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HETEROSOCIAL VS. HETEROINTERACTIVE SKILLS: ARE THERE DIFFERENT SOCIAL SKILLS FOR DIFFERENT SITUATIONS? SOCIAL SKILLS ASSESSMENT BY THE USE OF ROLE PLAY.

A Dissertation Presented

by

LINDA DEBRA SCOTT

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May, 1986

Psychology

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LINDA DEBRA SCOTT

Approved as to style and content by:

Marian L. MacDonald, Chairperson

Castellano B. Turner, Member

James R. Averill, Member

Norma J. Anderson, Member

Seymour M. Berger, Chair
Department of Pychology

DEDICATION

In Memory of

Dr. Ernest S. Paterson

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A 6-year-old client at Judge Baker said during our last session, "Linda, I am so glad you are gonna be Dr. Linda soon. I am just not sure how much longer I can 'tolegate' having to call you just Linda." To Malene, you won't have to 'tolegate' it anymore!

ABSTRACT

Heterosocial vs. Heterointeractive Skills: Are There Different Social Skills for Different Situations? Social Skills Assessment by the Use of Role Play

May, 1986

Linda Debra Scott, B.S., Trinity College

M.S., University of Massachusetts;

Ph.D., University of Massachusetts

Directed by: Professor Marian L. MacDonald

Heterosocial interactions are those in which men interact with women in a dating-type situation. Heterointeractive interactions are those in which men interact with women in nondating-type or business situations. Very little research has looked at how men interact differently in the two types of situations.

In this study, 61 low or "conservative" scorers and 63 high or "liberal" scorers on the Attitudes Towards Women Scale (Spence & Helmrich, 1972a) participated in either a business situation or a social situation role play with either a male or female confederate. They were rated on overall global social skills and 14 specific behaviors: eye

contact, subject talk time, facilitative gestures, confederate talk time, nervous gestures, open-ended questions, closed questions, silences, laughter, initiations, subject disclosures, physical attractiveness, controlling the scene, and breaking the role. The most significant finding was that subjects did differ in their overall global social skills rating depending on whether they interacted with a male or female confederate, whether it was a business or social situation role play, and whether they had liberal (high) or conservative (low) attitudes towards women. Conservative/low scorers on the Attitudes Towards Women Scale were rated as having the lowest overall global social skills when they interacted with a female confederate in a business role play situation. Male subjects with high/liberal attitudes towards women were rated as having better social skills than low/conservative subjects. Implications of the differences between heterosocial and heterointeractive skills in nondating/business situations were discussed.

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C H A P T E R I

INTRODUCTION

This study represents an attempt to assess changing role responses by men and women as a result of changing role definitions and role expectations of women. More specifically, this is an analysis of the interactional patterns between males and females in different settings. Through the use of techniques such as role play, methods were devised to assess the social skills of individuals interacting with members of their own sex and with members of the opposite sex, both in a social situation and in a wrok situation. The author was particularly interested in attempting to determine whether social skill responses are different in these two settings. In addition, the study was concerned with an individual's responsiveness to members of the same sex as opposed to members of the opposite sex. Subjects were male undergraduate students attending a large New England state-supported university.

The findings from such a study might prove to be valuable to a society that is redefining relationships between males and females. The findings might be helpful both in breaking down stereotyped attitudes and in practical areas such as training lawyers in jury selection techniques.

The importance of such a study as this is underscored by the rapid changes now underway in our society, particularly for women.

Role Playing in Social Skills Assessment

An individual must possess adequate social skills to interact appropriately with other people. Individuals who have not learned to successfully interact with other individuals are said to be "lacking in social skills." Treatment programs have been developed to teach social skills -- including assertiveness and heterosocial dating behaviors -- to individuals. Initially, social skills training was used predominantly with institutionalized psychiatric patients (Hersen & Bellack, 1978; Eisler, Hersen, Miller & Blanchard, 1975), but now it is used with numerous populations. Social skills training and assessment have been found to be successful with high school students (Sarason & Sarason, 1982); alcoholics (Miller, Hersen, Eisler & Hilsman, 1974); married couples (Jacobson, 1982); mentally retarded persons (Perry & Cerrato, 1977); depressed women (Libet & Lewinsohn, 1973); shy males (Twentyman & McFall, 1975); low assertive women (MacDonald, 1979); minimal dating men (Arkowitz et al., 1975; Curran, 1977); minimal dating women (Greenwald, 1977); and emotionally disturbed children (Matson et al., 1980). Even with all

these treatment successes, however, it is still extremely difficult to understand what is actually being treated. What are social skills, and how are they defined?

Defining social skills seems to be one of the major problems within the field of social skills training and assessment. There is no single universal definition of what social skills are, but there are many definitions of what social skills are not. Twentyman and McFall (1975), in their work with shy male college students, used the term social skills to refer to behavior problems where performance discrepancies are caused by a critical skill deficit. They suggested that these problems can be overcome through skills training. Libet and Lewinsohn (1973), in their work with depressed individuals, defined social skills as the ability to both emit positively reinforcing behaviors towards others and to avoid emitting behaviors that invite punishment. Weiss (1968) broadly defined social skills as communication, understanding interest, and rapport between speaker and listener.

Argyle and Kendon (1967) have developed a model in which they attribute a failure in social skills to a breakdown or impairment in some part of a continuously modified feedback cycle of goal pursuit to obtain rewards. When the cycle breaks down, the individual fails to achieve targets, which leads to an abnormally developed set of behavior patterns and negative outcome. Continuing from

this active cause and effect viewpoint, Trower, Bryant and Argyle (1978) said that an individual is socially inadequate if he or she is unable to affect the behavior and perception of others in a way that is socially acceptable. A socially unskilled person will appear annoying, cold, uninterested, isolated, or inept and will be generally unrewarding to others.

Hersen and Bellack (1977) have developed a working definition of social skills based on their work with psychiatric patients. They stated that social skills deficits are due to a deficient learning history during which the appropriate responses were never integrated into the individual's repetoire, the inhibition of behavior because of the disruptive effects of anxiety, or institutionalization during which disuse of social responses resulted in the patient's being unable to reproduce a part of his or her past repetoire. For the institutionalized patient, social skills may include being able to stand up for one's own rights, to get a job, to accomplish good grooming and hygiene, and to maintain personal relationships. Hersen and Bellack (1977) preferred a situationally specific concept of social skills rather than a global definition. The overall effectiveness of the behavior in specific social situations is most important. The individual must be able to express both positive and negative feelings in the interpersonal context without loss

of social reinforcement. In 1979, Bellack and Hersen elaborated that social skills for interpersonal behavior are best derived from learned abilities and that poor interpersonal skills result from faulty training or poor parent modelling. Parents should give direct instruction concerning proper social skills such as "Don't talk with your mouth full" or "Look at me when you talk to me." Bellack (1981) stated that although social skills have been defined for particular populations, the definitions all have certain commonalities:

> 1. Performance depends on discrete verbal and nonverbal components (Trower et al., 1978).
>
> 2. Parameters which define adequate behavior and their configuration vary according to the situation. Social skills are situationally specific (Eisler, Hersen, Miller & Blanchard, 1975).
>
> 3. Various component elements which comprise adequate social behaviors are learned response capabilities. Socially adept individuals know the how, when, and where to vary their responses.
>
> 4. When specific skill deficits can be identified, they can be targeted and remediated by training.

All of these definitions describe what represents a lack of social skills, but they do not accurately state what are <u>good</u> social skills. It seems that it is much easier to show someone with poor social skills than it is to explain why the person is not socially skilled. Curran (1979b, p.

321) said, "The definitional problem most succinctly stated is that everyone seems to know what good and poor social skills are, but no one can define them adequately." What behaviors constitute good social skills? Are they appropriate across situations, or are there different social skills for different interpersonal situations? How are these behaviors assessed?

Various strategies have been used to assess social skills, such as clinical interviews, taped interactions, self-report inventories, physiological measures, self-monitoring, peer ratings, behavioral diaries, in vivo or waiting room interactions, live behavioral observations, and observed role play situations. Bellack and Hersen (1979, pp. 77-80) attempted to assess social skills using four questions:

> 1. Does the individual manifest some dysfunctional interpersonal behavior?
>
> 2. What are the specific circumstances (i.e., situations in which the dysfunction is manifested)?
>
> 3. What is the (probable) source of the dysfunction?
>
> a. interference by other types of behavior such as anxiety;
> b. cognitive disturbance which can distort interpersonal communication;
> c. faulty attribution or expectations about the consequences of certain behaviors (Bellack & Hersen, 1978b);
> d. failure to emit a response of which they have capabilities, but for which they have not been reinforced.

4. What specific social skills deficits does the patient have? (It is easier to say that the person is "not quite right" than to tell exactly what is wrong.)

Questions such as these are best answered by direct observation. Role play is an effective direct observation assessment technique that can be used with most populations. This paper will examine the use of role play to assess social skills, particularly heterosocial skills.

Role Play in Psychological Assessment

Role play occurs when a person is explicitly asked to perform a role that is not normally his/her own, or when a person is asked to perform his or her normal role in a setting where it does not normally occur (Mann, 1956). Role play has been used for psychological assessment for many years. Moreno (1959) used dynamically oriented role playing called "psychodrama" as a catharsis of emotionally charged repressed feelings. In Moreno's early work, the protagonist would enact certain roles prescribed by the therapist to gain insight and practice significant role behaviors. Moreno developed a "Spontaneity Test" to assess spontaneous verbal and nonverbal reactions to prescribed situations and used raters to evaluate it.

Borgatta (1955) produced findings that demonstrated that role play was a valid test of actual behaviors. He

looked at actual and role-played behavior and projective tests with military personnel and showed a correlation of 0.76 between "actual" and role-played behavior using the Bales scoring system. Borgatta concluded that role playing appears to provide the same kind of information provided by real situations.

In 1942 the U.S. Office for Strategic Services (OSS) was set up to assess personnel selected for special military missions. A group of psychologists at the Harvard Psychological Clinic, under the direction of Henry Murray, used various assessment techniques including role playing, or "improvisation," to select the special personnel. The improvisations test was used to assess leadership qualities. Subjects were presented with a natural situation involving interpersonal relationships and told to improvise once the situation began (Murray & MacKinnon, 1946).

Following the lead of the OSS in utilizing role play as an assessment tool, the U.S. Veteran's Administration sponsored a program in 1946 that studied the prediction of performance of clinical psychology trainees and used the first standard improvisational battery in the history of assessment. A scoring system was not developed at that time, because not enough was known about this assessment procedure (McReynolds, 1977).

Rotter and Wickens (1948) were the first to gather reliability data on role-played assessment situations while

looking at "social aggressiveness" (assertiveness). Ratings were done on a 5-point scale of intensity of social aggressiveness by two sets of four raters with inter-rater reliability ranging from 0.59 to 0.84.

An improvisational assessment was developed by Harrow (1951) to evaluate the therapeutic implications for schizophrenics. Three interpersonal situations were enacted pre- and post-treatment and rated for eight variables by three judges with an average inter-rater reliability of .90.

The rated behaviors, enacted situations and subject instructions differed from study to study. However, McReynolds (1977) stated that these are common elements in all improvisational assessments there. The subject imagines being in a prescribed environmental situation and then carries out the actual behaviors (mostly verbal) as directed by the situation. During the role play, the subject make up the behavior. Raters or judges assess the subject's behavior and makes inferences about patterns of behavior or structures of personality using rating scales or coding procedures. The subject may then be asked to assess how closely the role play resembled his or her real performance or how much stress he or she felt. The improvisation is usually taped for further analysis. Role play includes at two people. One may be a trained confederate who may or may not be used to direct the flow of the conversation. With the exception of one test, the Role Play Dating

Interactions, (Rhyne, MacDonald, McGrath, Lindquist & Kramer, 1974), role play confederate responses are not preprogrammed, and most confederates are merely instructed to "be friendly or moderately nice." Role play tests may take place in a variety of settings: in a lab room with two people interacting so that certain skills can be measured; over the phone, in either a natural or an experimental situation; in a waiting room deception situation with a confederate; in a group structure to demonstrate correct and incorrect responses to social situations; or in practice situations for interviews.

Role plays can be brief with a single prompt situation line and one required response or extended with a full description of the situation and a longer conversational interchange.

Spencer (1978) classified role plays as empirical or hypothetical. An empirical role play, or a realistic enactment, is one that can be independently verified by other than post hoc references to the dependent variable. A hypothetical role is one that is imagined and cannot be reliably independently monitored. He theoretized that the empirical role play threatened external validity and the hypothetical role play threatened both internal and external validity.

