SKILLS ACQUISITION AND COGNITIVE RESTRUCTURING OPERATIONS IN TRAINING ASSERTIVE BEHAVIORS

THESIS

Presented to the Graduate Council of the North Texas State University in Partial Fulfillment of the Requirements

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By

R. Craig Lefebvre, B. A.
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Behavioral and cognitive skills training for increasing assertive behavior in college students were compared to an equally credible expectancy-control. One significant multivariate function successfully discriminated between the behavioral and control groups, and between the cognitive and control groups. This function was interpreted as showing enhanced behavioral/cognitive construction competencies in the behavioral and cognitive groups. A second function, though not significant, suggested that the cognitive training resulted in more aggressive behavior.
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Assertive training was introduced into the therapist's armamentarium by Andrew Salter in 1949 as "conditioned reflex therapy." Today, assertive training reflects the evolution of both behavioral theory and technique. Both Salter (1949) and Wolpe (1958) conceived of assertive training as a method to overcome a person's "inhibitions" or "social anxieties." The mechanism through which this was achieved was based on the theory of "reciprocal inhibition" as developed by Wolpe (1958), in which assertive behaviors were viewed as inhibiting feelings of anxiety the person experienced through the process of counterconditioning. The primary means to achieve these ends consisted of such exercises as "feeling talk," "facial talk," relaxation, and systematic desensitization (Salter, 1949; Wolpe, 1958). Although both Salter and Wolpe trained assertive behaviors similarly, two major differences have been noted between them. First, Wolpe did not assume that every client he saw required assertive training, whereas Salter endorsed its use for all psychological disorders. Second, Salter viewed assertiveness as a stable trait characteristic of an individual; Wolpe, on the other hand, acknowledged the possible role of situational factors in the inhibition of assertive behaviors (Rimm & Masters, 1974).
Salter's influence has never been very strong in the field of assertive training except in retrospective analysis of its ontogeny. On the other hand, overwhelming acceptance of Wolpe's systematic desensitization procedures seems to have paved the way for the receptivity of the clinical audience to assertive training (Rimm & Masters, 1974). This has led to much research as to the efficacy of this procedure (Lazarus, 1966; Lazarus & Serber, 1968; Stevenson, 1959; Wolpe & Lazarus, 1966).

While still applied under the same generic label, "assertive training," the procedures utilized to increase social effectiveness have undergone a subtle shift in emphasis. This shift results from two recent, major changes in the conceptualization of assertive behavior. As noted earlier, Wolpe (1958) viewed assertive training as a process to countercondition anxiety experienced in social situations. Anxiety was viewed as the target of intervention, so that assertive training consisted of the active practice of relaxation during scene rehearsal and the gradation of rehearsal scenes in accordance with their anxiety-eliciting properties. As the theoretical notions of anxiety and counterconditioning came under attack by such authors as Breger and McGaugh (1965) and Bandura (1969), the process of assertive training changed likewise.

The first change occurred at the "behavioral" level. This change came about by the decrease in popularity of
Hullian and neo-Hullian theory (of which Wolpe was an integral part), and the surge of Skinnerian behaviorism in clinical psychology. Concomitant with this theoretical shift was one of method. Difficulties in expressing assertive behavior were now viewed as due to skills deficits (Eisler, 1976) rather than as due to anxiety. To correct these skills deficits, procedures such as modeling, coaching, and performance feedback were introduced into the behavior rehearsal situation (McFall & Lillesand, 1971; McFall & Marston, 1970), and the role of anxiety as inhibiting assertive behaviors was minimized. The efficacy of these techniques has been attested to by many investigators (Edelstein & Eisler, 1976; Galassi, Galassi, & Litz, 1974; Goldsmith & McFall, 1974; Hersen, Eisler, Miller, Johnson, & Pinkston, 1973). In addition, evidence has accrued that behavior rehearsal without relaxation still has a significant impact on anxiety (Rathus, 1972).

The second major change in theoretical perspectives on assertive behavior since Wolpe has been a "cognitive" one. This outlook has reflected a current movement in clinical psychology of a "third force" (Mahoney, 1977). The impetus for a cognitive perspective on assertive behavior derived from the work of Schwartz and Gottman (1976) on college students. In their task analysis of assertive behavior, Schwartz and Gottman found that (a) low-assertive people did not differ from high-assertive people in their knowledge of appropriate assertive responses, (b) in "hypothetical"
role-playing situations (i.e., a friend asks the person how he would handle a specific assertive situation), the two groups were not different, (c) however, in "real-life" role-playing situations in which the person was asked to perform an assertive behavior in response to a contrived scenario, low-assertive individuals did not do as well as their high-assertive counterparts. Analysis of their results led them to the following conclusion (Schwartz & Gottman, 1976):

The size of the effects in the present task analysis suggests that the most likely source of nonassertiveness in low-assertive subjects could be related to the nature of their cognitive positive and negative self-statements. Low-assertive subjects had significantly fewer positive and more negative self-statements than high-assertive subjects. (p. 918)

