure. Each scene includes a short description of a situation involving two characters plus a cue for you to respond. After my assistant reads the description to you, he will take the part of the first character and will give you the cue to respond. When you have been given the cue, respond as you actually would in that situation. Be sure and listen carefully to the details in the description of the scene and try to place yourself in the situation, under those circumstances when you reply.

Each subject's identification, tape reel number, and tape footage was recorded on the audio log.

Next, each participant role-played a practice scene. Following this, the subject was asked if he/she had any questions about the procedures. The subject was then
recorded on the five remaining scenes.

The following scenes were used. The first scene was given only for practice. For illustration, all of the scenes here include an exemplar response to indicate how an assertive subject might reply; however, the exemplar responses were not presented to the subjects.

1. You are shopping for pair of dress shoes at a shoe store downtown. You have tried on several pairs, but have not found what you want. The salesman has been patient, but seems to be getting somewhat annoyed. You are aware of the time you have spent and that others are waiting to be helped. You still have not found exactly what you want, but one pair is close. The salesman says, "It looks good on you. Shall I wrap it up for you?" (Signal)

Exemplar Response: No thank you. It's still not what I want.

2. You are having dinner at one of the local restaurants in Missoula. You have ordered a broiled sirloin steak, cooked medium. You are hungry for a nice, juicy steak. Your mouth is watering. When your steak arrives, you cut into it eagerly and find that it is much too rare. Just then the waitress comes by and asks, "How is everything?" (Signal)

ER: Fine except for this steak. I ordered mine medium. This looks much too rare. I'd appreciate it if you would please return it and bring me a steak the way I ordered it.

3. You and your two friends are looking for a fourth person to share an apartment. They go ahead and find one without consulting you. You happen to know about this potential roommate. He's (or she's) really unorganized, sloppy, and inconsiderate. You really don't like being around him. In the meantime, your friends ask you one day for your opinion. One of your friends asks, "What do you think about him (her)?" (Signal)

ER: To be frank, I really don't think I want him as a roommate.

4. You are standing in the ticket line at the Fox Theatre. You have been in line now for 20 minutes. It's getting close to showtime. You are still a long way from the ticket window. You are beginning to wonder if there
will be enough tickets left. It wouldn't be the first time they were sold out. Suddenly, two fellows walk up to a couple of girls in line ahead of you and begin talking. They are obviously friends. You glance at your watch. Two minutes to showtime. Then one of the girls says to the newcomers, "Hey, it's a long line. Why don't you cut in here?" Then she says to you, "You don't mind, do you?" (Signal)

ER: Yes, I do mind. We've been waiting here for over 20 minutes. I don't think it's fair that you guys cut in line ahead of us. Why don't you move to the end of the line?

5. You are trying to study. But a loud party is going on next door. It's a big exam tomorrow, but you can't concentrate. You must quiet them down. You go to your neighbor's door and knock. You are greeted by your neighbor who says, "Hey, why don't you join the fun?" (Signal)

ER: No thank you. I'm studying for a big exam tomorrow and I wonder if you could keep the noise down a bit.

6. It's a Saturday afternoon and you have had several errands to run. Now you are almost done. You just have to pick up a pair of shoes from the shoe repair shop. It's late, about 4:55 p.m. The store closes at 5:00. As you approach the store, you notice the owner locking up. You look inside and see by the clock on the back wall that it is only 4:55. You tap on the window. He opens the door a little and says, "Sorry, I'm closed." (Signal)

ER: According to your clock, I've got five minutes and I really need to pick up my shoes for tonight.

*Taken from Carmody (Note 1; Appendix D).
APPENDIX D

Assertion Discrimination Test

Procedures and Instruction for the ADT

The research assistant informed the subject they are ready to begin the second half of the study. The scenes that make up the ADT were presented in random order.

Instructions: "This next task will involve rating responses to situations that are similar to those you were recorded on. However, this time you will not be asked to provide a reply. Instead, a response will be presented for each scene and you will be asked to make several ratings for that response. Please read each scene and response carefully. Then, fill out the four ratings that follow the reply (shown an example rating scale). They are as follows: 1) How aggressive, assertive, or nonassertive did the response seem to you? 2) How likely is it that you would make a response similar to the one provided if you were actually in the same situation? 3) How comfortable would you be making a response similar to the one provided? And 4) how positive or negative would you expect the outcome to be of making the response provided in the scene? Do you have any questions? (Response). Ok, please begin."
Sample Rating Scales

Each of the four scales below follows the response of every scene. You are to make the rating by placing an X on the mark directly above the numeral which best indicates your choice. A mark may not be placed between two numbers. Please examine the example rating at the bottom to be sure you understand how the scales are to be marked.