McReynolds (1977, p. 240) also listed four requirements for making role play resemble real behavior:

1. The subject must be meaningfully involved in the role play;

2. The situation must be related to the subject's prior experience so that she or he can effectively empathize with the situation;

3. The subject's participation should involve ongoing improvising of behavior in response to circumstances over which the person is not in total control, such as having another person in the role play;

4. The subject must be able to draw on his/her personal repetoire in improvised role play.

McReynolds designated four classes of behavior on the basis of the extent to which they are reality oriented. Real life behavior, when the person is actually doing what he believes himself to be doing and what it appears to others that he is doing, is limited by reality to his own competencies and the effect of the other person's behavior. Pretending behavior is when an "as if" behavior is requested and the subject pretends reality is different from the way it really is. Role playing belongs in this category. In role play, the person must be under the same physical limitations of time, space, and causality as in real life. Pretending behavior includes rituals, ceremonies, and celebrations. Make believe play of children is one of the most common forms of role play. With vicarious behavior, the third behavioral classification, actions aren't overtly performed, but are entirely mental, as is true with

fantasies. Vicarious behavior is not limited by reality. Dreaming, the class of fourth behavior, is even less constrained by reality. All types of fantastic events may seem to occur. Although these levels are on a continuum, they are not mutually exclusive. A person can engage in fantasy and real life behaviors, at the same time. Psychological assessment has always been used to attempt to predict real life behaviors and role playing is just one type of assessment.

The best way to find out how someone acts in a certain situation is to observe that person in that situation. It is logical that direct observation should be used to assess behavior. However, many problems must be mastered when using direct observation. One must determine the optimum amount of observed time, adjust observation intervals to the frequency and potential patterning of the behaviors, control for the reactive effects of anxiety factors, recognize the potential lack of generalization between specifically observed situations and actual behavior, and finally, insure standardization of the observational technique. Role play cannot assess a subject's "inner state," but it can sample interpersonal styles and actual behavior patterns. Role play has been used as a therapeutic technique within Gestalt therapy and psychodynamic therapy, and for personnel evaluations in business, industry, and education.

Behavior therapy uses role play to help people learn new skills through behavior rehearsal under a therapist's direction. A scene is enacted, then it is discussed or modelled, and it is replayed until the person emits the correct effective behavior. Role playing techniques are central to assertiveness training and to social skills training.

The terms assertion and social skills are often incorrectly used interchangeably. Assertiveness training is one means of learning social skills, but so are heterosocial dating modification programs and communication skills training with couples. Overall social skills can be increased by assertiveness training. An assertion deficit, or lack of assertiveness, can be demonstrated by not making negative responses (not refusing unreasonable demands, not standing up for one's own rights) or not making positive responses (not demonstrating affection, approval, or appreciation). Some of the most significant developments in role playing have been made in the area of assertion. McFall and Arson (1970) developed the Behavioral Role Playing Assertion Test using situations presented on audiotape requiring assertive responses. Eisler, Miller and Hersen (1973) then developed the Behavioral Assertiveness Test (BAT) using 14 role play situations that required assertion, with subjects interacting with a confederate. This Behavioral Assertiveness Test was revised, BAT-R, in

1975 by Eisler, Hersen, Miller and Blanchard, utilizing 32 role-played scenes of both negative and positive assertion. Using 60 psychiatric patients/subjects, they found that high and low assertiveness patients/subjects talked longer on the negative scenes, but low assertiveness patients/subjects complied more with requests, made fewer requests to change behavior, praised female confederates more, talked less and more softly, smiled more, and showed less affect. The development of role playing instruments such as these has been important to the social skills field, because the lack of assertion is an interpersonal clinical problem requiring assessment and treatment. Role playing is a highly suitable treatment and assessment technique.

A basic procedure for role play assessment has been developed in social skills training. With the exception of social skills training with hospitalized psychiatric patients, the majority of work is done with college students and more specifically, with male "minimal daters". In a typical assessment, a confederate is used and the subject is asked to pretend in specified situations (a few if the role plays are extended or many if the role plays are brief). The confederate delivers a prompt line, and the subject is supposed to respond. The interaction is video- or audiotaped so that the interaction can later be rated for overall skills or specific behaviors. Weiss (1968) probably first used systemic modified role play to assess social

skills. He instructed subjects to listen to taped monologues and indicate when they would normally make some kind of rapport maintaining gestures or verbal response. Weiss found interpersonal skill was related to a number of social variables.

Heterosocial Skills Assessment

Within the area of social skills, an increasing amount of work is being done with minimal dating or heterosocial skills assessment using role playing is the major assessment instrument. Many believe that it is important to study heterosocial skills because poor social skills may be social problems in later life. This skills acquisition is important to the adult developmental stage, and problems with dating have been accompanied by anxiety, depression, and academic failure. Barlow, Abel, Blanchard, Bristow and Young (1977) defined heterosocial skills as the ability to initiate, maintain, and terminate a social or sexual relationship with the opposite sex. Borkovec, Stone, O'Brien and Kaloupek (1974) found that 15.5% of males and 11.5% of females surveyed reported some fear of being with members of the opposite sex and concluded that social anxiety inhibited performance of college daters. Arkowitz, Hinton, Perl and Himadi, (1978) found that 37% of males and 25% of females from a group of 13,800 studied (or 31% of the

entire sample) reported anxiety about dating. Galassi and Galassi (1979) stated that heterosocial skills are necessary for successful social interchange. Curran (1977) also cited the importance of dating to socialization and said failure to date may be due to high social anxiety. He stated three etiologies for heterosocial difficulties:

> 1. Conditioned anxiety hypothesis - anxiety is the result of classically conditioned cues associated with vicarious or in vivo aversive stimuli. Clinical problems may be due to an excess of anxiety which blocks or inhibits the expression of more appropriate behavior.
>
> 2. Skills deficit hypothesis - difficulties due to skills deficit. McFall (1976) believes that heterosocial difficulties may be due to lack of experience, lack of opportunity to learn, obsolescences of previously adaptive responses, biological learning disabilities, inappropriate or inadequate behavioral repetoire, or traumatic events that may obstruct learning.
>
> 3. Cognitive distortion/evaluation hypothesis - the individual is capable of competent responses but has a faulty cognitive evaluation appraisal of his or her performance, expectations of aversive consequences and thus, is not able to emit the correct response. This performance deficit may be due to irrational beliefs, unrealistic performance criteria, negative self-evaluation, excessively high performance standards, or insufficient self-reinforcement. Clark and Arkowitz (1975) demonstrated that heterosocially anxious males misrated their own performance, but rated others correctly.

Bellack and Morrison (1982) also proposed a faulty discrimination hypothesis that said the socially unskilled individual does not know how to match specific social

behaviors with specific social situations. Galassi and Galassi (1979) also found physical attractiveness to contribute to heterosocial difficulties. Individuals experiencing heterosexual difficulties may be less physically attractive and thus have less opportunity to practice interacting. A halo global rating of social skills effectiveness may be due to degree of physical attractiveness of the subject. More research is needed on this variable to measure the deficits of heterosocial interactions. Rehm and Marston (1968) developed an audiotaped procedure consisting of ten social situations, Taped Situation Test (TST), to measure the behavior change in heterosexually anxious, low-frequency dating males. They believed that participants had at least minimal skills but were deficient in skills due to negative self evaluation during interactions with females or because they avoided heterosexual interactions. Rehm and Marston involved subjects with graduated exposure to heterosocial interactions and encouraged more self reinforcements. Anxiety, adequacy of response, and likability were rated by female raters, and experimental subjects showed significant improvement after the social skills training. To show the utility of the use of the audiotaped role play situation assessment, Arkowitz, Lichtenstein, McGovern and Hines (1975) modified the audiotaped TST to evaluate male dating behavior. They also used peer rating reports, role-played

telephone calls, live interactions, and self report in their assessment procedures.

The role play portion of the heterosocial skills assessment was made more elaborate by Twentyman and McFall (1975). In studying shy males, they used six three-minute role plays enacted via intercom and five minute role plays situations with the male subject and the female confederate in the same room. Anxiety and social skills were measured. The study determined that nondaters avoid "dating type" situations because they lack requisite interpersonal skills. In a later published study, Twentyman, Boland and McFall (1981) measured avoidance in college males using role play, in vivo interactions, simulated telephone calls, the Survey of Heterosexual Interaction (SHI) questionnaire, and self-report ratings. They found that nondating males have the most problems with initiation and feel less likely that they will be in actual dating situations because they tend to avoid these situations. The SHI questionnaire has become a widely used screening divice in heterosocial skills assessment.

Perri and Richards (1979), using a behavioral analytic model, developed a role play situations Heterosocial Adequacy Test with various levels of difficulty and likelihood occurrences for use with minimal dating male college students. They found that normal and regular daters were differentiated on the quality of verbal content and how

effective their responses were. In attempts to standardize behavioral measures, Barlow et al. (1977) developed a heterosocial skills checklist for males. They looked at high school and college males who were judged attractive by female students. Subjects were asked to role play five minute interactions with female confederates and were rated by two raters on the checklist as appropriate or inappropriate in five 30-second blocks. Differences were found in three out of four behavioral categories -- in form of conversation, voice, and affect but not in motor behaviors.

Lack of Standardization or Role Play Instruments

As the research in the field of social skills assessment, specifically heterosocial skills, continues, it becomes obvious that the lack of standardization in role playing situations is problematic. Various studies use videotape and audiotape, in vivo situations, self-report scales, different assessed behaviors, and different role play situations. The most widely used role play situations, the Behavioral Assertiveness Test Revised, BAT-R, (Eisler, Hersen, Miller & Blanchard, 1975) and the Simulated Social Interaction Test, SSIT, (Curran, 1982) both claim to be measuring social skills, but vary greatly. In the BAT-R, the role model delivers a prompt, and the subject is

expected to respond briefly to 32 situations. The confederate prompt line is predetermined, but there is no defined continuation format for the confederate's role. In the SSIT the interactions are more extended on eight situations with the narrator describing a scene, the confederate delivering a programmed prompt line, and the subject continuing the interaction. For example:

> Narrator: You are at a party and you notice a woman has been watching you all evening. Later she walks up to you and says --
>
> Confederate: Hi, my name is Jean.
>
> (Curran, 1982)

The confederate's next interaction is not preplanned. Curran and his associates abandoned the extended interaction format because of difficulties in standardizing confederate responses. Interestingly, in 1978 Curran stated that brief interactions did not tap enough interactive behaviors. Brief role plays do not show the ability to initiate and maintain a conversation and cannot measure the use of social reinforcers and response timing. Bellack (1979a) also mentioned that interactions should be extended because scene descriptions are too brief and susceptible to interpretations, and subjects may have difficulty imagining themselves in the situation. Hopkins, Krawitz and Bellack (1981) also found that subjects talked more easily in role plays measuring assertion when information about the scene

was provided in the narration. Although studies such as Wessberg et al. (1979) suggested that longer role plays are more valid than brief role plays, most laboratories still prefer the brief role play format.

Confederate Training

Although Curran and associates abandoned extended role plays because of the lack of standardization of confederate responses, MacDonald, Lindquist, Kramer, McGrath and Rhyne (1975) were able to standardize confederate prompt lines using a decision tree format in their Role Play Dating Interactions instrument. Using highly trained confederates in three 4-minute extended interactions and a detailed scoring criteria, they were able to more successfully control and standardize this procedure for measuring minimal dating skills. There also has not been an attempt to standardize confederate training across laboratories. Experimental laboratories may instruct confederates to respond with programmed responses (Rhyne et al., 1974), with moderate responsiveness (Wessberg et al., 1979; Bellack, Hersen & Lamparski, 1979; Greenwald, 1977), with detached appearances and minimal responses (Fischetti et al., 1977), or with limited numbers of words in the responses (Barlow et al., 1977). Steinberg et al. (1982) had confederates respond either unresponsively, neutrally, or responsively

and found that the confederates' different response styles did not affect subject ratings.

Methodological concerns about confederates have also been raised in different areas. Bellack (1979a) believed that more attention should be paid to a confederate's age, sex, and race. Studies such as Arkowitz et al. (1975) did not even control for individual differences of confederates. They used three different confederates unevenly distributed between subjects. Many studies do not even mention whether the same confederate was used for all subjects or what differences there were when different confederates were used. Because the response formats are not programmed, individual differences between confederates in the experiment may actually confound the results. It is important not only that the confederate training become more standardized, but that how often they perform, the way they are used, and how much practice they have had become more controlled and be noted in studies.

Rater Training

Although there are problems with confederate standardization, there are minimal attempts to standardize rater training across laboratories.

