Cognitive Therapy and Research, Vol. 3, No. 3, 1979, pp. 249–262

Self-Statements and Self-Evaluations: A Cognitive-Response Analysis of Heterosocial Anxiety[1]

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In the present investigation, an inductive measurement technique was employed to test some of the shared assertions made by theories of emotional behavior and behavior change. Specifically, the effects of heterosocial anxiety and anonymity on self-statements and self-evaluation by men were investigated. It was found that the anticipation of a discussion with an unfamiliar woman resulted in (a) the spontaneous generation of more negative self-statements and self-evaluation by high than by low heterosocially anxious men, (b) high and low heterosocially anxious men emitting their self-statements, which were clearly distinguishable; and (c) the anonymity of the impending discussion affecting neither the self-statements nor the self-evaluation of high and low heterosocially anxious men. These results provide evidence that an individual's idiosyncratic cognitive responses can be assessed objectively and easily, and that the nature of the self-statements is affected by individual differences even though the individuals involved may be unaware of these effects.

The study of heterosocial problems has intensified in recent years due to the severity and prevalence of such problems and the importance of heterosocial competence for present and future adjustment. College-aged men have expressed more interest in receiving help for anxiety about meeting and interacting with women than with choosing a career or learning about their

[1]The authors would like to thank Leo Quintanar, Mark Borden, J. P. Holbrook, Charles Daubner, Joseph Sidera, Mary K. Braccio, and Maria Calabrese for their help in data collection and reduction, and Anthony G. Greenwald and Richard J. Sebastian for their comments on an earlier draft of this manuscript.

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0147-5916/79/0900-0249$03.00/0

abilities, intelligence, and personalities (Martinson & Zerface, 1970), and almost one-third of a large sample of college men and women reported that they were somewhat or very anxious about dating (Arkowitz, Hinton, Perl, & Himadi, 1978). Moreover, social anxiety is associated with physiological arousal (Borkovec, Stone, O'Brien, & Kaloupek, 1974), is prevalent in patient populations (Lawlis, 1971), and is related to a variety of other behavioral disorders including alcoholism (Kraft, 1971) and sexual dysfunction (Bandura, 1969).

Research on the nature and treatment of heterosocial difficulties has relied on three theoretical formulations: conditioned anxiety (response disinhibition), skill deficits (response acquisition), and cognitive responses and distortions. Although successful treatment programs have been developed utilizing systematic desensitization (Curran & Gilbert, 1975; Mitchell & Orr, 1974), practice dating (Christensen, Arkowitz, & Anderson, 1975), and response acquisition procedures (MacDonald, Lindquist, Kramer, McGrath, & Rhyne, 1975; Twentyman & McFall, 1975), few consistent behavioral differences in skill and anxiety between heterosocially competent and incompetent men and women have been found. This suggests taking a closer look at the third model, focusing on the role of unrealistic expectations, misinterpretation of feedback, irrational beliefs, negative self-evaluations, and self-statements in heterosocial competence and anxiety.

In one of the few treatment studies that attempted to influence cognitions, Glass, Gottman, and Shmurak (1976) demonstrated the effectiveness of a cognitive self-statement modification program for heterosocially inhibited men. Although cognitive restructuring, social skills training, and combined treatment groups significantly outperformed a waiting list control group on trained situations, only groups including a cognitive therapy component demonstrated significant generalization to heterosocial performance in test situations on which they had not been trained. On an in vivo assessment measure, men in the cognitive self-statement modification group made significantly more phone calls and a better impression on women during the calls than did men in the other groups. Kanter and Goldfried (in press) found that rational restructuring was more effective than a self-control desensitization treatment in reducing irrational beliefs and state and trait anxiety. Furthermore, rational restructuring showed a greater tendency than desensitization treatment to generalize to nonsocial situations. Despite the promising nature of these results, evidence of effective cognitive treatments provides only indirect support for the role of cognition in the development, maintenance, and elicitation of heterosocial anxiety.