In another study that has investigated the effects of cognitive variables on assertive behavior, Eisler, Frederiksen, and Peterson (1978) found that (a) assertive individuals expected more positive consequences from their interactions with others than nonassertive individuals, (b) assertive individuals were more aware of the socially appropriate value of assertive responses, and (c) low-assertive individuals more frequently chose passive alternatives in a multiple-choice questionnaire format, possibly reflecting their belief that such responses will elicit more favorable consequences.
Other sources of support for a cognitive interpretation of assertive behavior have come from clinical studies which have examined the efficacy of cognitive procedures in the treatment of low-assertive individuals. Kazdin (1973, 1974, 1975, 1976) has demonstrated the utility of covert modeling procedures for increasing assertive behavior. In these studies, Kazdin asked college students to imagine scenes in which a model performed the desired assertive responses, and then to practice these images several times during 4 training sessions that each lasted for 1 hour. Through this sequence of studies, Kazdin demonstrated the effectiveness of this procedure in increasing overt assertive behavior, and delineated important parameters of successful treatment such as model similarity (Kazdin, 1974). He has also developed a methodology to measure the imagery sequences during training (Kazdin, 1975, 1976, 1977). Other clinical studies have been conducted by Glass (1974), Shmurak (1974), and Thorpe (1975) who found that the alteration of self-statements was more effective in reducing nonassertiveness than coaching and rehearsal. Other comparative studies have demonstrated the equality of effects for cognitive, behavioral, and combined treatment regimens (Tiegerman, 1975), or the superiority of behavioral treatments over cognitive ones (Lawrence, 1970).

Several points needed to be considered in reference to the changing conceptualizations of assertiveness. The first has been the existence in all three of these approaches of
confirmatory biases (Mahoney & DeMonbreun, 1977). This tendency towards confirming theoretical notions through empirical research has long been the "metatheory of science" (Weimer, 1977). This "justificationist" philosophy has not only entailed the notion of replicability of results, but has also placed a strong emphasis on falsifiability. Both of these conceptions have played a very influential role in the development of psychological science (Mahoney, 1974), primarily through their misunderstanding by psychologists. The assertive training literature has been strongly influenced by this philosophy, and these influences will be enumerated.

Replication of data has long been held to be tantamount to theory building. It added to the probability of an assertion being true (but of course never "proved" it). Even if supported 75% of the time, a theory could be maintained for much the same reason as any behavior on a partial reinforcement schedule. Failures to confirm (falsifications) could play one of four roles: (1) be discounted due to "chance," poor methodology, etc., (2) motivate changes in the hypotheses, (3) motivate wholesale revisions of the hypotheses, or (4) be overly reacted to in a manner termed "dogmatic falsification," characterized by the idea that while science cannot absolutely prove its propositions, it can conclusively disprove them (Weimer, 1977). However, this assumption that empirical knowledge grew only through confirmation or
refutation of hypotheses has been strongly challenged in recent years (e.g., Mahoney, 1974).

Applying this "meta-theory" to the history of assertive training research, it has been found that virtually all studies fall prey to these pitfalls. The evidence for confirmatory biases has been apparent in research which chose to select for its dependent variables only those which the theory predicted to or incorporated in its assumptions. Thus, much of the "anxiety-reduction" literature on assertive training utilized self-report measures of situation-specific anxiety and global ratings of assertive behavior. "Behavioral" literature assessed changes in component overt behaviors and self-report scales of assertiveness. "Cognitive" literature has assessed changes in self-report scales of concomitant "internal dialogues" and global behavior ratings. None of the three orientations has appeared to take into account the others when assessing for its own effects on assertive behavior. In comparative studies, this omission may have taken the form of comparing behavioral and cognitive approaches and measuring changes with only behavioral tests (Lawrence, 1970), or by comparing outcomes of behavioral and cognitive treatments on self-report inventories (Thorpe, 1975). Because of the biases inherent in many scientists that make it important to either confirm or totally disprove an hypothesis, the body of psychological knowledge has advanced at a very slow, and often chaotic, pace (Mahoney, 1974; Mahoney & DeMonbreum, 1977).
In opposition to the ideas previously presented with respect to scientific knowledge, it has been suggested that knowledge progressed through simultaneous evaluation of a number of paradigms and paradigmatic revolutions rather than through "molecular hypotheses reformulations and sequential theoretical revisions" (Mahoney, 1974, p. 291). The impact this has had on the present field of study is apparent in the sequential processes which have occurred without empirical verification. Because there is a large body of knowledge regarding "behavioral" theories of assertiveness, and since "cognitive" theories have been shown to be effective (as well as in vogue), "cognitive-behavioral" hybrid approaches to assertiveness training have appeared (Rich & Schroeder, 1977; Wolfe & Fodor, 1975). The justification for such therapies was not based on the empirical grounds of their efficacy in treatment (DiGiuseppe & Miller, 1977; Tiegerman, 1975). Rather, it may be viewed as a manifestation of a dogmatic falsificationalist position of "if we don't hang together, we will surely hang separately." What these combined approaches have eliminated is the opportunity to simultaneously evaluate two different perspectives on assertive training, having sought instead to reinforce each other against possible contradictory evidence of either one's efficacy.