Studies vary on the number of raters used, how rating criteria are defined, whether raters are naive or

specifically trained (Steinberg et al., 1982), and how the raters are trained to rate. Raters may even vary within an experiment, depending on the specifications of the experimental conditions (Monroe et al., 1982). Curran (1982) had raters view training tapes while the experimenter explained the construct of social skills and gave potential indicators of verbal and nonverbal cues. The experimenter discussed ratings on the training tape and gave specific feedback on rater performance. Curran utilized a 12-point, Likert-type scale to obtain global ratings. Corriveau et al. (1981) looked at various rater-training procedures and showed that the training procedure of providing information about the procedure, plus showing an example of the practice tape, was the most reliable procedure of the three procedures. The other two procedures were only showing examples and only giving information. Conger and Farrell (1982) described an elaborate training procedure that included the use of 35 practice tapes rated to an overall reliability of .85, not rating subjects twice in succession, and pointing out specific behavior to help define a global rating. Methodological problems with rater training also existed in studies such as the Eisler, Hersen, Miller and Blanchard (1975) study, which used one rater to rate 60 subjects and one rater to rate only 20 persons. Many studies mention that trained raters were used, but descriptions of rater training or what makes a rater

"trained" are rarely included. Rater training and use needs to be more carefully controlled.

Behaviors Assessed

One of the most controversial components of social skills assessment without standardization is what behaviors should be measured to be representative of social skills. A sampling of behaviors that have been previously measured in other social skills studies is shown in Figure 1. Certain labs prefer to define social skills by an overall effectiveness score known as a molar, a global, or a subjective rating, while other labs believe that social skills are comprised of component, molecular, or objective behaviors.

The molar rating perspective generally uses Likert-type scales to rate overall skills such as assertiveness, anxiety, social skillfulness, and effectiveness. It has high face validity and is flexible over a variety of settings. Wessberg et al. (1981) found that molar ratings had increased generalization across settings, but did not provide useful information on how to change the behavior. Greenwald (1977) found that global measures differentiated high-frequency from low-frequency female daters better than molecular measures in three role play situations and in *in vivo* waiting room situations with confederates. Royce

Fig. 1. A sampling of behaviors previously measured in social skills studies.

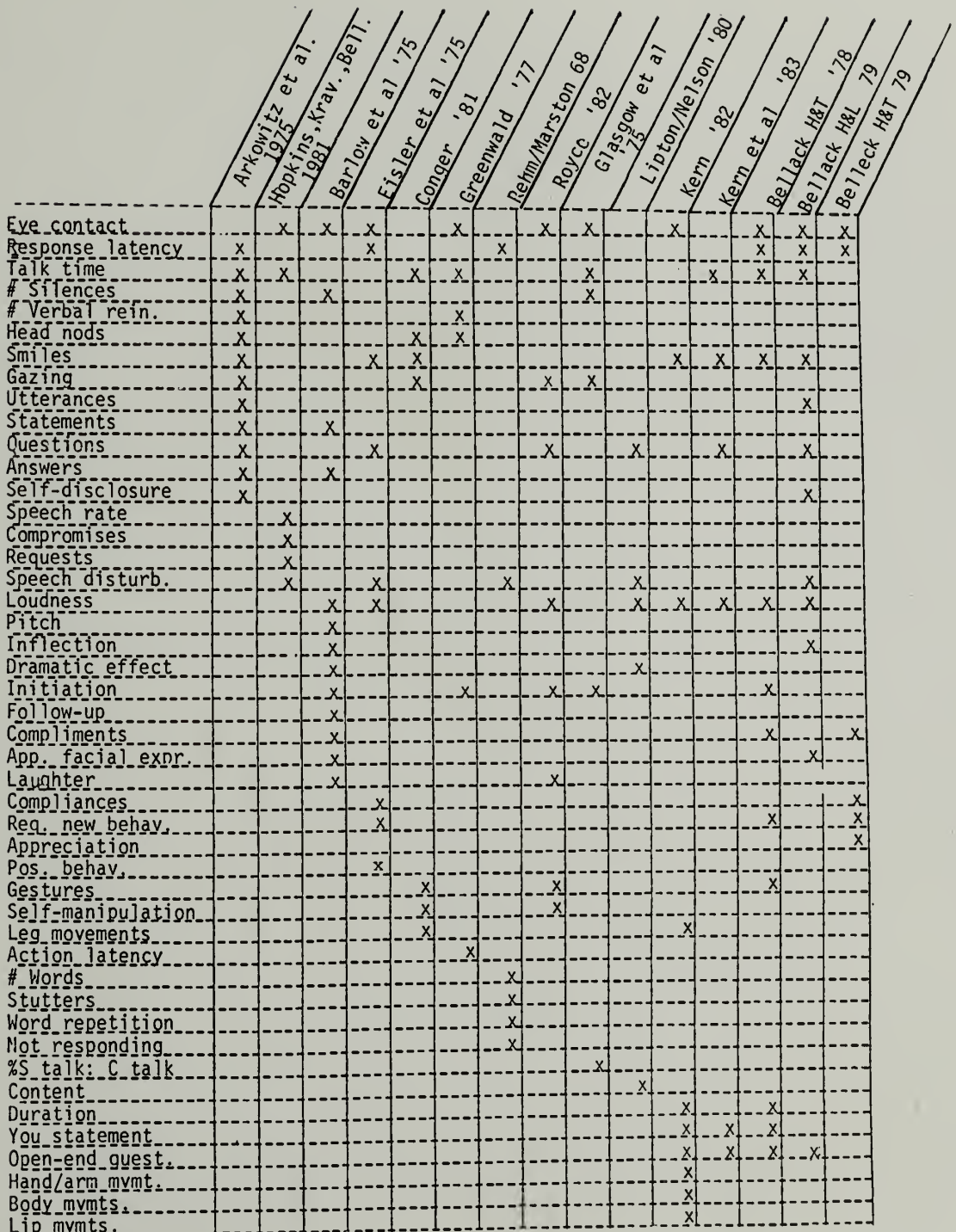

Arkowitz et al. 1975
Hopkins, Krav., Bell. 1981
Barlow et al '75
Eisler et al '75
Conger '81
Greenwald '77
Rehm/Marston 68
Royce '82
Glasgow et al 75
Lipton/Nelson '80
Kern '82
Kern et al '83
Bellack H&T '78
Bellack H&L 79
Belleck H&T 79
Eye contact
Response latency
Talk time
Silences
Verbal rein.
Head nods
Smiles
Gazing
Utterances
Statements
Questions
Answers
Self-disclosure
Speech rate
Compromises
Requests
Speech disturb.
Loudness
Pitch
Inflection
Dramatic effect
Initiation
Follow-up
Compliments
App. facial expr.
Laughter
Compliances
Req. new behav.
Appreciation
Pos. behav.
Gestures
Self-manipulation
Leg movements
Action latency
Words
Stutters
Word repetition
Not responding
%S talk: C talk
Content
Duration
You statement
Open-end quest.
Hand/arm mvmt.
Body mvmts.
Lip mvmts.

Figure 1.

(1982), in looking at sex differences in college students on molar ratings of social skills, found that certain molecular behaviors (i.e., gazing up, asking questions, and use of appropriate hand gestures for men; and eye contact, not speaking too quickly, and gazing up in women) contributed to higher molar heterosocial skills ratings. Dow, Glaser and Biglan (1981) also found that subjects who asked more questions and gave more compliments received higher global skill ratings. Opponents of the molar approach believe that it provides little information on the actual behavior, provides only a coarse discrimination (high, medium, or low social skill), can be biased by anxiety (Farrell at al., 1979) and physical attractiveness (Arkowitz, 1977), and is not consistently defined so that no one can be sure if an "8" in one lab means the same as an "8" in another lab. Curran (1979) suggested that a universal global scoring key would help avoid this problem and eliminate rater drift. Experimenters generally have raters make an overall global score without carefully defining social skills.

Proponents of the molecular approach of studying social skills behaviors believe it provides more specific information than molar ratings. The expressive features of the interaction are broken down and objectively measured. One problem is that the social interaction includes a complex behavioral pattern such as appropriate timing, content, and sequencing, and molecular ratings can only

measure simple behavioral properties such as frequency, duration, and presence or absence of the behavior. Bellack and Hersen are firm proponents of the molecular approach, believing that certain molecular behaviors facilitate interactions (i.e., open-ended questions encourage responses; intermittent eye contact, verbal reinforcements, and utterances such as "mmm" maintain interactions). They also said that certain molecular behaviors that measure social perception or the how, when and where to respond (i.e., seeking clarification, making responses relevant, timing, perception of emotion), must also be considered. Fischetti et al. (1977) demonstrated that frequency counts ignore the nature of the heterosocial interaction. Using taped role play situations, subjects were asked to signal the appropriate time to respond. Results demonstrated that heterosocially competent and heterosocially incompetent subjects differed only on placement and timing of the response, suggesting timing as a major skill deficit. Opponents of the molecular approach believe that molecular behaviors do not generalize well due to situational specificity and because which components of social skills should be measured in defining overall social competence skill must be universally decided (Curran, 1982). Curran uses the analogy of a baseball player to illustrate the molar vs. molecular debate. A molar rating tells which player is a .400 hitter, but it does not tell how or under

what conditions he or she hits best. A molecular rating tells how the player hits and what he or she does to hit (i.e., short swing, chokes up on the bat, wipes his or her feet) but does not tell if he or she is a .400 or a .150 hitter.

Social Competence

The question Curran raised as to which behaviors actually measure social competence presents an important issue within the area of social skills assessment. According to some researchers, a socially competent or skilled person is one who displays all the necessary skilled behaviors including good eye contact, asking open-ended questions, making responses within an appropriate amount of time or being able to make self-disclosures. Many studies use frequency count measures, but Curran (1979b) argued that this is a poor measure because both high and low counts might be appropriate in that situation and measures such as timing (Fischetti et al., 1972) are ignored. Social norms govern what is appropriate and at what times it is appropriate. Most studies generally do not look at the content of interactions. They do not consider what the person is actually saying or whether it is difficult or easy for the other individual to listen to this person. A person who had all the appropriate motor behaviors and syntax

styles but spoke only about intensely serious or monotonously boring things (i.e., someone continuously talking in very technical terms only about his or her work) would be rated as socially skilled but would not be a highly regarded conversational partner. This person could ask open-ended questions, maintain eye contact, and use appropriate hand gestures, but people would still avoid interacting with this boring person. Such is true of the schizophrenic person who can maintain good interactional behaviors but talks about crazy or psychotic things. It is important that social skills studies begin to develop ways to also assess content of the interaction and to standardly train individuals on what is appropriate content. Bellack (1979b, p. 97) noted that studies have not shown a strong relationship of molecular components to molar ratings (Arkowitz, 1977), so "there is no actual evidence that increasing eye contact, voice volume or the like actually affects marital interaction, dating frequency, level of depression, or any other clinically meaningful set of behaviors."

Are social skills the same as social competence or even social perception? Bellack and Morrison (1982) have identified the necessity of studying social or interpersonal perception, the where, when and how to make responses. Individuals must have knowledge of response cues and social mores. The person must be able to process information and

attend to the content and interpersonal response cues provided by the partner. A person must be able to accurately predict and assess interpersonal consequences of his or her behavior. A person who is said "to make all the wrong comments at the wrong times" is one who is lacking in social perception. Social competence is akin to this notion, adhering to the philosophy that a person must be able to integrate appropriate behaviors, good timing, social perception and acceptable valid content to be considered "socially competent." Social competence is a step further from social skills, but it is not usually measured because although social skillfulness is hard to define, social competence is even more difficult to specify. Curran (1979) noted that social skills is a neutral connotation of social competence. Social adequacy suggests that only minimal requisite skills are necessary, while social competence implies that optimal skills are needed. It is important that the term social competence be more specifically and objectively defined so that it can be included in social skills studies.

Validity

Another controversial methodological problem is whether role play has any validity. Nay (1977) said that role play is based only on face validity. The choice of which

specific behaviors should be measured also appears to be based solely on face validity. Bellack (1979) noted that if selected behaviors did not differentiate between contrasted groups of subjects who had or had not received social skills training, it was assumed that the treatment was ineffective, the role play was invalid, or the molar categories depended on something besides response skills.

Concurrent validity of role play has been tested in experiments that attempt to use role play to differentiate contrasted groups. Kern (1982) looked at three types of role play -- brief, extended, and clinical replication -- to assess validity. Using very specific procedures and methodology, he found that brief and extended role plays could not distinguish high frequency daters from low-frequency daters. Replication role plays could distinguish the two groups on the measures of open-ended questions, with global skills, durations of time, and personal attention measures approaching a significant level. In a later study (Kern, Miller & Eggers, 1983), Kern found that specification role play, where subjects were told to replicate specific behavioral measures, has the highest correlations with naturalistic interaction, suggesting high external validity.