It seems that although many heterosocially anxious students do not demonstrate a behavioral deficit, there is a growing body of research supporting cognitive differences between people who experience heterosocial problems and those wo do not. This has led Galassi and Galassi (in press) to

conclude that "there is more evidence that heterosocial problems are characterized (not necessarily caused) by deficits in cognitive rather than behavioral skills." For instance, high anxious people recall more negative information and interpret negative feedback less favorably than do low anxious individuals (Smith & Sarason, 1975; O'Banion & Arkowitz, in press). They tend to underestimate their own performance and expect greater negative evaluations from others, although judges' ratings of skill may not differentiate high and low socially anxious persons (Clark & Arkowitz, 1975; Smith & Sarason, 1975). Goldfried and Sobocinski (1975) also explored the nature of the cognitive component of social anxiety responses. Utilizing the Irrational Beliefs Test (Jones, Note 1) derived from the theory of Albert Ellis (1962), they found that irrational beliefs were positively correlated with self-report measures of social anxiety. In a second study, subjects high in need for approval on the Irrational Beliefs Test were more likely to become emotionally aroused after imagining themselves in situations of possible social rejection than were subjects low in need for social approval. However, these studies neither assessed directly the subjects' idiosyncratic cognitive responses (e.g., self-statements) nor examined the role of cognitive responses in the elicitation of heterosocial anxiety.

In order to more directly investigate the situational elicitation of self-relevant cognitions or self-statements and their role in mediating state anxiety and self-evaluation, we turned briefly to an independent yet applicable area of study within the field of social psychology. Researchers of attitude change have similarly argued that an individual's evaluative or affective response to a stimulus is influenced by information processing and cognitive responses (e.g., Cacioppo, Harkins, & Petty, 1980; Greenwald, 1968; Petty, Wells, & Brock, 1976).

In accordance with the cognitive response hypotheses regarding cognition and emotion, and based on the work of Meichenbaum (1977), we expected that high socially anxious men would spontaneously generate more negative self-statements than would low socially anxious men when anticipating a meeting with an unfamiliar woman. Self-statements were assessed by an inductive technique for the measurement of cognitive response developed by Brock (1967) and Greenwald (1968) and adapted for investigations of individual differences by Cacioppo and Petty (in press). Furthermore, it was expected that the favorableness of the self-statements would be related to an independent measure of self-evaluation. Confirmation of these hypotheses would provide necessary (though not sufficient) evidence that cognitive response processes (or self-statements) are important mediators of heterosocial anxiety.

For exploratory purposes, we examined the effects on the self-statements of high and low socially anxious men of varying their expected anonymity during the heterosocial interaction. Heterosocial anxiety is situa-

tionally as well as dispositionally specific and is accentuated by the anticipation or presentation of a member of the opposite sex (Borkovec et al., 1974; Landy & Gaupp, 1971) and by evaluations of performance (Watson & Friend, 1969). Thus it was expected that high socially anxious men would be affected more strongly by manipulations of their anonymity during the interaction than would low socially anxious men.

METHOD

The experiment was conducted in two phases. In the first phase subjects were tested and screened to form high and low socially anxious groups. In the second phase those high and low groups were exposed to the experimental conditions to be presented in the Independent Variables section.

Subjects and Design

The Social Avoidance and Distress Scale was administered to 137 male introductory psychology students (ages 18-21) as part of an experiment on communication. The administration of the Social Avoidance and Distress was conducted in large groups in a classroom. To disguise the purpose of the testing, subjects were also given several unrelated instruments to complete in the same setting. Each man whose score was among the top or bottom 30 scores on the Social Avoidance and Distress Scale was recruited for participation in the experiment. As a result of no-shows, 29 subjects high on social anxiety and 29 low on social anxiety participated. Subjects within each of the high and low social anxiety groups were assigned randomly to either meet an undergraduate female face to face (low anonymity) or talk to her over an intercom (high anonymity). Hence, a 2 (Social Anxiety: high vs. low) X 2 (Anonymity: high vs. low) between-subjects factorial design was employed.