A theoretical framework in which behavioral and cognitive changes were incorporated has been presented by Bandura
He has postulated that both behavioral and cognitive change was mediated by a central mechanism of "self-efficacy" (Bandura, 1977a, 1977b). It has been further presumed that these self-efficacy expectations were derived from four major sources of information: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Of these, performance accomplishments has been suggested as the most potent source for inducing behavior change (Bandura, Adams, & Beyer, 1977). What this has suggested was that personal experiences of mastery (i.e., behavioral training) would have stronger effects on both behavioral and cognitive components of assertive behavior than vicarious experiences, verbal persuasion techniques, or emotional/arousal management training.

The purpose of the present study was to evaluate two approaches to assertive training—skills acquisition (behavioral method) and cognitive restructuring (cognitive method). Three research hypotheses were formulated.

1. The skills acquisition approach would result in significantly greater behavioral change than a cognitive approach.

2. The cognitive restructuring approach would not result in significantly greater cognitive change than a behavioral approach.

3. Behavioral and cognitive training would be significantly better than an equally credible control group on both behavioral and cognitive outcome measures.
Method

Subjects

In order to obtain extra credit in their psychology classes, 24 undergraduate students volunteered for the study from the psychology department's subject pool. Each student was prescreened using the Assertion Inventory (Gambrill & Richey, 1975), and only those whose scores were above the cutoff score considered "unassertive" in the normative sample where included in the study. This reduced the sample size to 21 students, which consisted of 18 females and 3 males with an age range of 18 to 26. Females were then randomly assigned to one of three conditions, while males were distributed equally. Students within each condition were further divided into groups of three and four members, with each group conducted by one of two male doctoral clinical psychology students. After these assignments, students in each group were contacted by phone by the doctoral student who was to lead the group. They were all informed that their group would meet twice a week for 2 weeks, and that each session would last approximately 1½ hours. A meeting time for each group was then arranged that was compatible with the personal schedules of the members.

Procedure

Pretest measures. At the first session for each group, subjects were asked to complete both the Rathus Assertiveness Scale (Rathus, 1973) and the Assertion Inventory (Gambrill &
Richey, 1975). The Rathus Assertiveness Scale is a self-report inventory in which the respondents rate, on a 6-point scale, how characteristic a specified assertive or unassertive behavior is of them. Global self-ratings of self-perceived assertiveness, as well as judgments based on specific situational contexts, are elicited by 30 items (e.g., "I often don't know what to say to attractive persons of the opposite sex").

The Assertion Inventory consists of 40 interpersonal situations in which assertive behaviors are described (e.g., "Receive compliments," "Resist sales pressure"). Respondents first rate each of the items, on a 5-point scale, as to the degree of anxiety or discomfort it elicits. After completing all items, the respondents then rate them a second time as to the probability of their actually displaying the behavior.

Ten Conflict Resolution Inventory scenes (see Appendix A) were then presented to the subject and his/her behavioral responses were then either videotaped or audiotaped. These responses were later coded by independent raters who had been previously trained in the use of the Assertive Interaction Coding System, and who were blind as to the nature of the study. Following the behavioral assessment, the Assertive Self-Statement Test (Schwartz & Gottman, 1976) and the Cognitive Interference Questionnaire (see Appendix B) were completed by the subjects. Both of these instruments are designed to measure cognitive activity. The Assertive
Self-Statement Test is a 34-item questionnaire with 17 positive (e.g., "I was thinking that I am perfectly free to say no"), and 17 negative (e.g., "I was worried that the other person might become angry if I refused") self-statements which the respondents then rate as to the frequency they engaged in each ("hardly ever" to "very often").

The second cognitive measure, the Cognitive Interference Questionnaire, is an 11-item inventory which measures the frequency of cognitive activity not directly related to one's performance in the behavioral assessment (e.g., "I thought about how others have done on this task").

After the initial assessment procedure, each member of the groups was asked, based on the rationale of the treatment approach presented (see Appendices C, D, and E): (a) how credible the treatment appeared in terms of producing changes in assertive behavior, and (b) how much they personally expected to change as a result of treatment. This procedure followed that suggested by Jacobson and Baucom (1977), and was directed towards equating all groups on expectations of change and perceived credibility of the treatment programs. Following this, each subject was asked to sign an informed consent statement before the group began (see Appendix F).