Other studies have had more success in discriminating groups on the basis of role play. Perri and Richards (1979) obtained concurrent validity with their Heterosexual Adequacy Test (HAT) which significantly differentiated

adequate from inadequate daters on eight behavioral measures. Twentyman and McFall (1978) could discriminate shy males from confident males on role play measures and Greenwald (1977) demonstrated that physical attractiveness, global social skill and predicted dating frequency discriminated high dating women from low dating women in role play situations. Arkowitz et al. (1975) also could discriminate high and low frequency daters on self-report measures, peer ratings and molecular behaviors such as gaze, number of head nods, number of smiles, number of words per minute, etc. Curran, Wessberg, Monti, Corriveau and Coyne (1980) studied a psychiatric population and National Guardsmen on role play situations (SSIT) to demonstrate contrasted groups role play validity. Raters were able to differentiate the two groups on global measures for overall skillfulness and overall anxiety in the role plays.

Many studies have tried to measure external validity and generalizability of role play to natural situations. Studies have correlated role play with waiting room interactions, telephone conversations (Arkowitz et al., 1975), mental health professionals' opinions (Bellack, Hersen & Turner, 1978), self-rating scales (Twentyman & McFall, 1978), and practice dating (Christensen & Arkowitz, 1974). Using the Bales Interactional Analysis Test, Borgatta and Bales (1953) found that behaviors were consistent and highly correlated in role play and actual

behavior. Wessberg et al. (1979) found moderate external ecological validity for role play situations with college students by correlating role play measures and naturalistic waiting room measures.

In a series of papers in 1978, Bellack, Hersen and Turner argued that role play was not externally valid. In a contrasting conclusion from their work, Curran (1978) faulted their lax methodology for not being able to obtain validity. Bellack, Hersen and Turner (1979) did not find external validity for role play in a study measuring assertion with psychiatric patients. Comparing two naturalistic interactions (group therapy and interviews) to role play interaction measures, the role play measures demonstrated poor correlation and generalizability on specific components of behavior. Curran (1978) argued that this study did not obtain external validity because of an inadequate sample size, a poor description of judges' training, inadequate definitions of the constructs rated, differences in types of media used in observation, and inappropriately chosen situations for adequately observing subjects' behavior. Bellack, Hersen and Lamparski (1979) continued to argue against the external validity of role play when they found only moderate consistency on several measures of verbalization but none in paralinguistic and nonverbal measures in a study with female psychiatric patients in role play and naturalistic waiting room

situations. Male psychiatric patients observed in this study demonstrated very low correlations of role play and waiting room situations. Bellack, Hersen and Turner (1978) believed that overall role play cannot be proven valid nor invalid. More studies need to be done.

In an attempt to demonstrate generalizability, Curran et al. (1982) studied the correlations of ratings on the SSIT between six different social skills labs. Each lab was shown videotapes of three subjects in both brief and extended situations and asked to rate social skillfulness and anxiety on an 11-point scale. They found moderate generalizability across labs for global skill and anxiety ratings on the brief role plays but only for anxiety on the extended role play. This study suggesed external validity and the use of a somewhat universal working definition of social skills across laboratories.

Heterosocial Skills -- Dating or What?

The study of heterosocial dating skills is one that must be defined, clarified, and further developed. Social skills assessment has traditionally been studied with only psychiatric populations or with male college students who were "minimal or nondaters." Little research has been done with other than college populations or with women.

The measurement of how a college male should act when he is in a dating situation has formed the definition of what are considered good social skills. The role play situations are generally sterotypical and somewhat sexist, making the assumption that the male subject must be sexually interested in the female confederate. This type of assessment is overly constricted. It never assumes that the male subject will want anything except to "date" the female confederate. It is time that the field begins to look at same-sex interactions and "heterointeractive" (or "nondating") situations. A heterointeractive situation is one in which members of the opposite sex interact without a goal of obtaining a date (i e., business colleagues, clerks and customers, team members, friends, older persons to younger persons). Are the behaviors associated with good heterosocial dating skills considered appropriate or correct in a heterointeractive situation? Should people learn two different sets of social skills -- dating and nondating? With the increase of policies demanding equality on the basis of sex, the increase of sexual discrimination and sexual harassment charges, and more women entering the work force, perhaps it is necessary for these "limited" studies to become more realistic and relevant and to incorporate the concept of heterointeractive social skills.

Conclusion

The use of role play in assessing social skills is an innovative and practical way to sample behavior. Although there appear to be some methodological problems in this type of assessment technique, past research has been well developed and useful. A minor problem that could be easily rectified is the printing of actual role play situations and rating scales in journal articles. This would allow more opportunity for openness and continued or replicated studies. It is always most important to thoroughly assess a person's strengths and weaknesses before developing an appropriate treatment plan.

Is role play the best way to assess social skills? Both Bellack (1979a) and Curran (1979b) agreed that direct observation is the best strategy for assessing behavior. Also, due to the expense and impracticability of live behavioral observations, role playing appears to be the most valuable assessment technique. This study uses role play in an attempt to differentiate social skills used in heterosocial interactions from social skills used in "non" heterosocial interactions.

C H A P T E R I I

METHOD

Experimental Design

The experimental design was a 2x2x2 mixed factorial with the following independent variables: (a) type of role play situation, which was either business or social; (b) sex of the confederate; and (c) standing on the Attitudes Towards Women Questionnaire (ATW; Spence, Helmrich, 1972a), which were either "high" or "low" based on a median split (mdn = 116.3). Except for the fixed Attitudes Towards Women factor, subjects were assigned to conditions randomly. As a consequence of technical difficulties resulting in the elimination of certain subject data, there were unequal numbers of subjects in each cell. The number of subjects in each cell is presented in Table 1.

Subjects

Subjects were 124 male undergraduate college students who had completed the Attitudes Towards Women (ATW) Scale (Spence & Helmrich, 1972) during a psychology class. Ninety-nine of these subjects were drawn from 139 male students who initially completed the questionnaire. Six

Table 1
Division of Subjects by Conditions

	Business Role Play Confederates		Social Role Plays Confederates		
	Male	Female	Male	Female	TOTAL
High ATW	16	16	14	15	61
Low ATW	16	16	15	16	63
TOTAL	32	32	29	31	
	64		60		124

of the 139 subjects were not contacted because they did not give a valid phone number. Nine of 133 subjects contacted (five low ATW and four high ATW) refused to participate. Moreover, two subjects refused to be videotaped after having arrived at the session (even though they had been previously informed about the video taping); while 16 subjects missed their scheduled appointments (although eight of these were successfully re-recruited through a second telephone call). Finally, the data from 15 subjects were unusable due to technical equipment failures. Therefore, 25 additional subjects (12 high ATW and 13 low ATW) were recruited subsequent to the initial recruitment through posted notices announcing the experiment. All subjects received course credit in exchange for their participation.

The Attitudes Towards Women Scale was used as the criterion for dividing subjects into different experimental conditions. For the 124 subjects who were used in the study, scores on the ATW ranged from 60 to 162, with a mean of 116.63; a standard deviation of 19.36; and a median score of 116.3. There was a negative skew of -.136.

In the 1972 study of Spence and Helmrich (1972b), the range of scores for 267 male college students was 37 to 155 and the mean was 86.75. The mean of this present study, twelve years after the original study, was 29.88 points higher (or .54 of a point more liberal for each question). Kern et al. (1985) reported a mean of 93.2 and a standard

deviation of 18.1 for male and female students in his 1985 study using the 55-item Attitudes Towards Women Scale.

Sixty-one (61) of the males had scores of 116 (median score) and above on the ATW and they were placed in the "high" or "liberal" group; sixty-three (63) of the males had scores of 115 and below on the ATW and they were placed in the "low" or "conservative" group. The high and low groups were then each randomly divided in half and assigned to either a business or social role-play situation. The business and social groups were then again randomly divided in half and were assigned to interact with either a male or female confederate.

Screening Instrument

The Attitudes Towards Women Scale, an objective instrument to measure attitudes toward the rights and roles of women in contemporary society, was developed by Janet T. Spence and Robert Helmrich in 1972 (see Appendix A). The measure includes 55 items which fall into one of six content clusters (Spence & Helmrich, 1972b):

1) Vocational and educational pursuits (e.g., "There should be a strict merit system in job appointment and promotion without regard to sex");

2) Dating and courtship (e.g., "A woman should be free as a man to propose marriage");

3) Sexual behavior (e.g., "Women have an obligation to be faithful to their husbands");

4) Marital relationships and moral obligations (e.g., "As head of the household, the husband should have more responsibility for the family's financial plans than his wife");

5) Freedom of independence (e.g., "Women should assume their rightful place in business and all the professions along with men");

6) Drinking, swearing and dirty jokes (e.g., "Swearing and obscenity are more repulsive in the speech of a woman than a man").

Items are scored 0-3 depending on the degree of agreement with each statement. Three indicates the most pro-feminist response, while zero represents the most traditional response. Negatively worded items were reversed for the scoring. Higher scores reflect a more liberal or pro-feminist attitude towards women.

The experimenter recruited subjects through introductory psychology courses. It had been previously arranged with individual faculty members of the Psychology Department to allow the experimenter to give the questionnaire during the last 15 minutes of their class. Class sizes ranged from 10 to 200 students and eight classes were visited. Potential subjects were told that if they were willing to fill out the questionnaire for no credit, that they might be selected for a two-credit experiment later in the semester. Administration time for the ATW

questionnaire was 15-20 minutes. One-hundred and twenty-two (122) female students and 139 male students agreed to complete the questionnaires. The data for the female students was not able to be used in this experiment. Information concerning subjects who chose not to participate is not available since these subjects were allowed to leave class if they did not want to participate.

Experimental Measures

Social Interaction Self-Statement Test.

The Social Interaction Self-Statement Test (SISST) (Appendix B) was developed by Glass, Merluzzi, Bierer and Larsen (1982) as a cognitive assessment measure of social anxiety. The test consists of fifteen positive or facilitative self-statements (e.g., "I'm beginning to feel more at ease") and fifteen negative or inhibitive self-statements (e.g., "What I say will probably sound stupid"), and it is used to measure a subject's thoughts after imagining stressful social encounters. Split half reliability coefficients calculated on odd versus even items of this measure have been reported as .73 ($p < .001$) for positive and .86 ($p < .001$) for negative self-statements (Glass, Merluzzi, Bierer & Larsen, 1982, p. 47). Pearson correlation coefficients, calculated to determine the

relationship of the SSIST to observed social skill, observed anxiety, and the self-reported presence of facilitating or inhibiting self-statements have indicated high concurrent validity for the negative self-statements (Glass et al., 1982, p. 45). Subjects with high inhibitive or negative scores were considered to be less skilled and more anxious on behavioral ratings than were subjects with low inhibitive scores. No data are conclusive concerning positive self-statements.

In this study, the SSIST was used to tap cognitive self-statements following the set of three role-play scenes. Each subject received three scores; an inhibitive or negative self-statement score (the sum of all negative statements), a facilitative or positive self-statement score (the sum of all positive statements), and an overall self-statement score (the sum of the facilitative and the inhibitive scores).

Person Perception Questionnaire.

The 35-item Person Perception (Confederate Ratings) Questionnaire (Appendix C) was based on the Osgood Semantic Differential Scale (Osgood, Suci & Tannenbaum, 1957) and the Interpersonal Evaluation Inventory (Kelly, Kern, Kirkley, Patterson & Keene, 1980). On the questionnaire, the subject was asked to rate his perception of the confederate with

whom he had just interacted using an anchored 7-point, bi-polar scale. To control for response bias, the positive and negative end points of the scale were reversed in random order for the 35 items. This measure was inçluded to evaluate similarities within conditions between confederates, as well as to check the effectiveness of the experimental manipulation.

Activities and Interests Questionnaire.

The 40-item Activities and Interests Questionnaire (Appendix D) was developed by Kenneth Fletcher and James Averill in 1984. It serves as a screening device for the study of role-play activity. The data for this questionnaire will not be reported in this study.

Informational Survey.

The Informational Survey (Appendix E) is a 19-item questionnaire that obtains factual trivial information (e.g., "How many albums do you own?") to be used in a later correlational study. The data for this questionnaire will not be reported in this study.

Role Plays

Confederates were two male and two female undergraduate research assistants. Each subject interacted with only one confederate for all three vignette role-play scenes. Sixty-three of the subjects interacted with a female confederate and 61 of the subjects interacted with a male confederate. Assignment to confederates was random within the constraints of scheduling and gender.

For enacting role-plays, all confederates were trained to be moderately responsive, pleasant, and neither too effusive nor too aloof. Confederates were instructed to initiate conversation only if the subject had not talked for a full 10-second interval. A clock with a second hand was set up behind the subject's head to cue the confederate that ten seconds had elapsed. Confederates were asked to limit their responses to follow a natural rhythm.