Independent Variables

Social Anxiety. As stated previously, prior to their participation in the experimental manipulation potential subjects completed the 28-item Social Avoidance and Distress Scale (Watson & Friend, 1969). Subjects were divided into two groups, *high social anxiety* (M = 16.8) and *low social anxiety* (M = 2.1)

Anonymity. In order to assess potential differences between high and low socially anxious males, the degree of anonymity was manipulated. All

subjects were told that they would interact with an undergraduate female. However, in the high anonymity conditions, each subject was told that the discussion would be conducted via an intercom system with a female student who was in the adjoining room, that no identifying information such as names or addresses would be discussed, and that he would not actually meet his partner face to face. In the low anonymity conditions, each subject was told the discussion would be conducted in the adjoining room in which the female student was located. The subject was asked his name; after the subject responded, he was told that he would be introduced to his partner by name, that he would be seated at a second chair at her table, and that they then would engage in the discussion face to face.

Procedure

Subjects were tested individually in a laboratory room, which was furnished with a small conference table and two chairs. In addition, an intercom was situated on the desk table with wires leading through the wall to another room. Each subject was told that (a) the research concerns "interpersonal dynamics," (b) he was to discuss the issue of undergraduate life on college campuses with a female student, (c) the female student was selected from a different department to reduce the likelihood that they had met previously, (d) the discussion should last approximately 5 minutes, (e) he was not responsible for *what* was discussed since that was the responsibility of his partner, and (f) the discussion itself would not be monitored.

All subjects were told that prior to and after their discussion, each partner would be asked to complete a questionnaire. The experimenter explained that he had to retrieve the questionnaire from his office and that he would return with it in a few minutes. The subject was asked to sit quietly until the experimenter returned with the questionnaire. The experimenter then exited, retrieved a questionnaire from an adjoining room, and waited 3 minutes before returning. (This 3-minute interval provided time for subjects, if motivated, to generate positive and negative self-statements.) The experimenter then administered the dependent-variable booklet (i.e., the "prediscussion questionnaire"). An actual conversation never occurred although subjects were led to believe that it would. All subjects were completely debriefed.

Dependent Variables

Thought Listing. Cacioppo and Petty (in press) have discussed a method for eliciting and scoring cognitive responses. In general, the procedure involves asking subjects to list the thoughts they had had during a

given (immediately preceding) time interval. In the present study, subjects were instructed to test all thoughts that occurred to them during the 3 minutes immediately prior to the anticipated interaction.

The following instructions were read by all subjects:

> We are now interested in everything that went through your mind about the upcoming discussion. Please list these thoughts, whether they were about yourself, the situation, and/or others; whether they were positive, neutral, and/or negative. Any case is fine. IGNORE SPELLING, GRAMMAR, AND PUNCTUATION. You will have 2.5 minutes to write. We have deliberately provided more space than we think people will need, to insure that everyone would have plenty of room. Please be completely honest. Your responses will be anonymous. The next page contains the form we have prepared for you to use to record your thoughts and ideas. Simply write down the first thought you had in the first box, the second, in the second box, etc. Please put only one idea or thought in a box.

Twelve 8-inch (20.32-cm) horizontal lines each about 1 inch (2.54 cm) from the one above created the boxes in which subjects were to list their thoughts. After 2.5 minutes, the experimenter asked the subject to continue through the booklet.

In the next page of the booklet, subjects were instructed to go back and rate their thoughts:

> We would now like for you to turn back to the page on which you wrote down your thoughts. We would like you to go back and rate each of the ideas that you wrote down. In the left margin beside each idea that you wrote down, we would like to know if that idea was (+) favorable toward yourself, (–) unfavorable toward yourself, or (0) neither favorable nor unfavorable toward yourself. If the idea that you wrote down seemed to be favorable toward yourself, you should place a + (plus) in the left margin beside the idea; if the idea you wrote down seems unfavorable toward yourself, you should place a – (minus) in the left margin beside that idea; and if the idea was neither favorable nor unfavorable, or had nothing to do with yourself, you should put a 0 (zero) in the left margin. Please go back now and rate each idea listed by putting a +, –, or 0 in the left margin. Be sure to rate each thought that you wrote down. Please also be honest in your ratings.