Training. The first experimental condition consisted of two behaviorally oriented groups in which skills-acquisition was the focus. These behavioral groups practiced, through role-playing, increasing the amount of eye contact, "assertive"
body posture and gestures, and appropriate phrasing of verbal content. Session 1 consisted of introductions, a behavioral rationale for assertive training stressing a skills-deficit model, and familiarization with role-playing. During this initial training session, eye contact was targeted by the therapists for change. Session 2 was spent in training non-verbal assertive skills such as body posture, gesturing, facial expression, and personal space. Sessions 3 and 4 were oriented towards changing verbal content which was consistent with the rationale of the Assertive Interaction Coding System (Lefebvre, Weeks, & Hughes, 1978). In all sessions, the 10 scenes that were used in the behavioral pretest were presented for practicing these skills. In each instance, a scene was described, a verbal prompt by the antagonist given, and the response from the role-player observed by the groups. Corrective feedback was then given specific to the behaviors targeted for that session, and the scene reenacted until acceptable performance was consensually validated by the groups.

The second condition was two cognitively oriented treatment groups in which cognitive restructuring operations were instituted. Students did not have the opportunities to either role-play or receive any instructions on how to modify overt motoric or verbal behaviors. Instead, the cognitive groups were oriented towards assessing and changing the individuals' appraisals, expectations, and attributions of
situations in which assertive responses would be appropriate.

Session 1 was organized as a presentation of a cognitive formulation of nonassertive behavior in which findings presented by Schwartz and Gottman (1976) and Eisler et al. (1978) were incorporated. A group discussion was led by the therapists which focused on self-statements made by each individual when faced with situations that could elicit assertive behavior. Two major issues incorporated in this session were (a) the similarities that many of the students had in this respect, and (b) that effective behavior is impossible without effective thoughts.

Session 2 continued on the themes of Session 1 with regard to the prevalence of negative self-statements across people and situations. In this session, the therapists both assessed and restructured maladaptive appraisals and expectations that the students made when presented with each of the 10 scenes used during the pretest.

Session 3 began with further assessment of the appraisals and expectations that the students made in the Conflict Resolution Inventory situations. After this, the focus was on the students' assessing the appraisals and expectations of the antagonist in the scene. Throughout this session, the students were given the rationale that they could act more assertively by knowing or anticipating what the other person expected or wanted in a given situation.
Session 4 was directed towards integrating the earlier sessions into a scheme in which self-statements were viewed as both contributing to and a result of appraisals and expectations that one had of one's self and another in an interpersonal situation. The remainder of the session was spent in rational-emotive imagery (Maultsby, 1977) in which the groups were presented each of the 10 scenes and asked to both assess and observe their appraisals and expectations of the scene and the antagonist, then covertly role-play their responses. No attempt was made by the therapists to assess the imagery itself, nor was any help given on "how to do it right."

The third experimental condition consisted of two expectancy-credibility control groups in which a treatment that was judged by the students as being able to effect changes in their behavior but which has not been empirically demonstrated to do so, was given. The focus of these groups was insight-oriented, justified by a historical rationale in which nonassertiveness was presented as a trait that was developmental in origin. Insight and affective expression were encouraged by the therapists where suppressed anger at significant others was implicit in the approach, as well as the students' inhibition of "natural tendencies." Theoretical orientation and method closely followed that of Gestalt therapy (Perls, 1969; Perls, Hefferline, & Goodman, 1951; Polster & Polster, 1973), and was directed towards solving
interpersonal difficulties that the students presented spontaneously (e.g., breaking-up with a boyfriend, being nagged by parents, getting along better with fraternity brothers).

**Posttest measures.** Following the last treatment session, each subject was asked to return for a debriefing session in which the final assessment was conducted. The assessment procedures paralleled those done earlier, with the exception that five of the behavioral assessment scenes were different from those rehearsed in the behavioral and cognitive groups (see Appendix G). Subjects were debriefed as to the experimental nature of the training procedures and offered further training if desired.

**Results**

The initial analyses consisted of one-way ANOVAs between groups to assess their initial equality on the self-report measures (Assertion Inventory, Rathus Assertiveness Scale, and Assertive Self-Statement Test), and on the expectancy and credibility ratings for their respective groups. No significant differences were found between any groups on any of the measures. Both groups in each experimental condition were then combined to form one behavior, cognitive, and control group for subsequent analyses.

Following the analysis of the pretherapy measures, a step-wise multiple discriminant analysis (MDA) procedure to minimize Wilks' lambda was performed on all outcome measures. The result of this analysis was a significant five-variable
model ($F = 4.0779, p < .002$) shown in Table 1, which included Position Statements, Questions, Commands, Verbal Compliances, and the Cognitive Interference Questionnaire.

Table 1

Summary of Multiple Discriminant Analysis

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Variable Entered</th>
<th>Wilks' lambda</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Position Statements</td>
<td>.45246</td>
<td>.001</td>
</tr>
<tr>
<td>2</td>
<td>Questions</td>
<td>.31227</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>Commands</td>
<td>.22941</td>
<td>.000</td>
</tr>
<tr>
<td>4</td>
<td>Verbal Compliances</td>
<td>.19634</td>
<td>.001</td>
</tr>
<tr>
<td>5</td>
<td>Cognitive Interference Questionnaire</td>
<td>.16573</td>
<td>.002</td>
</tr>
</tbody>
</table>

From this model, two orthogonal discriminant functions were derived which accounted for 73% and 36% of the total variance between groups respectively (see Table 2).