After extensive training, each confederate performed in two criterion practice sessions, one business situation and one social situation. Their performances were evaluated by the other confederates and the experimenter for conformity to the experimental protocol. To ensure consistency and performance across sessions, the experimenter also made unannounced checks of performances on approximately every tenth subject (n=13). Specific attention was paid to the criteria of five-second confederate responses, ten-second

silences, and whether the confederate or the subject was taking control of the flow of the conversation. Confederates were unaware when they were being rated, but the experimenter met with the confederate after the session was finished. These intermittent confederate ratings helped to standardize confederates' performances both within and between role plays, and within and across experimental conditions.

In order to be able to collapse the performances of individual confederates of the same sex, analyses of variance were performed on the variables of: confederate/people perception ratings, subject silences, confederate talking time, and who was controlling the scene (Tables 2 and 3). No significant main effects for sex were found for individuals except for confederate talk time, which showed a difference between and within gender ($F_{3,120} = 10.40$; $p < .000$). Therefore, data were collapsed across individuals within gender for all subsequent analyses.

Breaking the Role

This variable was used for measuring the quality of role playing and whether the subject was able to "stay in the role". This was included to ensure that the role playing was not problematic. No significant differences

Table 2
Means* and Standard Deviations for Individual Confederates for Person Perception, Confederate Talk Time, Silences and Control of the Scene

Item		Female Confederates 1D	Female Confederates 2N	Male Confederates 1J	Male Confederates 2P
Person Perception ($F_{3,120} = .49$, $p < .6110$)	X	212.88	210.63	209.97	215.69
	SD	22.98	21.45	21.00	23.82
Confederate Talk Time ($F_{3,120} = 10.41$; $p < .000$)	X	67.48	54.09	65.70	87.90
	SD	21.86	21.90	22.81	29.40
Silences ($F_{3,120} = 2.5$; $p < .06$)	X	4.35	3.68	3.70	1.23
	SD	4.19	5.92	5.67	2.26
Control of the Scene ($F_{3,120} = .68$; $p < .56$)	X	1.67	2.06	2.03	1.80
	SD	1.24	1.18	1.22	1.34

Note. Mean of Person Perception = Sum of 356 item rating of confederate.
Mean of Confederate Talk Time = Number of seconds the confederate spoke summed across the three vignettes.
Mean of Silences = Mean number of 10 second silences summed across the three vignettes.
Mean of Control of the Scene = Mean number of vignettes in which subject was in overall control of the interaction.

Table 3
Planned Comparisons for Confederate Performance Between and Within Sex on Person Perception, Confederate Talk Time, Silences and Control of the Scene

Category	df	t	P
Person Perception			
Within Sex			
Confederate Female 1/Female 2	61	.40	NS
Confederate Male 1/Male 2	59	-1.00	NS
Between Sex			
Confederate Males/Females	122	.26	NS
Confederate Talk Time			
Within Sex			
Confederate Female 1/Female 2	61	2.43	< .018
Confederate Male 1/Male 2	59	3.30	< .002
Between Sex			
Confederate Males/Females	122	3.46	< .001
Silences			
Within Sex			
Confederate Female 1/Female 2	61	- .51	NS
Confederate Male 1/Male 2	59	2.22	< .030
Between Sex			
Confederate Males/Females	122	1.76	NS
Control of the Scene			
Within Sex			
Confederate Female 1/Female 2	61	1.25	NS
Confederate Male 1/Male 2	59	.70	NS
Between Sex			
Confederate Males/Females	122	.20	NS

between conditions were found. Descriptive statistics for "breaking the role" are shown in Table 4.

Perceptions of the Confederates

Subjects were asked to rate the confederate with whom they had just interacted in the role play on a 7-point scale for 35 items (Person Perception Questionnaire -- Appendix C). This was included to insure that there were no problems with the confederate's role. There were no significant differences between conditions for subjects who rated confederates positively or negatively. Descriptive statistics are shown in Table 5.

Ratings of Videotapes

All videotaped interactions were rated independently by the five trained undergraduate raters unfamiliar with either the subject or the confederate involved. Raters were each trained to rate two global characteristics: physical attractiveness and overall social skills. Training to rate overall social skills and physical attractiveness was done in a group format, where all raters viewed ten videotapes and rated the subjects on a seven-point scale. The practice tapes were those that could not be used due to technical difficulties when one vignette scene was missing. During

Table 4
Means and Standard Deviations for Breaking the Role

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	.37	.81		
Female Confederate	63	.35	.73	1.63	NS
High ATW	61	.44	.74		
Low ATW	63	.49	.82	.134	NS
Social Situation	60	.40	.74		
Business Situation	64	.53	.81	.910	NS
High ATW/Male	30	.36	.76		
High ATW/Female	31	.51	.72		
Low ATW/Male	31	.38	.88		
Low ATW/Female	32	.59	.75	.030	NS
Male/Social Situation	29	.20	.61		
Female/Social Situation	31	.58	.80		
Male/Business Situation	32	.53	.94		
Female/Business Situation	32	.53	.67	1.73	NS
High/Social Situation	29	.34	.61		
Low/Social Situation	31	.45	.85		
High/Business Situation	32	.53	.84		
Low/Business Situation	32	.53	.80	.140	NS
High/Male/Social	14	.21	.42		
High/Female/Social	15	.46	.74		
High/Male/Business	16	.50	.96		
High/Female/Business	16	.56	.72		
Low/Male/Social	15	.20	.77		
Low/Male/Business	16	.56	.96		
Low/Female/Social	16	.68	.87		
Low/Female/Business	16	.50	.63	.040	NS

*Mean for Breaking the Role = Mean number of vignettes in which subject interrupted role play.

Table 5
Means and Standard Deviations for Perceptions of Confederate

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	207.80	20.90		
Female Confederate	63	207.20	21.50	.007	NS
High ATW	61	204.60	24.10		
Low ATW	63	207.90	19.00	.656	NS
Social Situation	60	213.80	24.30		
Business Situation	64	210.80	19.90	.438	NS
High ATW/Male	30	209.05	24.07		
High ATW/Female	31	212.42	25.19		
Low ATW/Male	31	216.39	20.46		
Low ATW/Female	32	211.08	18.95	1.31	NS
Male/Social Situation	29	214.27	24.00		
Female/Social Situation	31	213.36	25.15		
Male/Business Situation	32	211.44	21.20		
Female/Business Situation	32	210.17	18.89	.007	NS
High/Social Situation	29	210.29	28.69		
Low/Social Situation	31	217.07	19.48		
High/Business Situation	32	211.19	20.45		
Low/Business Situation	32	210.42	19.72	.954	NS
High/Male/Social	14	210.12	30.19		
High/Female/Social	15	210.45	28.27		
High/Male/Business	16	208.12	18.11		
High/Female/Business	16	214.27	22.71		
Low/Male/Social	15	218.14	16.49		
Low/Male/Business	16	214.76	24.03		
Low/Female/Social	16	216.08	22.42		
Low/Female/Business	16	206.07	13.63	.714	NS

*Mean of Perception of Confederate = Mean sum of 35 item rating of confederate.

training sessions, raters were not allowed to discuss the subject until after all ratings were completed. They were asked, "How socially skilled is this person?" or "How much would you like to talk to this person?". Raters were told to watch for positive statements, attending, conveying interest, and body posture. Raters would rate the subject from 1 (not at all skilled/not at all attractive) to 7 (extremely social skilled/extremely attractive). After all raters had completed their ratings, ratings were compared and discussed. Confederates were able to reach overall interrater reliability of .82 for global social skills, calculated on number of exact agreements between all raters divided by total number of agreements and disagreements with only ten practice tapes.

It was more difficult for raters to reach reliability for physical attractiveness. Raters argued that they had different definitions of what was attractive, but they discussed and compared their ratings until they were able to reach an overall reliability over .80. It took 13 tapes before raters were able to reach interrater reliability of .81 for physical attractiveness.

Each rater was then trained to rate two or three of thirteen different specific behaviors for all of the subjects: eye contact, nervous gestures, facilitative gestures, self-disclosure, open questions, closed questions, initiations, subject talk time, confederate talk time,

silences, laughter, "breaking the role", and control of the scene. Raters trained with ten practice tapes until they reached at least a .80 interrater reliability, calculated by the number of exact agreements divided by number of agreements and disagreements, with the criterion raters. Criterion raters were two graduate students who checked for reliability on each variable.

Throughout the rating procedure, the independent criterion raters conducted independent reliability checks on the raters by re-rating 20% of all tapes or 24 tapes. These tapes were one high business, one low business, one high social, and one low social, and two unknown, randomly chosen tapes, for each of the four confederates on each of the following specific behaviors:

A. Eye contact - total number of 5-second periods that subject gazed at confederate (without looking away) divided by the total number of 5-second periods for each scene. Interrater reliability = .93.

B. Laughter - frequency count of controlled verbal laughing or chuckling sounds. Silent smiling was not included. Interrater reliability = 1.00.

C. Questions

a. Open-ended questions - frequency of questions that required a lengthy statement of opinions, feelings, or explanation. Interrater reliability = .91

b. Closed-ended questions - frequency of questions that required a yes, no, or one word response. Interrater reliability = .91

D. Nervous Gestures - frequency count of extraneous body movements/repetitive behaviors such as fidgeting, drumming fingers, scratching, shifting body positions, toying with objects or body parts.
Interrater reliability = .80.

E. Facilitative Gestures - frequency count of gestures which facilitated or explained the accompanying verbal response.
Interrater reliability = .89.

F. Initiations - frequency count of times subject began a conversation or introduced a new topic.
Interrater reliability = .88.

G. Subject Talk Time - amount of time subject was talking divided by total amount of time for the scene.
Interrater reliability = 1.00.

H. Confederate Talk Time - amount of time confederate was talking divided by total amount of time for the scene.
Interrater reliability = .99.

I. Silences - number of silences lasting ten or more seconds.
Interrater reliability = .88.

J. Breaking the Role - number of role-play scenes in which subject interrupted the scene with a question or comment such as, "Should I be saying this?" or "Are they still videotaping?".
Interrater reliability = 1.00.

K. Control of Conversation - number of role-play scenes in which subject controlled the conversation and the confederate did not have to carry the conversation.
Interrater reliability = 1.00.

L. Subject Self-Disclosures = number of times subject disclosed information about himself which began with, "I think," "I feel," "I am," and so forth.
Interrater reliability = .83.

Setting

This experiment took place in a two-room laboratory with the two rooms connected by a one-way mirror. One room was equipped with a camera and video recorder where a research assistant would videotape each subject's role-play. The other room was furnished with two chairs, a small rug, and an end table with a lamp. The confederate's chair was placed with its back against the one-way mirror; the subject's chair faced the one-way mirror. On the wall behind the subject, a clock was placed approximately one foot above the subject's head so that the confederate could time vignettes without looking away from the subject.

Procedure

All subjects who had given a valid telephone number during the screening assessment were telephoned by one of five undergraduate research assistants. Three of the assistants were female and two were male. Each research assistant read the following:

> You have been selected to participate in a role-play experiment for which you will receive two experimental credits, if you are interested. You will be videotaped during the experiment through a one-way mirror. The experiment will take a little over one hour.

Let's schedule a time. Please come to
Bartlett 10 and take a seat outside the door.
Please be on time. Thank you.

Subjects were called two months after the completion of the ATW and they were not told that their participation in the ATW questionnaire study was related to their invitation to participate in this project. Only two subjects asked if the questionnaire and the experiment were related.

Interestingly, the rate of acceptance to participate in the study was directly related to the sex of the research assistant placing the call. Seventy-five percent (n=39) of the potential participants initially called by male research assistants refused to participate in the study, while only ten to fifteen percent (approximate n=8) of the potential participants initially called by female research assistants refused to participate. All of those initially called by male research assistants were then reinvited by female research assistants; only fifteen to twenty percent (approximate n=3) declined to participate on the second call. Following this discovery, all potential subjects were contacted by a female assistant, and then only approximately five percent declined (approximate n=2).

When the subject arrived for the experiment, he was asked to first sign an informed consent form explaining the videotaping and the experiment (Appendix F); he was then asked to read through the written descriptions of three

role-play scenes (Appendix G) in either the business or the social situation, depending on his randomly assigned experimental condition. The business and social situation role plays had been constructed to be parallel to each other with only the settings changed in the descriptions.

The subjects had previously been designated as belonging to Group one (high ATW scorers) or Group two (low ATW scorers) by the experimenter, but the confederates were not aware of what the group differences were. Each confederate (two males and two females) would alternately assign all Group one subjects to a business or social role play situation. All Group two subjects were also alternately assigned to a business or a social role play. This insured that confederates did not participate in two role plays of the same situation consecutively. Subjects interacted with only one confederate (either male or female) in all three vignettes for their assigned role play situations.