1) How aggressive, assertive, or nonassertive did the response seem to you?

1 1 1 1 1 1 1 1
-4 -3 -2 -1 0 1 2 3 4
AGGRESSIVE ASSERTIVE NONASSERTIVE

2) How likely is it that you would make a response similar to the one provided if you were actually in the same situation?

1 1 1 1 1 1 1 1
-4 -3 -2 -1 0 1 2 3 4
VERY UNLIKELY VERY LIKELY

3) How comfortable would you be making a response similar to the one provided?

1 1 1 1 1 1 1 1
-4 -3 -2 -1 0 1 2 3 4
VERY UNCOMFORTABLE VERY COMFORTABLE

4) How positive or negative would you expect the outcome to be of making the response provided in the scene?

1 1 1 1 1 1 1 1
-4 -3 -2 -1 0 1 2 3 4
VERY NEGATIVE VERY POSITIVE

Example Scale:

1 1 1 1 I I I I X I
-4 -3 -2 -1 0 1 2 3 4
VERY UNLIKELY VERY LIKELY
Assertion Discrimination Test Situations

1. It's a crisp October Saturday afternoon at Dornblaser Field. A Grizzly football game is about to begin. You both have reserve seats. The crowd is cheering as the game begins with the opening kickoff. As you approach your seats, you see someone sitting in yours. You show him your ticket. He looks up and says, "The game has already started. Why don't you find another seat."

The Response: I'm sorry, but you are in my seat. You can see by this ticket that it's reserved. I'm afraid I'll have to ask you to leave.

2. You are sitting in the back seat of a taxi. You are on your way home from Johnson Bell Airport. You arrive home. The meter reads $2.50. You give the driver a five-dollar bill and wait for your change. He gives you two dollars back and thanks you, saying, "Here's your change."

The Response: Excuse me, I'm probably wrong, but I'm not sure you gave me the correct change. I sure don't mean to make a big fuss over it, so I hope you don't think I'm cheap or anything.

3. You are sitting in your front room. The door bell rings. A well-dressed man with a briefcase is at the door. He says he is conducting a T.V. survey, wanting to know the channels and programs you watch. He then describes two channels and a few extra programs you could get if you had cable T.V. You realize that this man is here to sell you a subscription for cable T.V. You are just not interested. He says, "I'd like to offer you two months for the price of one, our introductory offer for just $8.00."

The Response: I'm not interested in buying cable T.V. and if I had known that's what you were up to to begin with, I wouldn't have let you waste my time.

4. You just bought a $100 watch from a jewerly store in downtown Missoula. A week later, you happen to be walking down Higgins Avenue and notice time flashing on the Western Montana Bank Building, 10:30 a.m. You check your watch. It indicates 8:00 a.m. The second hand is not even moving. You've only had the watch a week and already it is not working right. You return to the store to exchange it for one that works. As you walk over to the clerk, he greets you and says, "May I help you?"

The Response: Yes, you charged me a $100 for this watch a week ago and I expected to get something of quality,
but this watch doesn't work. Either give me a watch that does or else refund what I paid you.

5. It's lunchtime and you're sitting in a crowded restaurant. You've just finished lunch and are now enjoying a cup of coffee. You notice a number of people waiting for places to sit. Suddenly, the waitress comes up and says, "You've been here a half an hour already. Why don't you leave so someone else can have a seat?"

The Response: Oh, I hadn't realized I've been here so long. I guess I should have been a little more considerate about making room for others. But, can't I stay just a little while longer, I'll leave as soon as possible?

6. It's late in the evening. You are in your room studying for an exam. Two friends drop by for a visit. Time passes and they are still involved in the conversation. It's getting late. You still have half of your notes and a couple of chapters from the text to review. It's beginning to look as if they'll never leave. You must get back to your studies, but your friends are making no move to leave. Suddenly, there is a lull in the conversation. One of your friends says, "You aren't saying very much."

The Response: I really hate to break this up, but I really have to study. Maybe we could continue this conversation some other time.

7. You are coming out of class, walking across the oval by Main Hall. You are a little hungry and want to catch a bite to eat at the Copper Commons. You get some coffee and a roll. It's a pleasant break between classes. Then a friend comes up to you who is always borrowing money from you but never paying it back. A dime here, a quarter there. He asks, "How about loaning me some change for coffee?"