Table 2

Summary of Discriminant Functions

<table>
<thead>
<tr>
<th>Discriminant Function</th>
<th>Eigenvalue</th>
<th>Relative Percentage</th>
<th>Canonical Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.86706</td>
<td>83.65</td>
<td>.861</td>
</tr>
<tr>
<td>2</td>
<td>.56030</td>
<td>16.35</td>
<td>.599</td>
</tr>
</tbody>
</table>
Standardized coefficients were then calculated for each variable in the model for each function, and these are presented in Table 3.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Interference</td>
<td>-0.27698</td>
<td>-0.12304</td>
</tr>
<tr>
<td>Questionnaire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commands</td>
<td>-0.21981</td>
<td>-0.79337</td>
</tr>
<tr>
<td>Verbal Compliances</td>
<td>0.36821</td>
<td>-0.20729</td>
</tr>
<tr>
<td>Position Statements</td>
<td>-0.29296</td>
<td>-0.36668</td>
</tr>
<tr>
<td>Questions</td>
<td>0.24642</td>
<td>-0.68389</td>
</tr>
</tbody>
</table>

Examination of the data shows that only the first discriminant function was significant (Wilks' lambda = 0.1654; $\chi^2 = 28.758$; df = 10; $p < .001$), and accounts for 83% of the variance between groups. Function 1 was defined primarily by the negative contributions of Position Statements and the Cognitive Interference Questionnaire, and the positive contribution of Verbal Compliances. A pair-wise F ratio using Function 1 to discriminate between groups showed significant differences between the behavioral and control groups ($F = 7.13$; df = 5, 14; $p < .005$), and between the cognitive and control groups ($F = 5.56$; df = 5, 14; $p < .01$). The second
function was defined by the strong negative contributions of Commands and Questions. Though not significant, Function 2 appears to be discriminating between the cognitive and behavioral groups. This interpretation was suggested by examination of the group centroids on the function in Table 4.

**Table 4**

Plots of Group Centroids on Discriminant Functions

<table>
<thead>
<tr>
<th>Group</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral</td>
<td>-0.73384</td>
<td>0.65051</td>
</tr>
<tr>
<td>Cognitive</td>
<td>-0.44257</td>
<td>-0.76755</td>
</tr>
<tr>
<td>Control</td>
<td>1.17640</td>
<td>0.11703</td>
</tr>
</tbody>
</table>

A final analysis performed to test the validity of the discriminant model consisted of generating predictions of individual subject's group membership by a linear combination of the individual's outcome scores weighted by the unstandardized discriminant function coefficients. By this method, 100% (7 of 7) of the behavioral group, 71% (5 of 7) of the cognitive group, and 86% (6 of 7) of the control group were correctly classified. These results indicate that by using the discriminant functions derived from the outcome measures, 86% of the subjects can then be correctly classified as to their group membership, demonstrating a high degree of discriminant validity for the discriminant model.
Discussion

The results of this study did not uphold the contention that a skills acquisition approach would result in significantly greater behavior change than one stressing cognitive restructuring. Both experimental conditions appeared to have produced similar changes, although the second discriminant function did indicate some qualitative differences between these two groups that will be elaborated upon later. As expected, the data indicated that the cognitive restructuring approach did not produce greater cognitive change than the skills-acquisition method. Support was also obtained for the hypothesis that both the behavioral and cognitive groups would result in significantly greater improvement than an equally credible expectancy-control group. Further, outcomes were obtained with two therapists each conducting one group within each experimental condition. Thus, the possible confounding effects of experimenter bias and therapist variables were minimized.

In general, the data provide evidence to indicate that following short-term, circumscribed assertive training targeting one specific response class (refusal of requests), outcome can be fairly well described by one (possible two) multivariate functions. The significant function in this study may be best interpreted as a behavioral/cognitive construction competency along the lines suggested by Mischel (1973), which is based on the emphasis of behavioral verbal
content codes in the discriminant model, and the inclusion of the Cognitive Interference Questionnaire. However, the contribution that this questionnaire makes to the discrimination between groups is opposite to what one would expect. Cognitive interference, as a construct, has usually been identified by cognitive-behavioral theorists as something which prevents adaptive functioning through distraction of the subject from the task at hand (Meichenbaum, 1977). However, most of this work has been based on hyperactive children and test-anxious college students where attention-to-task is clearly an important parameter in need of change. It appears, though, that in role-playing assertive situations, assertive subjects are scanning the immediate environment at a very high rate, while nonassertive subjects do very little of this. Thus, more assertive subjects in this study not only demonstrated pronounced behavioral differences from their nonassertive counterparts (which can be identified as enhanced "behavioral construction competencies"), but also exhibited higher rates of self-reported cognitive constructions as well. It is also important to note that their cognitive activity is not in the form of positive and/or negative self-statement as suggested by Schwartz and Gottman (1976); for if it were, one would expect the Assertive Self-Statement Test to be included in the discriminant analysis. Rather, cognitive appraisal of the environment appears to be a more salient variable in differentiating assertive from
nonassertive college students, and cognitive appraisal of performance a less important issue.