Semantic Differential. In order to assess the subjects' attitudes toward themselves and toward the impending interaction, subjects completed two semantic differential scales. Both scales contained the same items presented in two random orders. The scales included four items from each of the evaluative, potency, and activity dimensions (Osgood, Suci, & Tannenbaum, 1958). The items in the evaluative dimension included good-bad, kind-cruel, pleasant-unpleasant, and valuable-worthless. Potency dimension items included heavy-light, hard-soft, strong-weak, and large-small. Finally, activity dimension items were excitable-calm, quick-slow, sharp-dull, and active-passive. All scales were cast in a 7-point format with the direction of each scale randomly determined. The scores for each dimension were computed by summing the subjects' responses across the four items.

Ancillary Measures

Subjects responded to the state anxiety scale of Spielberger's State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1969) and the Self-Monitoring Scale (Snyder, 1974). These were completed last.

Judges' Ratings of Thought Listing

In addition to the subject's ratings, the thoughts listed were submitted to two judges for scoring as either positive, negative, or neutral/irrelevant self-statements. Judges were unaware of the conditions to which subjects were assigned. Rated as "negative self-statements" were statements involving the self that mentioned specific unfavorable consequences, statements of alternative activities, challenges to the validity of the situation, and statements of negative affect. Rated as "positive self-statements" were statements involving the self that mentioned specific favorable consequences, statements eliminating alternative activities, statements that supported the validity of the situation, and statements of positive affect. All other statements were scored as being neutral/irrelevant. Examples of positive self-statements included: "Hope the discussion is about alcohol so I can get away from generalities in the questionnaire and express my views" and "I can't wait." Examples of negative self-statements included: "I'm a little nervous, but not much" and "Will I 'choke' when trying to discuss?" Examples of neutral/irrelevant self-statements included: "I really have no idea what to expect so I'm pretty neutral" and "I wonder what she will look like."

Scores for both judges' and subjects' ratings of thoughts were computed by summing the number of statements in each category for each subject. Thus each subject had a positive, negative, and neutral score based on their own ratings and judges' ratings.

RESULTS[3]

Self-Statements and Self-Ratings

Subjects were willing and able to understand and follow the thought-listing instructions. Furthermore, an independent judge was able to score

[3]A Social Anxiety X Anonymity multivariate analysis of variance with all dependent measures entered yielded a highly significant effect for Social Anxiety ($F(15,40) = 22.05$, $p < .001$). No other significant effects were obtained. Since the total set of dependent measures can be clustered into theoretically relevant groupings of variables, more specific multivariate and univariate analyses of variance were performed, the results of which are reported in the text.

the listed thoughts according to the favorableness/unfavorableness of each cognitive response toward the "self." Rescoring of the first judge's ratings revealed a second judge to be in agreement with the ratings of the first judge on over 95% of the responses examined ($r = .952, p < .01$); disagreements between the judges were resolved easily through discussion. Thus the thought-listing procedure appears to be a workable means of assessing self-statements.

A two-way (Social Anxiety X Anonymity) multivariate analysis of variance with the three self-statement ratings of the judges (positive, neutral/irrelevant, and negative) and three self-ratings (evaluation, potency, and activity) as dependent variables yielded a significant main effect for Social Anxiety ($F(6,49) = 3.32, p < .01$).