The Response: You really amaze me. You haven't repaid one dime of what I've loaned you, yet you still ask for more money. Maybe you should be more concerned about paying people back rather than in borrowing from everyone.

8. You have rented an apartment near campus. When you signed the lease your landlord promised he'd repair the faucet in the kitchen sink, the shower nozzle and towel rack in the bathroom. Five weeks have passed and no repairs have been done. You are becoming annoyed by the inconvenience and decide to speak to the landlord. You go down to his place. He answers the door and says, "Have you come to pay this month's rent?"
The Response: Are you kidding? You have not done a thing to make the repairs that you promised. Since tomorrow is your day off, you can work on the apartment then.

9. You take your car to the gas station on Higgins Avenue for a tune-up. It should cost about 25 dollars. You return later in the day. The mechanic says, "Let's see. That's 12 dollars for parts, 8 dollars for labor, 4 dollars for an oil filter, 5 dollars for tire rotation and 5 dollars for anti-freeze. 34 dollars altogether. Will that be cash or charge?"

The Response: Neither. I told you just to give it a tune-up. I don't feel I should have to pay for all those extras unless you can convince me that they were absolutely necessary.

10. A friend in one of your classes borrowed your class notes several weeks ago and has failed to return them, forcing you to use scrap paper to take notes. Now, he is asking you for your notes again. He comes up to you after class and asks, "Say, I missed a couple of classes. Could I borrow yours notes?"

The Response: Gee, I'm awfully sorry, but I was thinking about looking at them tonight.

11. You are sitting in your assigned seat in a psychology lecture course. For two weeks you have had the misfortune of sitting next to a chain smoker. He smokes one after another, apparently not concerned about where the smoke drifts. It usually floats over by you. It's really irritating. Your eyes are even watering and you can't concentrate on the lecture material. Finally, he turns and says to you, "Do you have a light? I ran out of matches."

The Response: Sorry, I don't carry any.

12. You loaned a friend 10 dollars with the understanding that he'll pay it back the next day. It's been two months and he still hasn't returned the money. He never mentions it when he sees you. You're beginning to wonder of he intends to pay you back. You happen to see him in the Copper Commons one day and think that this is your chance to remind him. He says to you, "Here, have a seat next to me."

The Response: Thanks. By the way, when are your going to repay the ten dollars I loaned you? If you haven't got the money with you now I could stop by and pick it up this week.

13. You have taken an important essay exam in history a
course. You expect an A. When your paper is returned, you are surprised to see that you got a C. After careful inspection, you still feel that you deserve an A. It's an essay exam, however, and you are not absolutely sure. You have decided to check with your professor. You are now walking into his office with the test paper in your hand. He says, "Come in. What can I do for you?"

The Response: I know you are very busy and I really don't mean to bother you. But, would you mind if I asked you a question about the exam?

14. You are working at an 8:00 a.m. to 5:00 p.m. desk job. Today's workload is particularly heavy. You are looking forward to a relaxing evening. You are planning to go out to dinner and then to a movie. It's now 4:30 p.m. You just have enough time after work to get home, shower, and pick up your friend. You already have your theater tickets. Just then, your boss comes up and says, "Say, we're awfully busy today, I wonder if you wouldn't mind working overtime tonight until 9:00 p.m."

The Response: I'm sorry. I had previous plans for this evening. However, I could stay late another night if you will be needing me then.

15. You are relaxing, taking a short break between classes. You want to be by yourself for a few moments. A friend of yours approaches. You know that he has recently become quite active in a local religious organization very outspoken in their "mission" and beliefs. He begins to discuss his beliefs with you, wanting to argue his view. You respect his beliefs and enthusiasm, but simply are not in the mood to talk about complex theological issues at the moment. He asks, "Do you have more time to discuss these beliefs with me?"

The Response: No. This whole conversation is begin to wear on my nerves.
APPENDIX E

Classification of ADT Responses

Procedures and Written Instructions

Replies for the ADT scenes were designed to be either aggressive, assertive, or nonassertive. To validate the intended response type, each scene and reply was presented to five judges, composed of graduate students who had previous clinical or research experience with assertion training. Prior to the presentation of the situations, each judge read the following brief criteria of aggressive, assertive, and nonassertive behavior. Then, the judges were presented with the scenes and replies, and were asked to make the classifications.

Written instructions: "Please read each of the following 15 scenes and replies. Then, in the space provided in front of the reply, indicate your classification of the reply using the criteria below."