This latter interpretation, that cognitive appraisal of the environment contributes more to enhanced assertive behavior than cognitive appraisal of one's performance, receives further support when one notes the lack of either the Rathus Assertiveness Schedule or Assertion Inventory in the discriminant analysis. These measures of self-perceived competence in assertive situations also do not reflect the observed group differences on the behavioral measures or the Cognitive Interference Questionnaire. It may be that all subjects perceived themselves as equally competent or incompetent in assertive situations following training; however, the lack of differentiation between the groups on these measures also brings into question the validity of these measures in discriminating assertive individuals from unassertive individuals, as well as the possible inability of the treatment conditions to effect changes in self-perceived competence within a 6-hour training program. Further research would be useful to ascertain the validity of these measures' use in outcome studies, as well as to examine the effect of treatment duration on subjects' self-perceived assertiveness.

In evaluating treatment outcome based on measures of assertive verbal behavior, specific behavioral components that discriminate assertive from nonassertive individuals are the use of many verbal compliances and questions by
the unassertive people, and the use of position statements by assertive people. Only verbal compliances have been previously reported by behavioral researchers as identifying unassertive subjects (McFall & Marston, 1970), so that the present data not only point to another characteristic of this group (the use of questions), but also illuminate two specific deficits—the lack of position statements and commands. It should also be noted that previous research has used the behavioral response of making a request as a measure of assertiveness (Hersen, Eisler, Miller, Johnson, & Pinston, 1975). While this category was included in the present study, its failure to discriminate significantly between groups raises the issue of whether this variable is as valid as the use of position statements, which accounts for nearly 55% of the variance between groups.

Though not significant, the second discriminant function obtained in this study raises important questions regarding the distinction between assertiveness and aggressiveness which has been recently addressed by DeGiovanni and Epstein (1978). Inspection of the variables that loaded highly on this function suggests that it may be tapping an aggressiveness variable because of the very high relationships between it and commands. Assertiveness and aggressiveness were presented by DiGiovanni and Epstein (1978) as two distinct response classes, while the data here suggest that there is much overlap between the two. The distinction between
aggressive and assertive behavior appears viable, but because of their assumed independence has yet to be reliably assessed. The need to utilize multivariate methods to differentiate the two is strongly suggested, and specific, discrete criteria may not be forthcoming. The difference may reside in rates of response or in the intercorrelation of specific behaviors, rather than behaviors themselves.

While no significant differences existed between either experimental group on this function, there does seem to be a higher level of aggressive behavior (rate of commands) in the cognitive restructuring group. This presents the possibility that subjects in this group, though "thinking" more assertively, acted in a less-skilled fashion than the behavioral group, resulting in "standing up for their rights" to the point of infringing on the other person's rights. In contrast, the behavioral group showed no evidence that they "thought" less assertively than their cognitive counterparts.

The conclusion drawn from this analysis is that skills acquisition results in positive changes in both behavior and cognitive modalities; cognitive restructuring operations result in positive changes in only the cognitive modality, and because of the lack of change in some specific assertive skills, this is translated into aggressive behavior. The necessity of utilizing skills acquisition techniques in conjunction with a cognitive therapy for nonassertiveness appears to be indicated to circumvent the likelihood of
turning out individuals who are aggressive, rather than assertive.

In summary, the present study demonstrates the effectiveness of both behavioral and cognitive treatments for college students who have difficulty refusing requests. This should not be construed as implying that these treatments will be as effective in training other assertive behaviors (i.e., expressing emotion or making requests). In addition, both experimental treatments were found to load heavily on a behavioral/cognitive construction competencies dimension. That behavioral and cognitive effects are combined in the discriminant analysis appears to lend credibility to Bandura's (1977a, 1977b) contention of a central mechanism that is affected by both treatments, and which in turn effects both behavior and cognition.
Appendix A

Transcripts of Scenes Used in Pretherapy Assessment and as Training Scenes in the Behavioral and Cognitive Groups\textsuperscript{a}

1. You have just finished having lunch when a friend asks you to go with him/her to get something to eat. You know that he/she will not go if you refuse to accompany him/her.

2. A person you do not know very well is going away for the weekend. He/she has some books which are due at the library and he/she asks if you would bring them back for him/her so they won't be overdue. The books are heavy, and you hadn't planned on going near the library during the weekend.

3. A friend of yours owes you $5.00 she borrowed from you a week ago. Now she comes up to you on the street and asks if she could borrow another $5.00.

4. You take your car to a garage to have a new tire put on. When you return later, you find that not only has the mechanic put on the new tire, but he has also given your car a major tune-up. He quotes you the price and asks whether you will pay cash or charge it.

5. You have volunteered to help a friend of yours do some charity work. He/she really needs your help, but when he/she calls to ask you to do it tonight, you've already planned to go out.