Univariate analyses of variance were performed next for measures of the self-statements and self-ratings. (The means are summarized in Table I.) The results provided support for the predictions concerning cognitive response and heterosocial anxiety. High socially anxious men spontaneously generated more negative self-statements ($F(1,54) = 7.25, p < .01$), and

Table I. Effects of Heterosexual Social Anxiety and Anonymity on Mean Cognitive Responses and Ratings of the Self and the Impending Discussion

	Heterosocial anxiety, anonymity			
	High		Low	
Measure[a]	High	Low	High	Low
Self-statements				
Negative	1.86	2.07	1.00	1.33
Neutral	3.07	2.67	3.29	3.40
Positive	1.50	1.53	2.00	1.27
Ratings of self				
Evaluation	22.28	22.33	24.57	23.93
Potency	16.07	16.87	19.07	17.53
Activity	17.29	19.40	21.36	19.80
Ratings of discussion				
Evaluation	19.21	20.20	21.71	23.20
Potency	16.57	16.00	17.36	17.20
Activity	16.57	18.40	19.00	18.73
Ancillary measures				
State anxiety	59.07	57.60	65.29	65.53
Self-monitoring	11.64	13.53	12.86	13.93

[a] In all but the entries for the measure of state anxiety (in which case, the opposite applies), the larger the entry, the greater the attribute measured.

rated themselves more negatively ($F(1,54) = 7.29$, $p < .01$), less potent ($F(1,54) = 8.09$, $p < .01$), and less active ($F(1,54) = 6.06$, $p < .02$) than did low anxious men. Additionally, a Social Anxiety X Anonymity interaction was found for the self-ratings of activity ($F(1,54) = 4.32$, $p < .05$). The application of the Newman-Keuls procedure for pairwise comparisons revealed that high socially anxious men rated themselves as more active when they were anticipating a face-to-face rather than an anonymous interaction with an unfamiliar woman ($p < .05$), whereas the low socially anxious men were unaffected by the presumed anonymity of the impending interaction. Finally, a 2 X 2 analysis of variance was performed for the ratings of cognitive responses (i.e., positive, neutral/irrelevant, and negative responses about the self) provided by the subjects. The analysis revealed that the subject-rated self-statements were affected by neither the Social Anxiety nor the Anonymity factor.

Within-cell correlations were calculated to assess the association between self-statements and self-evaluation. These analyses revealed that the greater the number of negative self-statements, the lower the self-evaluation: this effect was evident for both judge-scored ($r = -.32$, $p < .05$) and subject-scored ($r = -.34$, $p < .05$) self-statements. Neither the number of positive nor the number of neutral/irrelevant self-statements was related to self-evaluation.[4]

Ratings of the Impending Discussion

A two-way multivariate analysis of variance with the ratings of the impending discussion (evaluation, activity, and potency) as dependent variables yielded a significant main effect for Social Anxiety ($F(3,52) = 4.01$, $p < .02$). Univariate tests revealed that high socially anxious men rated the impending discussion more negatively than did low socially anxious men ($F(1,54) = 9.08$, $p < .01$—see Table I). No other effects reached acceptable levels of statistical significance.

Within-cell correlations were calculated among the evaluations of the impending discussion, self-evaluations, and self-statements. The analyses yielded a single significant correlation: evaluations of the self and of the impending discussion were related positively ($r = .43$, $p < .05$). The absence of a relationship between the subjects' evaluation of the discussion and their

[4] Within-cell correlations were calculated too among the judge- and subject-scored self-statements. The results showed that subjects and judges were in general agreement as to what constituted a positive ($r = +.59$, $p < .05$), neutral ($r = +.70$, $p < .05$), and negative ($r = +.64$, $p < .05$) self-statement. Note that although these correlations are substantial, they display much less concordance than did two trained judges who scored the self-statements independently.

self-statements is of interest. It suggests that the favorableness of a person's self-statements is predictive only of the person's evaluation of the object of the self-statement (in this instance, the "self"), not of a person's general mood or evaluative disposition.

Ancillary Measures

Measures of state anxiety and self-monitoring behavior also were obtained (see Table I). A two-way multivariate analysis of variance with these measures as dependent variables yielded a significant main effect for Social Anxiety ($F(2,53) = 6.93$, $p < .01$). Univariate analyses of variance indicated high socially anxious men displayed more state anxiety ($F(1,54) = 10.15$, $p < .01$) but were equal in self-monitoring behavior ($F < 1$) when compared to low socially anxious men. No other effects were significant.