With each situation type, there were three five-minute interactions for each experimental condition. Interactions were videotaped to permit later rating. The order of the vignettes within experimental conditions was determined using a Latin Square order design (i.e., the first-third of the subjects began the experiment with vignette scene one, the second-third of the subjects began with vignette scene

two, and the last-third of the subjects began with vignette scene three).

When the subject was ready to begin his session, he was asked to have a seat in the furnished room. The confederate had previously placed a notebook on his/her own chair so that the subject would be unable to use the chair that faced away from the mirror. The subject was then asked to re-read the first of the vignette scenes which included the written instructions, "act as you naturally would in this situation, just as if it were actually happening right now in your life." The subject was then requested to place everything that he held in his hands or lap, including the vignette scene descriptions, on the floor to signify that he was ready to begin. As soon as his belongings were placed on the floor, the videotaping would begin and the confederate would say the prompt line. The prompt line was the same for parallel business and social situations. The role-play continued for five minutes. At the end of five minutes, the confederate would say, "That was fine. Let's go on to the next scene." At the end of the third and last vignette, the confederate said, "That was great. Thank you very much. Would you please fill out these brief questionnaires and return them to the next room when you are through?"

Following the three role-play scenes, the subject was asked to fill out four brief questionnaires to rate their experience of the role play: 1) The Social Interaction

Self-Statement Test (SISST, Appendix B, Glass, Merluzzi & Larsen, 1982) and 2) a person perception questionnaire measuring how the subject perceived the confederate (Appendix C). The Interests and Activities Questionnaire (Fletcher & Averill, 1984, Appendix D) and a nonsense informational questionnaire (Appendix E) were the other two questionnaires given to subjects, but the data from these questionnaires will not be discussed here since they were to be used specifically in other studies. Each subject was given a debriefing form (Appendix F), two experimental credits, and thanked for his time and cooperation.

C H A P T E R I I I

RESULTS

Preliminary analyses involved conducting a 2x2x2x3 (sex by situation type by ATW by vignette) multivariate analysis of variance with repeated measures on the last factor to see whether specific vignettes within situation types were different from one another. There was not a significant main effect for vignette and there were no significant interactions with vignette for any of the independent variables (see Table 6). Therefore, the vignette factor was collapsed for all remaining analyses.

Analysis of Global Social Skills

A 2x2x2 (sex by situation type by ATW) analysis of variance was performed on overall global social skills; it yielded a significant main effect ($F_{7,116} = 17.51$, $p < .001$) for Attitudes Towards Women scores (see Table 7). Post hoc analyses showed that subjects who scored higher (in the more liberal direction) on the ATW were judged to be more socially skillful than were low (more conservative) scores ($t_{122} = 3.98$, p .001).

The 2x2x2 (sex by situation type by ATW) analyses of variance on the overall global social skills variable also

Table 6
Multivariate Analysis of the Maximally Discriminating Simple Linear Combination of Scores on All Dependent Variables for Individual Vignettes within Vignette Type

Factor	F(7,116)	P
Constant (vignette)	1.46	.23 NS
ATW and Vignette	.90	.40 NS
Sex of Confederate & Vignette	2.20	.11 NS
Situation Type & Vignette	1.15	.31 NS
ATW x Sex of Confederate & Vignette	.46	.62 NS
ATW x Situation Type & Vignette	.39	.67 NS
Sex of Confederate x Situation Type & Vignette	.86	.42 NS
ATW x Sex of Confederate x Situation Type & Vignette	.28	.75 NS

Table 7
Analysis of Variance F Values for Main Effects and Interactions on the Overall Global Social Skills Ratings

Factor	F(7,116)	P
ATW	17.51	<.001
Situation Type	.71	NS
Sex of Confederate	2.48	NS
ATW x Situation Type	1.37	NS
ATW x Sex of Confederate	2.02	NS
Sex of Confederate x Situation	4.68	<.033
Situation Type x Sex of Confederate x ATW	7.10	<.009

yielded a significant two-way interaction between sex of confederate and situation type ($F_{7,116} = 4.68$, $p < .033$). Post hoc analyses indicated that subjects who interacted with female confederates in business role play situations were less skillful than were subjects interacting with male confederates in business situations ($t_{62} - 2.25$, $p < .028$). No other pairwise comparisons were significant.

There was also a significant three-way interaction between ATW scores by sex of confederate by situation type ($F_{7,116} = 7.103$, $p < .009$) (see Table 7). Post hoc comparisons indicated that low ATW subjects interacting with female confederates in business situations were judged as significantly less skillful than were subjects in all of the other groups, except low ATW subjects interacting with male confederates in social situations (see Table 8). Descriptive statistics for overall social skills are shown in Table 9.

In an effort to understand what was contributing to the judged difference in global social skills, specific behaviors which might have been components of the overall score were analyzed separately.

Subject Talk Time

A three-way analysis of variance on the amount of time the subject talked in each scene (subject talk time) yielded

Table 8
Post-hoc Planned Comparisons (t-tests) on Overall Global Skills

	HMS		HFS		HMB		HFB		LMS		LMB		LFS		LFB	
	df	t	df	t	df	t	df	t	df	t	df	t	df	t	df	t
HMS	—			NS		NS		NS		NS		NS		NS	(28)	3.86*
HFS						NS		NS		NS		NS		NS	(29)	3.83*
HMB								NS		NS		NS		NS	(30)	3.90*
HFB									(29)	2.19**		NS		NS	(30)	4.19*
LMS												NS		NS		NS
LMB														NS	(30)	3.56*
LFS															(30)	-2.90*
LFB																—

*p< .05; **p< .01.

Note. HMS = High ATW/male confederates/social situation
HFS = High ATW/female confederate/social situation
HMB = High ATW/male confederate/business situation
HFB = High ATW/female confederate/business situation
LMS = Low ATW/male confederate/social situation
LMB = Low ATW/male confederate/business situation
LFS = Low ATW/female confederate/social situation
LFB = Low ATW/female confederate/business situation

Table 9
Means and Standard Deviations for Overall Social Skills

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	14.11	2.96		
Female Confederate	63	13.28	3.54	2.48	NS
High ATW	61	14.81	2.59		
Low ATW	63	12.60	3.52	17.51	<.001
Social Situation	60	13.90	2.97		
Business Situation	64	13.50	3.55	.719	NS
High ATW/Male	30	14.80	2.78		
High ATW/Female	31	14.70	2.44		
Low ATW/Male	31	13.30	2.98		
Low ATW/Female	32	11.80	3.86	2.01	NS
Male/Social Situation	29	13.70	3.31		
Female/Social Situation	31	14.00	2.67		
Male/Business Situation	32	14.40	2.60		
Female/Business Situation	32	12.50	4.12	4.681	<.03
High/Social Situation	29	14.72	2.51		
Low/Social Situation	31	13.12	3.20		
High/Business Situation	32	14.90	2.70		
Low/Business Situation	32	12.09	3.78	.049	NS
High/Male/Social	14	14.92	2.78		
High/Female/Social	15	14.53	2.32		
High/Male/Business	16	14.81	2.80		
High/Female/Business	16	15.00	2.60		
Low/Male/Social	15	12.60	3.46		
Low/Male/Business	16	14.12	2.33		
Low/Female/Social	16	13.62	2.96		
Low/Female/Business	16	10.06	3.92	7.103	<.009

*Mean for Overall Social Skills = Sum of ratings on a 5-point scale for three vignettes.

a significant three-way interaction for sex of confederate by situation type by ATW score ($F_{7,116} = 4.77$, $p < .031$) and a significant two-way interaction for sex of confederate by situation type ($F_{7,116} = 5.37$, $p < .022$).

Post hoc comparisons indicated that subjects interacting with male confederates in a business situation talked significantly more than did male subjects interacting in a social situation ($t_{59} = 2.00$, $p < .05$). Moreover, low ATW subjects interacting with female confederates in business situations talked significantly less than low ATW subjects interacting with female confederates in social situations, high ATW subjects interacting with male confederates in business situations, and low ATW subjects interacting with male confederates in business situations (see Table 10). Descriptive statistics are shown in Table 11.

Controlling the Scene

The number of scenes in which the subject controlled the direction of the conversation (defined as introducing new topics, keeping the conversation progressing, asking questions, etc.) was found to be an important variable for differentiation between conditions. A three-way analysis of variance on controlling the scene yielded a significant main effect for ATW score ($F_{7,116} = 6.42$, $p < .013$). Post hoc

Table 10
Post-hoc Planned Comparisons (t-tests) on Subject Talk Time

	HMS		HFS		HMB		HFB		LMS		LMB		LFS		LFB	
	df	t	df	t	df	t	df	t	df	t	df	t	df	t	df	t
HMS	—			NS		NS		NS		NS		NS		NS		NS
HFS						NS		NS		NS		NS		NS		NS
HMB								NS		NS		NS		NS	(30)	2.29*
HFB										NS		NS		NS	(30)	2.28*
LMS												NS		NS		NS
LMB														NS	(30)	2.80**
LFS															(30)	-2.33**
LFB																—

*p< .05; **p< .01.

Note. HMS = High ATW/male confederates/social situation
HFS = High ATW/female confederate/social situation
HMB = High ATW/male confederate/business situation
HFB = High ATW/female confederate/business situation
LMS = Low ATW/male confederate/social situation
LMB = Low ATW/male confederate/business situation
LFS = Low ATW/female confederate/social situation
LFB = Low ATW/female confederate/business situation

Table 11
Means and Standard Deviations for Subject Talk Time

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	145.83	48.87		
Female Confederate	63	143,55	50.37	.065	NS
High ATW	61	150.03	45.37		
Low ATW	63	139.49	52.95	1.45	NS
Social Situation	60	142.63	49.42		
Business Situation	64	146.59	49.80	.186	NS
High ATW/Male	30	151.30	47.10		
High ATW/Female	31	148.70	44.30		
Low ATW/Male	31	140.50	50.70		
Low ATW/Female	32	138.50	55.80	.001	NS
Male/Social Situation	29	133.00	47.00		
Female/Social Situation	31	151.60	50.60		
Male/Business Situation	32	157.40	48.30		
Female/Business Situation	32	135.70	49.60	5.37	<.022
High/Social Situation	29	143.37	34.49		
Low/Social Situation	31	141.93	60.76		
High/Business Situation	32	156.06	53.21		
Low/Business Situation	32	137.12	44.98	.840	NS
High/Male/Social	14	144.00	32.60		
High/Female/Social	15	142.00	37.20		
High/Male/Business	16	157.60	57.20		
High/Female/Business	16	154.00	50.70		
Low/Male/Social	15	122.00	56.40		
Low/Male/Business	16	157.20	39.30		
Low/Female/Social	16	160.00	60.70		
Low/Female/Business	16	117.00	42.00	4.77	<.031

*Mean for Subject Talk Time = Total seconds subject spoke summed across three vignettes.

analyses found that high ATW subjects controlled the scene significantly more frequently than low ATW subjects ($t_{122} = 2.56$, $p < .012$). Descriptive statistics for controlling the scene are shown in Table 12.

Facilitative Gestures

A three-way analysis of variance on facilitative gestures yielded a significant main effect for ATW score ($F_{7,116} = 6.65$, $p < .011$). Post hoc analyses indicated that subjects with high ATW scores used significantly more gestures than subjects with low ATW scores ($t_{122} = 2.61$, $p < .01$). Subsequent planned comparisons showed that low ATW subjects interacting with female confederates in business situations used significantly fewer facilitative gestures than all groups, except low ATW subjects interacting with male confederates in social situations (see Table 13). Descriptive statistics for facilitative gestures are shown in Table 14.

Confederate Talk Time

This variable was originally intended to check for consistency between confederates. It became apparent, however, that confederate talk time was also negatively correlated with overall global social skills ($r = -.113$, p

Table 12
Means and Standard Deviations for Controlling the Scene

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	1.91	1.28		
Female Confederate	63	1.87	1.22	.046	NS
High ATW	61	2.18	1.11		
Low ATW	63	1.66	1.31	6.42	<.013
Social Situation	60	1.96	1.20		
Business Situation	64	1.82	1.29	.446	NS
High ATW/Male	30	2.06	1.17		
High ATW/Female	31	2.29	1.07		
Low ATW/Male	31	1.77	1.24		
Low ATW/Female	32	1.46	1.24	1.45	NS
Male/Social Situation	29	1.89	1.23		
Female/Social Situation	31	2.03	1.19		
Male/Business Situation	32	1.93	1.34		
Female/Business Situation	32	1.71	1.25	.665	NS
High/Social Situation	29	2.24	.98		
Low/Social Situation	31	1.70	1.34		
High/Business Situation	32	2.12	1.23		
Low/Business Situation	32	1.53	1.29	2.32	NS
High/Male/Social	14	2.07	.99		
High/Female/Social	15	2.40	.98		
High/Male/Business	16	2.06	1.34		
High/Female/Business	16	2.18	1.16		
Low/Male/Social	15	1.73	1.43		
Low/Male/Business	16	1.81	1.37		
Low/Female/Social	16	1.68	1.30		
Low/Female/Business	16	1.25	1.18	.72	NS

*Mean of Control of the Scene = Mean number of vignettes in which subject was in overall control of the interactions.