\textsuperscript{a}Adapted from McFall & Lillesand, 1971.
6. A high school student comes to your door selling magazine subscriptions. He says it would really help if you would buy one since he is competing for a college scholarship. You can't find any especially interesting magazines on his list, and in any case, you feel they are slightly overpriced.

7. You have been standing in the ticket line at the theater for about 20 minutes. Just as you are getting close to the box office, four people, who you know only slightly, come up to you and ask if you would let them "cut in" in front of you.

8. A friend of yours is flying out of town. He/she asks if you would drive him/her to the airport which is 45 minutes away. The plane leaves at 7:30 a.m., and you have an appointment back in town at 8:00 a.m.

9. You are in a restaurant, and have ordered a steak "medium rare." When the waiter brings you the steak it is "well done," in fact, burnt. He then asks if there will be anything else you need.

10. You are on a committee of which a friend of yours is the chairperson. The project the committee is working on is not completed, although you have done more than your fair share of work. After a meeting, your friend comments about how slow some members are working, and suggests that the two of you finish the project yourselves.
Appendix B
Cognitive Interference Questionnaire

I. We are interested in learning about the kinds of thoughts that go through people's heads while they are working on a task. The following is a list of thoughts, some of which you might have had while doing the task on which you have just worked. Please indicate approximately how often each thought occurred to you while working on it by placing the appropriate number in the blank provided to the left of each question.

Example 1 = never
2 = once
3 = a few times
4 = often
5 = very often

I. __ 1. I thought about how poorly I was doing.
      __ 2. I wondered what the experimenter would think of me.
      __ 3. I thought about how I should work more carefully.
      __ 4. I thought about how much time I had left.
      __ 5. I thought about how others have done on this task.
      __ 6. I thought about the difficulty of the problem.
      __ 7. I thought about my level of ability.
      __ 8. I thought about the purpose of the experiment.
      __ 9. I thought about how I would feel if I were told how I performed.
      __ 10. I thought about how often I got confused.
Appendix C
Rationale Presented to the Subjects in the Behavioral Group

Prior to actually beginning assertive training, we believe that every person should be aware of how this training is conducted, and what we mean by "assertive" behavior.

We define "assertive" behavior as any behavior, which, when it occurs in an interpersonal situation, maximizes positive benefits for all people involved. Likewise, "assertive" behavior also minimizes negative or aversive consequences for all concerned. We believe that the ways people behave assertively or nonassertively are learned. Thus, our training procedures are designed to help you learn how to become more assertive.

The group you are in (we have found that assertive training is much more effective in groups) is devised to help you learn quickly how to become a more assertive person. The way this is done is by teaching you new behaviors that we have found are characteristic of assertive people. We do this through learning and practicing them in assertive situations. Therefore, you become an active part of this learning process; and as a result, you are the one responsible for how much progress you will make in the next two weeks.

This approach is based upon established procedures pioneered by Dr. Joseph Wolpe, and is known as Behavior
Therapy. It has been proven many times to be an effective treatment for nonassertive people by many researchers.

Assertive training is constantly undergoing close examination by psychologists in order to improve it. We are no different, so that at various times we wish to find out how you are progressing, how you like the training, and suggestions you may have to improve it. At this point we would like you now, having read this introduction, to answer a few questions for us.
Appendix D
Rationale Presented to the Subjects in the Cognitive Group

Prior to actually beginning assertive training, we believe that every person should be aware of how this training is conducted, and what we mean by "assertive" behavior.

We define "assertive" behavior as any behavior, which, when it occurs in an interpersonal situation, maximizes positive benefits for all people involved. Likewise, "assertive" behavior also minimizes negative or aversive consequences for all concerned. We believe that the ways people behave assertively or nonassertively are learned. Thus, our training procedures are designed to help you learn how to become more assertive.

The group you are in (we have found that assertive training is much more effective in groups) is devised to help you learn quickly how to become a more assertive person. The way this is done is by teaching you new ways to think about assertive situations that we have found are characteristic of assertive people. We do this through learning and practicing them in assertive situations. Therefore, you become an active part of this learning process; and as a result, you are the one responsible for how much progress you will make in the next two weeks.

This approach is based upon established procedures pioneered by Dr. Albert Ellis, and is known as Cognitive
Therapy. It has been proven many times to be an effective treatment for nonassertive people by many researchers.

Assertive training is constantly undergoing close examination by psychologists in order to improve it. We are no different, so that at various times we wish to find out how you are progressing, how you like the training, and suggestions you may have to improve it. At this point we would like you now, having read this introduction, to answer a few questions for us.
Appendix E
Rationale Presented to the Subjects in the Expectancy/Credibility Control Group

Prior to actually beginning assertive training, we believe that every person should be aware of how this training is conducted, and what we mean by "assertive" behavior.

We define "assertive" behavior as any behavior which, when it occurs in an interpersonal situation, maximizes positive benefits for all people involved. Likewise, "assertive" behavior also minimizes negative or aversive consequences for all concerned. We believe that the ways people behave assertively or nonassertively are learned. Thus, our training procedures are designed to help you learn how to become more assertive.