DISCUSSION

The present study was designed to provide information about the following hypotheses: (a) High socially anxious men would generate more negative self-statements than would low socially anxious men when anticipating a meeting with an unfamiliar woman, and (b) the favorableness of the self-statements would be related to self-evaluation. The results of our investigation provided evidence consistent with these hypotheses. We found that while awaiting to interact with an unfamiliar woman, high socially anxious men generated more negative self-statements, rated the impending discussion and rated themselves more negatively, rated themselves as less potent and less active, and reported more state anxiety than did low socially anxious men. Furthermore, negative self-statements were related significantly to self-evaluation but were not related to the more general evaluation of the discussion. Together, these results are consistent with the notion that cognitive response processes are important mediators of heterosocial anxiety. Of course, these results are not definitive regarding the causal role of cognitive responses in self-evaluation and heterosocial anxiety. But the technique employed here for measuring cognitive responses provides a means of studying experimentally this issue in future research. Furthermore, the results of several existing studies at least suggest that the nature of self-relevant cognitive responses determines *in part* the current evaluations of the self. For instance, Mirels and McPeek (1977) recently found that subjects who generated self-laudatory essays rated themselves more favorably than did subjects who wrote in support of a social proposition. And in an unpublished experiment (Gergen & Gibbs, Note 2), subjects constructed talks

about themselves that would gain the approval of a hypothetical prospective employer. Regardless of whether or not the talk was actually delivered, subjects' self-evaluations were increased by its formulation.

Support for the potential significance of cognitive response in the *maintenance* of heterosocial anxiety is provided by the obtained interaction of level of social anxiety and anonymity for the measure of activity of the self. This finding is consistent with past research demonstrating that high and low socially anxious men differ less behaviorally while interacting with women than in the frequency with which they expose themselves to heterosexual interactions and in the affective consequences of awaiting and effecting these heterosexual interactions (Arkowitz, Lichtenstein, McGovern, & Hines, 1975; Borkovec et al., 1974; Glasgow & Arkowitz, 1975; Glass et al., 1976). Behavioral avoidance reduces the aversive subjective reactions of heterosocially anxious men, thereby reinforcing the initial negative self-statements (i.e., instrumental avoidance learning). In this manner, seemingly nonrewarding asocial behavior may be reinforced and hence maintained.

Objective and Subjective Assessments of Cognitive Response

Skepticism has been expressed recently about the ability of individuals to identify the stimuli that elicit cognitive or behavioral responses (cf. Nisbett & Bellows, 1977; Nisbett & Wilson, 1977). However, an individual's ability to report the *cause* of a cognitive or behavioral response neither alters the fact that the response was elicited nor necessarily affects the measurement of function of the response (cf. Ericsson & Simon, Note 3). Thus subjects and judges need not agree on the ratings of cognitive response, just as content analyses and introspections need not yield the same result. Similarly, the inability of individuals to identify the reasons for or the nature of their thoughts need not imply that their thoughts are unimportant or mere epiphenomena (cf. Cacioppo & Petty, 1979). Instead, the discrepancy between objective and subjective (e.g., self-) ratings of cognitive response may provide yet additional information about the cognitive dynamics of an individual.

For instance, we found that high and low socially anxious men rated their listed thoughts similarly, but independent judges, who were unaware of the experimental conditions to which subjects were assigned, rated the thoughts listed by high and low socially anxious individuals as being distinctive. To our knowledge, this is the first investigation of *individual differences* in the generation and judgment of cognitive response using the thought-listing procedure. The finding that high and low socially anxious individuals rated their self-statements as equally favorable was unexpected,

but perhaps suggests that each group has a unique "frame of reference" for what constitutes a normal or favorable self-statement. While additional empirical work is necessary, it is interesting to note that several previous studies have found high socially anxious individuals to possess more negative expectations regarding social interactions and more negative generalizations about themselves than low socially anxious individuals (Clark & Arkowitz, 1975; Smith, 1972; Smith & Sarason, 1975; O'Banion & Arkowitz, in press). This difference in self-schema may provide the basis for the unique frames of reference postulated to exist for high and low socially anxious individuals. If this hypothesis is borne out by future research, it would underscore the clinical importance of treating the supporting cognitive structures for the self-statements per se. In this endeavor, the self-statements are construed as a means of assessing and altering these otherwise inaccessible cognitive structures (cf. Cacioppo et al., 1980).