Table 13
Post-hoc Planned Comparisons (t-tests) on Facilitative Gestures

	HMS		HFS		HMB		HFB		LMS		LMB		LFS		LFB	
	df	t	df	t	df	t	df	t	df	t	df	t	df	t	df	t
HMS	—			NS		NS		NS		NS		NS		NS		NS
HFS						NS		NS		NS		NS		NS	(29)	2.09**
HMB								NS		NS		NS		NS	(30)	2.49**
HFB										NS		NS		NS	(30)	2.58**
LMS												NS		NS		NS
LMB														NS	(30)	2.44**
LFS															(30)	-2.56**
LFB																—

*p< .05; **p< .01.

Note. HMS = High ATW/male confederates/social situation
HFS = High ATW/female confederate/social situation
HMB = High ATW/male confederate/business situation
HFB = High ATW/female confederate/business situation
LMS = Low ATW/male confederate/social situation
LMB = Low ATW/male confederate/business situation
LFS = Low ATW/female confederate/social situation
LFB = Low ATW/female confederate/business situation

Table 14
Means and Standard Deviations for Facilitative Gestures

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	14.50	13.90		
Female Confederate	63	13.20	12.90	.307	NS
High ATW	61	16.96	16.70		
Low ATW	63	10.82	8.20	6.65	<.01
Social Situation	60	13.30	12.80		
Business Situation	64	14.30	14.00	.238	NS
High ATW/Male	30	17.40	17.80		
High ATW/Female	31	16.40	15.90		
Low ATW/Male	31	11.60	8.10		
Low ATW/Female	32	10.00	8.30	.028	NS
Male/Social Situation	29	13.50	14.02		
Female/Social Situation	31	15.10	14.34		
Male/Business Situation	32	15.30	14.07		
Female/Business Situation	32	11.30	11.39	1.35	NS
High/Social Situation	29	16.44	17.79		
Low/Social Situation	31	12.45	9.32		
High/Business Situation	32	17.43	16.01		
Low/Business Situation	32	9.25	6.71	2.58	NS
High/Male/Social	14	16.00	17.40		
High/Female/Social	15	16.80	18.70		
High/Male/Business	16	18.70	18.50		
High/Female/Business	16	16.10	13.40		
Low/Male/Social	15	11.30	9.90		
Low/Male/Business	16	11.90	6.20		
Low/Female/Social	16	13.50	8.80		
Low/Female/Business	16	6.50	6.20	.673	NS

*Mean for Facilitative Gestures = Total number of gestures summed across the three vignettes.

<.104). It is misleading to look at confederate talk time alone, because it would appear that the confederates were not standardized. Confederate talk time can best be conceptualized in relation to subject talk time and the number of ten-second silences; the confederate spoke more only if there were ten-second silences and when the subject spoke less. When confederate talk time was considered in relation to subject talk time and silences (conversational time = silences + confederate talk time + subject talk time) (see Table 15), there were no significant differences and there was a mean difference of only 3.02 seconds, or .6% of total conversational time, between male and female confederates. Descriptive statistics for conversational time are shown in Table 16.

A three-way analysis of variance on confederate talk time demonstrated a significant main effect for sex of confederate ($F_{7,116} = 12.25$, $p < .001$) and a significant three-way interaction for sex of the confederate, type of situation, and ATW scores ($F_{7,116} = 4.97$, $p < .028$). Post hoc analyses showed that female confederates in the social situation interacting with low ATW subjects spoke less than male confederates in social situations interacting with low ATW scorers ($t_{29} = 3.81$, $p < .001$) and male confederates in the business situations interacting with both high ATW scorers ($t_{30} = 3.43$, $p < .002$) and low ATW scorers ($t_{30} =$

Table 15
Conversational Time by Sex of Confederate

Sex of Confederate	Subject Talk Time (seconds)	+	Confederate Talk Time (seconds)	+	Number of Silences x10 (seconds)	TOTAL
Male	145.83		76.62		24.9	247.35
Female 244.33	143.55		60.68		40.1	
Mean Difference	2.28		15.94		-15.2	3.02

Table 16
Means and Standard Deviations for Conversational Time (Silences + Subject Talk Time + Confederate Talk Time)

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	247.35	53.88		
Female Confederate	63	244.33	61.85	.068	NS
High ATW	61	249.70	61.82		
Low ATW	63	242.14	53.97	.499	NS
Social Situation	60	235.98	47.38		
Business Situation	64	255.12	65.21	3.42	NS
High ATW/Male	30	245.36	55.24		
High ATW/Female	31	253.90	68.23		
Low ATW/Male	31	249.32	53.36		
Low ATW/Female	32	235.18	54.49	1.32	NS
Male/Social Situation	29	232.93	53.41		
Female/Social Situation	31	238.83	41.66		
Male/Business Situation	32	260.46	51.67		
Female/Business Situation	32	249.78	76.89	.68	NS
High/Social Situation	29	229.06	35.72		
Low/Social Situation	31	242.45	55.99		
High/Business Situation	32	268.40	74.06		
Low/Business Situation	32	241.48	52.84	3.86	NS
High/Male/Social	14	223.92	32.47		
High/Female/Social	15	233.86	39.01		
High/Male/Business	16	264.12	64.67		
High/Female/Business	16	272.68	84.34		
Low/Male/Social	15	241.33	67.59		
Low/Male/Business	16	256.81	36.16		
Low/Female/Social	16	243.50	44.75		
Low/Female/Business	16	226.87	63.13	.560	NS

*Mean of Conversational Time = Mean number of 10-second silences x 10 x mean number of seconds subject spoke + mean number of seconds confederate spoke, all summed across the three vignettes.

2.61, $p < .014$) (see Table 17). Descriptive statistics for confederate talk time are shown in Table 18.

Closed Questions

The number of closed questions (those requiring only short yes/no type answers) was found to differ, depending on the sex of the confederate. A three-way analysis of variance on closed questions showed a significant main effect for sex of the confederate ($F7,116 = 6.81$, $p < .01$). Post hoc analyses showed that subjects interacting with male confederates asked fewer closed questions than did subjects interacting with female confederates ($t122$, $p < .01$). Descriptive statistics for closed questions are shown in Table 19.

Open-Ended Questions

The number of open-ended questions that subjects asked showed a trend similar to the one observed with closed questions. A three-way analysis of variance on open-ended questions showed a significant main effect for the sex of the confederate ($F7,116 = 8.12$, $p < .005$). Subjects interacting with female confederates asked more open-ended questions than did subjects interacting with male confederates. Descriptive statistics for open-ended questions are shown in Table 20.

Table 17
Post-hoc Planned Comparisons (t-tests) on Confederate Talk Time

	HMS		HFS		HMB		HFB		LMS		LMB		LFS		LFB	
	df	t	df	t	df	t	df	t	df	t	df	t	df	t	df	t
HMS	—			NS		NS		NS	(27)	-2.33*		NS		NS		NS
HFS						NS		NS	(28)	-2.32*		NS		NS		NS
HMB								NS		NS		NS	(30)	3.43**		NS
HFB									(29)	-2.46*		NS		NS		NS
LMS												NS	(29)	3.81**	(29)	2.33*
LMB													(30)	2.61*		NS
LFS														NS		NS
LFB																NS

*$p < .05$; **$p < .01$.

Note. HMS = High ATW/male confederates/social situation
HFS = High ATW/female confederate/social situation
HMB = High ATW/male confederate/business situation
HFB = High ATW/female confederate/business situation
LMS = Low ATW/male confederate/social situation
LMB = Low ATW/male confederate/business situation
LFS = Low ATW/female confederate/social situation
LFB = Low ATW/female confederate/business situation

Table 18
Means and Standard Deviations for Confederate Talk Time

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	76.62	28.34		
Female Confederate	63	60.60	22.73	12.25	<.001
High ATW	61	67.70	23.35		
Low ATW	63	69.30	30.59	.438	NS
Social Situation	60	66.80	22.17		
Business Situation	64	70.00	26.50	.134	NS
High ATW/Male	30	71.36	23.09		
High ATW/Female	31	64.16	21.39		
Low ATW/Male	31	81.70	32.19		
Low ATW/Female	32	57.31	23.81	3.58	NS
Male/Social Situation	29	76.44	29.76		
Female/Social Situation	31	57.87	21.28		
Male/Business Situation	32	76.78	27.47		
Female/Business Situation	32	63.40	24.08	.292	NS
High/Social Situation	29	64.65	20.25		
Low/Social Situation	31	68.90	32.55		
High/Business Situation	32	70.46	24.08		
Low/Business Situation	32	69.71	29.09	.336	NS
High/Male/Social	14	64.07	21.31		
High/Female/Social	15	65.20	19.95		
High/Male/Business	16	77.75	23.33		
High/Female/Business	16	63.18	23.27		
Low/Male/Social	15	88.00	32.45		
Low/Male/Business	16	75.81	31.83		
Low/Female/Social	16	51.00	20.73		
Low/Female/Business	16	63.62	25.63	4.97	<.028

*Mean for Confederate Talk Time = Total number of seconds confederates spoke summed across the three vignettes.

Table 19
Means and Standard Deviations for Closed Questions

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	1.90	2.35		
Female Confederate	63	3.15	2.92	6.81	<.010
High ATW	61	2.37	2.81		
Low ATW	63	2.69	2.63	.435	NS
Social Situation	60	2.71	2.82		
Business Situation	64	2.37	2.62	.432	NS
High ATW/Male	30	1.30	2.29		
High ATW/Female	31	3.41	2.91		
Low ATW/Male	31	2.48	2.29		
Low ATW/Female	32	2.90	2.95	3.05	NS
Male/Social Situation	29	2.27	2.63		
Female/Social Situation	31	3.12	2.98		
Male/Business Situation	32	1.56	2.04		
Female/Business Situation	32	3.18	2.91	.600	NS
High/Social Situation	29	2.65	2.78		
Low/Social Situation	31	2.77	2.91		
High/Business Situation	32	2.12	2.87		
Low/Business Situation	32	2.62	2.37	.134	NS
High/Male/Social	14	1.85	3.08		
High/Female/Social	15	3.40	2.32		
High/Male/Business	16	.81	1.16		
High/Female/Business	16	3.43	3.46		
Low/Male/Social	15	2.66	2.16		
Low/Male/Business	16	2.31	2.46		
Low/Female/Social	16	2.87	3.55		
Low/Female/Business	16	3.93	2.32	.120	NS

*Mean for Closed Questions = Total number of closed questions subject asked summed across three vignettes.

Table 20
Means and Standard Deviations for Open-Ended Questions

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	10.00	6.26		
Female Confederate	63	14.80	11.38	8.12	<.005
High ATW	61	13.10	11.39		
Low ATW	63	11.80	7.25	.661	NS
Social Situation	60	12.16	8.76		
Business Situation	64	12.79	10.20	.165	NS
High ATW/Male	30	10.26	6.25		
High ATW/Female	31	16.03	14.30		
Low ATW/Male	31	9.83	6.37		
Low ATW/Female	32	13.71	7.62	.317	NS
Male/Social Situation	29	9.68	6.69		
Female/Social Situation	31	14.48	9.88		
Male/Business Situation	32	10.37	5.93		
Female/Business Situation	32	15.21	12.81	.000	NS
High/Social Situation	29	12.58	9.80		
Low/Social Situation	31	11.77	7.80		
High/Business Situation	32	13.75	12.79		
Low/Business Situation	32	11.84	6.79	.112	NS
High/Male/Social	14	9.42	5.99		
High/Female/Social	15	15.53	11.81		
High/Male/Business	16	11.00	6.58		
High/Female/Business	16	16.50	16.69		
Low/Male/Social	15	9.93	7.49		
Low/Male/Business	16	9.75	5.36		
Low/Female/Social	16	13.50	7.93		
Low/Female/Business	16	13.93	7.56	.033	NS

*Mean for Open-Ended Questions - Mean number of open-ended questions subject asked summed across three vignettes.

Eye Contact

A three-way analysis of variance on eye contact yielded a significant two-way interaction effect between ATW scores and sex of confederate ($F_{7,116} = 5.19$, $p < .025$). Low ATW subjects interacting with female confederates had significantly less eye contact than high ATW subjects interacting with male confederates ($t_{60} = 1.99$, $p < .05$), low ATW subjects interacting with male confederates ($t_{61} = 2.26$, $p < .028$), and high ATW subjects interacting with female confederates ($t_{61} = 2.68$, $p < .009$). Descriptive statistics for eye contact are shown in Table 21.