The group you are in (we have found that assertive training is much more effective in groups) is devised to help you learn quickly how to become a more assertive person. The way this is done is by teaching you new ways to think about yourself that we have found are characteristic of assertive people. We do this by group discussions and exploration of the causes of why you are not more assertive. Therefore, you become an active part of this learning process; and as a result, you are the one responsible for how much progress you will make in the next two weeks.

This approach is based upon established procedures pioneered by Dr. Frederick Perls, and is known as Gestalt
Therapy. It has been proven many times to be an effective treatment for nonassertive people by many researchers.

Assertive training is constantly undergoing close examination by psychologists in order to improve it. We are no different, so that at various times we wish to find out how you are progressing, how you like the training, and suggestions you may have to improve it. At this point we would like you now, having read this introduction, to answer a few questions for us.
Appendix F
Use of Human Subjects
Informed Consent

Name of Subject: ____________________________

1. I hereby give consent to Craig Lefebvre and Dr. Anita Hughes to perform or supervise the following investigational procedure or treatment:
   Participate in assertive training groups

2. I have (seen, heard) a clear explanation and understand the nature and purpose of the procedure or treatment; possible alternative procedures that would be advantageous to me (him, her); and the attendant discomforts or risks involved and the possibility of complications which might arise. I have (seen, heard) a clear explanation and understand the benefits to be expected. I understand that the procedure or treatment to be performed is investigational and that I may withdraw my consent for my (his, her) status. With my understanding of this, having received this information and satisfactory answers to the questions I have asked, I voluntarily consent to the procedure or treatment designated in Paragraph 1 above.

   ____________________________  ____________________________
   Date  ____________________________
   Signed: ____________________________  Signed: ____________________________
   Witness  Subject
Appendix F--Continued

Signed: _______ Witness _______ Signed: _______ Person Responsible _______

Relationship _______

Instructions to persons authorized to sign:

If the subject is not competent, the person responsible shall be the legal appointed guardian or legally authorized representative.

If the subject is a minor under 18 years of age, the person responsible is the mother or father or legally appointed guardian.

If the subject is unable to write his name, the following is legally acceptable: John H. (His X Mark) Doe and two (2) witnesses.
Appendix G

Transcripts of Scenes Used in Posttherapy Assessment\textsuperscript{a}

1. You have just finished having lunch when a friend asks you to go with him/her to get something to eat. You know that he/she will not go if you refuse to accompany him/her.

2. You are in a store trying on some shoes. You know what style and color you want, but the only size the salesman has is a half-size too small for you. You try them on and find that they are a little tight. The salesman then says that they will stretch some after you've worn them a few times.

3. A friend of yours owes you $5.00 she borrowed from you a week ago. Now she comes up to you on the street and asks if she could borrow another $5.00.

4. You are at work and about to take a "break." Just as you are ready to go, a co-worker, who you know only slightly, asks if you would help him/her do a job that he/she says will "only" take 15 minutes.

5. You take your car to a garage to have a new tire put on. When you return later, you find that not only has the mechanic put on the new tire, but he has also given your car a major tune-up. He quotes you the price and asks whether you'll pay cash or charge it.

\textsuperscript{a}Adapted from McFall & Lillesand, 1971.
6. A man calls you on the phone, identifying himself as an insurance agent. He offers to take you out to dinner, at the restaurant of your choice, so that he can talk to you about insurance plans.

7. A high school student comes to your door selling magazine subscriptions. He says it would really help if you would buy one since he is competing for a college scholarship. You can't find any especially interesting magazines on his list, and in any case, you feel they are slightly overpriced.

8. While a friend is away, you've been asked to take care of his/her car, and in return, you can drive it if you want. Now another friend comes over and asks if he/she can borrow the same car to drive down to Dallas and shop.

9. You are on a committee of which a friend of yours is the chairperson. The project the committee is working on is not completed, although you have done more than your fair share of work. After a meeting, your friend comments about how slowly some members are working, and suggests that the two of you finish the project yourselves.

10. You've been looking forward to a night at home, alone, so that you can catch up on some things you've let go for a while. When you get home from work, some friends of yours call and ask if you can babysit their three children tonight.
References


Hersen, M., Eisler, R. M., Miller, P. M., Johnson, M. B., & Pinkston, S. G. Effects of phenothiazines and social
skills training in a withdrawn schizophrenia.


Lazarus, A. A. Behavior rehearsal vs. nondirective therapy vs. advice in effecting behavior change. Behaviour Research and Therapy, 1966, 4, 209-212.


Rathus, S. A. An experimental investigation of assertive training in a group setting. *Journal of Behavior Therapy and Experimental Psychiatry, 1972, 3,* 81-86.


Stevenson, I. Direct instigation of behavioral changes in psychotherapy. *AMA Archives of General Psychiatry*, 1959, 1, 115-123.