These findings are consistent with a growing body of literature that indicates people are active (though sometimes ignorant) constructors of their realities with developed generalizations about themselves, derived from past experience and maintained by present ideation, which function to organize and guide the processing of personally relevant information. It is hoped that in demonstrating a technique for the independent assessment of spontaneous self-statements, the place of cognition in a theory of the *individual* will be facilitated.

REFERENCE NOTES

1. Jones, R. G. *A factored measure of Ellis' irrational belief system, with personality and maladjustment correlates.* Unpublished doctoral dissertation, Texas Technological College, 1968.
2. Gergen, K. J., & Gibbs, M. *Role playing and modifying the self-concept.* Paper presented at the meeting of the Eastern Psychological Association, Atlantic City, April 1965.
3. Ericsson, K. A., & Simon, H. A. *Retrospective verbal reports as data.* Unpublished manuscript, Carnegie-Mellon University, Pittsburgh, 1978.

REFERENCES

Arkowitz, H., Hinton, R., Perl, J., & Himadi, W. Treatment strategies for dating anxiety based on real-life practice. *Counseling Psychologist,* 1978, *7,* 41-46.

Arkowitz, H., Lichtenstein, E., McGovern, K., & Hines, P. The behavioral assessment of social competence in males. *Behavior Therapy,* 1975, *6,* 3-13.

Bandura, A. *Principles of behavior modification.* New York: Holt, Rinehart & Winston, 1969.

Borkovec, T. D., Stone, N. M., O'Brien, G. T., & Kaloupek, D. G. Evaluation of a clinically relevant target behavior for analog outcome research. *Behavior Therapy,* 1974, *5,* 503-511.

Brock, T. C. Communication discrepancy and intent to persuade as determinants of counterargument production. *Journal of Experimental Social Psychology,* 1967, *3,* 269-309.

Cacioppo, J. T., Harkins, S. G., & Petty, R. E. The nature of attitudes and cognitive responses and their relationships to behavior. In R. E. Petty, T. M. Ostrom, & T. C. Brock (Eds.), *Cognitive responses in persuation: A text in attitude change.* Hillsdale, N.J.: Erlbaum, 1980.

Cacioppo, J. T., & Petty, R. E. The effects of message repetition and position on cognitive response, recall, and persuasion. *Journal of Personality and Social Psychology,* 1979, *37,* 97-109.

Cacioppo, J. T., & Petty, R. E. Inductive techniques for cognitive assessment: The thought listing procedure. In T. V. Merluzzi, C. R. Glass, & M. Genest (Eds.), *Cognitive assessment.* New York: Guilford Press, in press.

Christensen, A., Arkowitz, H., & Anderson, J. Beaus for Cupid's errors: Practice dating and feedback for college dating inhibitions. *Behaviour Research and Therapy,* 1975, *13,* 321-331.

Clark, J., & Arkowitz, H. Social anxiety and the self-evaluation of interpersonal performance. *Psychological Reports,* 1975, *36,* 211-221.

Curran, J. P., & Gilbert, F. S. A test of the relative effectiveness of a systematic desensitization program and an interpersonal skills training program with date anxious subjects. *Behavior Therapy,* 1975, *6,* 510-521.

Ellis, A. *Reason and emotion in psychotherapy.* New York: Lyle Stuart, 1962.

Galassi, J. P., & Galassi, M. D. Modification of heterosocial skills deficits. In A. S. Bellack & M. Hersen (Eds.), *Research and practice in social skills training,* in press.