1 = aggressive
0 = assertive
-1 = nonassertive

If there is 80% agreement on the classification of a response it was accepted for the ADT. One reply failed to meet this criterion and a new reply was submitted to the judges in its place.

Criteria of Aggressive, Assertive, and Nonassertive Behavior
The social effectiveness of an individual's behavior will be a function of the specific set of circumstances surrounding it. In situations where an assertive response is appropriate, a person's behavior may fall anywhere on a continuum of aggressive to assertive to nonassertive. At times, it is a difficult task to decide where a given response falls on that continuum, as people's opinions often vary on these issues. To resolve some of the confusion a number of writers in the field of assertion training (Alberti & Emmons, 1974; Hollandsworth, 1977; Lange & Jakubowski, 1976) have specified explicit guidelines by which a response may be judged for its appropriateness. Hence, the determination of the assertiveness/aggressiveness/nonassertiveness of a response may be reasonably consistent when the following guidelines are used (condensed from the writings of the cited authors).

Criteria of Aggressive Responses:

1. Behavior that may be self-enhancing and expressive of one's feelings, but usually hurts others by minimizing their value as a person, or by not letting them make their own choices.

2. Any response which delivers either verbally or nonverbally, noxious stimulation to another individual.

3. The use of threats and punishment to gain compliance, where a threat may be a statement of pending punishment, and punishment is a form of noxious stimulation: depriving expected gains or social punishment, such as, negative evaluation and social rejection.

4. Behavior that is a put down of the recipient; it may involve belittling, or overpowering other people so that they are less able to express and defend their needs, beliefs, and rights.
5. Behavior that does not indicate that another person has the right to ask for a favor, or to express themself.

Criteria of Assertive Behavior:

1. Behavior which involves standing up for rights and expressing thoughts, feelings, and beliefs in direct, honest, and appropriate ways which do not violate another person's rights.

2. Giving another person feedback in a non-threatening, non-punitive manner which may modify their behavior.

3. Behavior suggesting self-respect, in addition to, respect of another person's right to express themself.

4. A compromise that allows each party's needs to be met, without sacrificing either party's personal integrity.

5. Behavior that is self-enhancing, suggestive that the person has chosen for himself/herself, and is an honest expression of one's feelings.

Criteria of Nonassertive Behavior:

1. Failure to express honest feelings, thoughts, and beliefs in situations where one's rights or interests are likely to be overlooked by others.

2. Behavior that is self-denying, indicates an inhibition of actual feelings, and often is accompanied by feelings of hurt or anger as a result of the inadequate response.

3. A response that is self-effacing, appeasing, or overly apologetic, as if one is avoiding conflicts at any cost.

4. Behavior that may either suggest a lack of self-respect, such as acting as though one is reprehensible for refusing a request, or a subtle lack of respect for another person's ability to handle disappointment.

5. Allowing others to choose for oneself.
<table>
<thead>
<tr>
<th>Variablea</th>
<th>Factor 1 With RASb</th>
<th>Factor 1 Without RASc</th>
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<tr>
<td>Affect</td>
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<td>Compliance</td>
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<td>Assertiveness</td>
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</table>

\textsuperscript{a}n = 75.

\textsuperscript{b}Eigenvalue of 3.63.

\textsuperscript{c}Eigenvalue of 3.36.
Table 2
Pearson Product-Moment Correlations of A-BRAT Ratings and the RASt

<table>
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<th></th>
<th>DURA</th>
<th>LOUD</th>
<th>AFFE</th>
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<th>COMP</th>
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</table>

^n = 75.

All correlations significant at p < .05 unless marked with an asterisk.

NS represents not significant.

*p < .01.
### Table 3

**Analyses of Variance**

**RAS Classification**

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<td></td>
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<td>362.28**</td>
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<td>2.09</td>
<td>2.11</td>
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<td></td>
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<td>Type of Reply (B)</td>
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<td>82.13**</td>
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<td>Type of Reply (B)</td>
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<td>81.35**b</td>
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<td>3.56**b</td>
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<td>Error (within)</td>
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<td>1.72</td>
<td></td>
</tr>
<tr>
<td>Valence</td>
<td>RAS Levels (A)</td>
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<td>2.13</td>
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<td>Error (between)</td>
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<td>2.12</td>
<td></td>
</tr>
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<td>Error (within)</td>
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<td>1.96</td>
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</tr>
</tbody>
</table>

*a_ n = 25.*

*bGieser-Greenhouse conservative F test was used with reduced degrees of freedom.*

*p < .05.*

**p < .01.*
### Table 4

**Analyses of Variance**

* **A-BRAT Classification**

<table>
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<th>F</th>
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<tbody>
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<td>2.39</td>
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<td></td>
<td>Error(within)</td>
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<td>2.08</td>
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<td>1.72</td>
<td></td>
</tr>
<tr>
<td>Valence</td>
<td>A-BRAT Levels(A)</td>
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<td>4.10</td>
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<td></td>
<td>Type of Reply(B)</td>
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*a\n = 25.

b Gieser-Greenhouse conservative F test was used with reduced degrees of freedom.

c Hotellings T test was conducted for the level of significance reported.