Glasgow, R. & Arkowitz, H. The behavioral assessment of male and female social competence in dyadic heterosexual interactions. *Behavior Therapy,* 1975, *6,* 488-498.

Glass, C., Gottman, M., & Shmurak, S. H. Response-acquisition and cognitive self-statement modification approaches to dating-skills training. *Journal of Counseling Psychology,* 1976, *23,* 520-526.

Goldfried, M. R., & Sobocinski, D. Effect of irrational beliefs on emotional arousal. *Journal of Consulting and Clinical Psychology,* 1975, *43,* 504-510.

Greenwald, A. G. Cognitive learning, cognitive response to persuasion, and attitude change. In A. G. Greenwald, T. C. Brock, & T. M. Ostrom (Eds.), *Psychological foundation of attitudes.* New York: Academic Press, 1968.

Kanter, N., & Goldfried, M. Relative efficacy of rational restructuring and self-control desensitization in the reduction of interpersonal anxiety. *Behavior Therapy,* in press.

Kraft, T. Social anxiety model of alcoholism. *Perceptual and Motor Skills,* 1971, *33,* 797-798.

Landy, F. J., & Gaupp, L. A. A factor analysis of the fear survey schedule-III. *Behaviour Research and Therapy,* 1971, *9,* 89-93.

Lawlis, G. F. Response styles of a patient population on the Fear Survey Schedule. *Behaviour Research and Therapy,* 1971, *9,* 95-102.

MacDonald, M. L., Lindquist, C. U., Kramer, J. A., McGrath, R. A., & Rhyne, L. D. Social skills training: Behavior rehearsal in groups and dating skills. *Journal of Counseling Psychology,* 1975, *22,* 224-230.

Martinson, W. D., & Zerface, J. P. Comparison of individual counseling and a social program with nondaters. *Journal of Counseling Psychology,* 1970, *17,* 36-40.

Meichenbaum, D. *Cognitive-behavior modification: An integrative approach.* New York: Plenum Press, 1977.

Mirels, H. L., & McPeek, R. W. Self-advocacy and self-esteem. *Journal of Consulting and Clinical Psychology,* 1977, *45,* 1132-1138.

Mitchell, K. R., & Orr, T. E. Note on treatment of heterosexual anxiety using short-term massed desensitization. *Psychological Reports,* 1974, *35,* 1093-1094.

Nisbett, R. E., & Bellows, N. Verbal reports about causal influences on social judgments: Private access versus public theories. *Journal of Personality and Social Psychology,* 1977, *35,* 613-624.

Nisbett, R. E., & Wilson, T. D. Telling more than we can know: Verbal reports on mental processes. *Psychological Review,* 1977, *84,* 231-259.

O'Banion, K., & Arkowitz, H. Social anxiety and selective memory for affective information about the self. *Social Behavior and Personality,* in press.

Osgood, C., Suci, G., & Tannenbaum, P. *The measurement of meaning.* Urbana: University of Illinois Press, 1958.

Petty, R. E., Wells, G. L., & Brock, T. C. Distraction can enhance or reduce yielding to propaganda: Thought disruption versus effort justification. *Journal of Personality and Social Psychology,* 1976, *34,* 874-884.

Smith, R. E. Social anxiety as a moderator variable in the attitude similarity-attraction relationship. *Journal of Experimental Research in Personality,* 1972, *6,* 22-28.

Smith, R. E., & Sarason, I. G. Social anxiety and the evaluation of negative interpersonal feedback. *Journal of Consulting and Clinical Psychology,* 1975, *43,* 429.

Snyder, M. The self-monitoring of expressive behavior. *Journal of Personality and Social Psychology,* 1974, *30,* 526-537.

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. *The state-trait anxiety inventory.* Palo Alto: Consulting Psychologists Press, 1969.

Twentyman, C. T., & McFall, R. M. Behavioral training of social skills in shy males. *Journal of Consulting and Clinical Psychology,* 1975, *43,* 384-395.

Watson, D., & Friend, R. Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology,* 1969, *33,* 448-457.