*p < .05.

**p < .01.
Table 5
ADT Comparisons of Means for Aggressive, Assertive and Nonassertive Replies

<table>
<thead>
<tr>
<th>Reply</th>
<th>Assertion</th>
<th>Likelihood</th>
<th>Comfort</th>
<th>Valence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggres.</td>
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<td>-1.21</td>
<td>-1.43</td>
<td>-0.55</td>
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<td>Assert.</td>
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<td>1.22</td>
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<tr>
<td>Nonass.</td>
<td>1.83</td>
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<td>0.71</td>
<td>0.58</td>
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</table>

Newman-Keuls Comparison of Means

<table>
<thead>
<tr>
<th>Comparison</th>
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<th>p &gt; .01</th>
<th>p &gt; .01</th>
<th>p &gt; .01</th>
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</thead>
<tbody>
<tr>
<td>Agg &amp; Ass</td>
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<td></td>
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<tr>
<td>Agg &amp; Non</td>
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</tr>
<tr>
<td>Ass &amp; Non</td>
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<td></td>
<td>NS</td>
<td>NS</td>
</tr>
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</table>

\[ n = 75. \]
Table 6
Newman-Keuls Comparisons of Likelihood of Giving Aggressive, Assertive, and Nonassertive Replies Among High, Moderate and Low RAS-assertive Subjects

<table>
<thead>
<tr>
<th></th>
<th>L-AGG</th>
<th>M-AGG</th>
<th>H-AGG</th>
<th>H-NON</th>
<th>M-NON</th>
<th>L-NON</th>
<th>L-ASS</th>
<th>M-ASS</th>
<th>H-ASS</th>
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</thead>
<tbody>
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<td>0.93</td>
<td>1.72</td>
<td>2.27</td>
</tr>
</tbody>
</table>

\(^a\) \(n = 25.\)

\(^b\) H-, M-, and L- represents high, moderate, and low RAS-assertiveness levels respectively.

\(^c\) AGG, ASS, and NON represents aggressive, assertive, and nonassertive replies respectively.
Table 7
Newman-Keuls Comparisons of Comfort in Giving Aggressive, Assertive, and Nonassertive Replies Among High, Moderate, and Low RAS-assertive Subjects\textsuperscript{a}

<table>
<thead>
<tr>
<th></th>
<th>L-AGG</th>
<th>M-AGG</th>
<th>H-AGG</th>
<th>L-ASS</th>
<th>H-NON</th>
<th>M-NON</th>
<th>L-NON</th>
<th>M-ASS</th>
<th>H-ASS</th>
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</thead>
<tbody>
<tr>
<td>-2.02</td>
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<td>0.94</td>
<td>0.14</td>
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<td>0.65</td>
<td>0.79</td>
<td>1.25</td>
<td>1.95</td>
<td></td>
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</table>

\textsuperscript{a} n = 25.

\textsuperscript{b} H-, M-, and L- represents high, moderate, and low RAS-assertiveness levels respectively.

\textsuperscript{c} AGG, ASS, and NON represents aggressive, assertive, and nonassertive replies respectively.
Table 8
Means for Aggressive, Assertive, and Nonassertive Replies for High, Moderate, and Low A-BRAT-assertive Subjects on Ratings of Comfort

<table>
<thead>
<tr>
<th>Level</th>
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<th>Assertive</th>
<th>Nonassertive</th>
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<td>0.45</td>
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<tr>
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<td>Low</td>
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</table>

aN = 25.
Table 9

Pearson Product-Moment Correlation of ADT Ratings on Aggressive, Assertive, and Nonassertive Replies

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<thead>
<tr>
<th>Assertion</th>
<th>Likelihood</th>
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<th>Valence</th>
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</thead>
<tbody>
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a  \( n = 75 \).

b  Agg, Ass, and Non, represents aggressive, assertive, and nonassertive replies.