Silences

There were no significant main effects or interactions on silences. Descriptive statistics for silences are shown in Table 22.

Nervous Gestures

There were no significant main effects or interactions for nervous gestures. Descriptive statistics are shown in Table 23.

Table 21
Means and Standard Deviations for Eye Contact

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	196.14	54.82		
Female Confederate	63	182.90	56.28	1.82	NS
High ATW	61	196.85	46.07		
Low ATW	63	182.22	63.26	2.22	NS
Social Situation	60	184.63	60.89		
Business Situation	64	193.90	50.50	.824	NS
High ATW/Male	30	192.33	46.05		
High ATW/Female	31	201.32	46.40		
Low ATW/Male	31	199.93	62.69		
Low ATW/Female	32	165.06	59.87	5.19	<.025
Male/Social Situation	29	183.62	64.56		
Female/Social Situation	31	185.58	58.31		
Male/Business Situation	32	207.50	42.09		
Female/Business Situation	32	180.31	55.05	2.36	NS
High/Social Situation	29	196.00	52.71		
Low/Social Situation	31	174.00	66.76		
High/Business Situation	32	197.62	39.96		
Low/Business Situation	32	190.18	59.65	.506	NS
High/Male/Social	14	190.78	49.39		
High/Female/Social	15	200.86	56.92		
High/Male/Business	16	193.50	44.52		
High/Female/Business	16	201.75	35.80		
Low/Male/Social	15	176.93	77.27		
Low/Male/Business	16	221.50	35.51		
Low/Female/Social	16	171.25	57.66		
Low/Female/Business	16	158.87	63.25	2.01	NS

*Mean for Eye Contact = Mean number of seconds subject gazed at confederate summed across the three vignettes.

Table 22
Means and Standard Deviations for Silences

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	2.49	4.48		
Female Confederate	63	4.01	5.11	3.13	NS
High ATW	61	3.19	5.40		
Low ATW	63	3.33	4.31	.03	NS
Social Situation	60	2.65	3.66		
Business Situation	64	3.84	5.73	1.96	NS
High ATW/Male	30	2.26	4.77		
High ATW/Female	31	4.09	5.88		
Low ATW/Male	31	2.70	4.26		
Low ATW/Female	32	3.93	4.34	.119	NS
Male/Social Situation	29	2.34	4.18		
Female/Social Situation	31	2.93	3.15		
Male/Business Situation	32	2.62	4.81		
Female/Business Situation	32	5.06	6.36	1.10	NS
High/Social Situation	29	2.10	2.31		
Low/Social Situation	31	3.16	4.56		
High/Business Situation	32	4.18	7.03		
Low/Business Situation	32	3.50	4.12	1.01	NS
High/Male/Social	14	1.57	1.78		
High/Female/Social	15	2.60	2.69		
High/Male/Business	16	2.87	6.35		
High/Female/Business	16	5.50	7.62		
Low/Male/Social	15	3.06	5.56		
Low/Male/Business	16	2.37	2.70		
Low/Female/Social	16	3.25	3.58		
Low/Female/Business	16	4.62	5.01	.018	NS

*Mean for Silences - Mean number of 10-second silences summed across the three vignettes.

Table 23
Means and Standard Deviations for Nervous Gestures

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	18.44	11.11		
Female Confederate	63	16.98	12.43	.463	NS
High ATW	61	18.72	12.38		
Low ATW	63	16.71	11.19	.868	NS
Social Situation	60	17.45	12.49		
Business Situation	64	17.95	11.11	.047	NS
High ATW/Male	30	18.53	10.42		
High ATW/Female	31	18.90	14.19		
Low ATW/Male	31	18.35	11.90		
Low ATW/Female	32	15.12	10.39	.708	NS
Male/Social Situation	29	18.55	11.37		
Female/Social Situation	31	16.38	13.56		
Male/Business Situation	32	18.34	11.04		
Female/Business Situation	32	17.56	11.46	.096	NS
High/Social Situation	29	18.27	13.12		
Low/Social Situation	31	16.64	12.04		
High/Business Situation	32	19.12	11.86		
Low/Business Situation	32	16.78	10.49	.033	NS
High/Male/Social	14	16.42	5.80		
High/Female/Social	15	20.00	17.50		
High/Male/Business	16	20.37	13.16		
High/Female/Business	16	17.87	10.70		
Low/Male/Social	15	20.53	14.79		
Low/Male/Business	16	16.31	8.37		
Low/Female/Social	16	13.00	7.52		
Low/Female/Business	16	17.25	12.53	2.89	NS

*Mean for Nervous Gestures = Mean number of nervous gestures summed across the three vignettes.

Laughter

There were no significant main effects or interactions for laughter. Descriptive statistics are shown in Table 24.

Initiations

There were no significant main effects or interactions for subject initiations. Descriptive statistics are shown in Table 25.

Subject Disclosures

There were no significant main effects or interactions for subject disclosures. Descriptive statistics are shown in Table 26.

Physical Attractiveness

A three-way analysis of variance on physical attractiveness ratings yielded a significant main effect for ATW scores ($F_{7,116} = 5.13$, $p < .025$). Post hoc comparisons indicated that high ATW scorers were judged as being significantly more attractive than were low ATW scorers ($t_{122} = 2.27$, $p < .025$). Descriptive statistics for physical attractiveness are shown in Table 27.

Table 24
Means and Standard Deviations for Laughter

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	14.68	9.77		
Female Confederate	63	15.14	15.03	.030	NS
High ATW	61	14.04	11.93		
Low ATW	63	15.76	13.38	5.29	NS
Social Situation	60	16.78	14.40		
Business Situation	64	13.17	10.50	2.47	NS
High ATW/Male	30	12.40	8.63		
High ATW/Female	31	15.64	14.40		
Low ATW/Male	31	16.90	10.42		
Low ATW/Female	32	14.65	15.83	1.54	NS
Male/Social Situation	29	14.79	10.05		
Female/Social Situation	31	18.64	17.59		
Male/Business Situation	32	14.59	9.67		
Female/Business Situation	32	11.75	11.32	2.236	NS
High/Social Situation	29	15.31	12.45		
Low/Social Situation	31	18.16	16.20		
High/Business Situation	32	12.90	11.52		
Low/Business Situation	32	13.43	9.65	.283	NS
High/Male/Social	14	12.57	9.40		
High/Female/Social	15	17.86	14.62		
High/Male/Business	16	12.25	8.20		
High/Female/Business	16	13.56	14.35		
Low/Male/Social	15	16.86	10.51		
Low/Male/Business	16	16.93	10.69		
Low/Female/Social	16	19.37	20.45		
Low/Female/Business	16	9.93	7.21	.369	NS

*Mean for Laughter = Mean number of times subject laughed or chuckled summed across the three vignettes.

Table 25
Means and Standard Deviations for Initiations

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	39.50	30.70		
Female Confederate	63	34.70	24.40	.916	NS
High ATW	61	38.20	28.30		
Low ATW	63	36.00	27.20	.178	NS
Social Situation	60	36.78	29.20		
Business Situation	64	37.40	26.40	.011	NS
High ATW/Male	30	43.90	33.37		
High ATW/Female	31	32.70	21.72		
Low ATW/Male	31	35.41	27.92		
Low ATW/Female	32	36.68	26.99	1.51	NS
Male/Social Situation	29	39.00	33.06		
Female/Social Situation	31	37.70	25.62		
Male/Business Situation	32	40.12	29.05		
Female/Business Situation	32	34.75	23.62	.007	NS
High/Social Situation	29	38.41	29.33		
Low/Social Situation	31	35.75	29.62		
High/Business Situation	32	38.03	27.98		
Low/Business Situation	32	36.84	25.16	.046	NS
High/Male/Social	14	44.35	34.93		
High/Female/Social	15	32.86	22.78		
High/Male/Business	16	43.50	33.09		
High/Female/Business	16	32.56	21.43		
Low/Male/Social	15	34.00	31.57		
Low/Male/Business	16	36.75	24.99		
Low/Female/Social	16	36.43	28.66		
Low/Female/Business	16	36.93	26.15	.019	NS

*Mean for Initiations = Mean number of times subject initiates topic summed across the three vignettes.

Table 26
Means and Standard Deviations for Subject Disclosures

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	16.50	7.90		
Female Confederate	63	17.40	9.80	.255	NS
High ATW	61	17.40	8.70		
Low ATW	63	16.50	9.10	.381	NS
Social Situation	60	17.80	9.40		
Business Situation	64	16.20	8.40	.931	NS
High ATW/Male	30	16.70	9.28		
High ATW/Female	31	18.25	8.35		
Low ATW/Male	31	16.45	6.57		
Low ATW/Female	32	16.59	11.14	2.11	NS
Male/Social Situation	29	17.62	8.38		
Female/Social Situation	31	17.96	10.48		
Male/Business Situation	32	15.62	7.55		
Female/Business Situation	32	16.87	9.28	.074	NS
High/Social Situation	29	17.03	8.83		
Low/Social Situation	31	18.51	10.07		
High/Business Situation	32	17.90	8.85		
Low/Business Situation	32	14.59	7.74	2.24	NS
High/Male/Social	14	17.78	10.00		
High/Female/Social	15	16.33	7.88		
High/Male/Business	16	15.75	8.83		
High/Female/Business	16	20.06	8.61		
Low/Male/Social	15	17.46	6.91		
Low/Male/Business	16	15.50	6.30		
Low/Female/Social	16	19.50	12.50		
Low/Female/Business	16	13.68	9.07	2.22	NS

*Mean for Subject Disclosure = Mean number of times subject disclosed personal information about himself summed across the three vignettes.

Table 27
Means and Standard Deviations for Physical Attractiveness

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	3.85	1.09		
Female Confederate	63	3.69	1.56	.43	NS
High ATW	61	4.04	1.33		
Low ATW	63	3.50	1.31	5.13	<.025
Social Situation	60	3.91	1.29		
Business Situation	64	3.64	1.39	1.42	NS
High ATW/Male	30	4.00	1.36		
High ATW/Female	31	4.09	1.32		
Low ATW/Male	31	3.70	.73		
Low ATW/Female	32	3.31	1.69	1.03	NS
Male/Social Situation	29	4.06	.75		
Female/Social Situation	31	3.77	1.64		
Male/Business Situation	32	3.65	1.31		
Female/Business Situation	32	3.62	1.49	.281	NS
High/Social Situation	29	4.06	.75		
Low/Social Situation	31	3.77	1.64		
High/Business Situation	32	3.65	1.31		
Low/Business Situation	32	3.62	1.49	.049	NS
High/Male/Social	14	4.21	.69		
High/Female/Social	15	4.13	1.24		
High/Male/Business	16	3.81	1.75		
High/Female/Business	16	4.06	1.43		
Low/Male/Social	15	3.93	.79		
Low/Male/Business	16	3.50	.63		
Low/Female/Social	16	3.43	1.93		
Low/Female/Business	16	3.18	1.47	.023	NS

*Mean for Physical Attractiveness = Group average rating on 1-7 point scale.

A 2x2x2 (sex by situation type by ATW) analysis of variance, with physical attractiveness as the covariate, was also done on overall global social skills scores to rule out that physical attractiveness predicted the overall global social skill score. There were no differences between the trends of overall global social skills when physical attractiveness was used as the covariate (see Table 28) and when it was not used as a covariate (refer back to Table 7). This demonstrates that global overall social skills cannot be explained by the influence of physical attractiveness.

Correlations

A stepwise multiple regression was performed to see which variables were predictors of overall global social skills (Table 29). Results showed that subject talk time predicted overall global social skills more than any other specific behavior. Subject talk time was not an exact predictor of overall global social skills, but it was the variable that came closest to repeating the overall social skills pattern. Multiple regression correlation coefficients did not indicate that they were strong predictors of overall global social skills (see Table 29), although controlling the scene, facilitative gestures, laughter, initiations, eye contact, subject disclosures, physical attractiveness and subject talk time all did

Table 28
Analysis of Variance on Overall Global Social Skill Ratings with the Covariate of Physical Attractiveness

Factor	F value	P
ATW	12.14	<.001
Situation Type	.124	NS
Sex of Confederate	1.87	NS
ATW x Situation Type	1.25	NS
ATW x Sex of Confederate	1.01	NS
Sex of Confederate x Situation	6.28	<.014
Situation Type x Sex of Confederate x ATW	7.92	<.006

df (8,115)

Table 29
Multiple Regression (Stepwise): Prediction of Overall Global Social Ratings

Predictor	Multiple R	R Squared	R2 Change	T	P
Subject Talk Time	.55	.306	.306	2.69	.0082
Physical Attraction	.64	.410	.104	3.32	.0012
Controlling the Scene	.68	.469	.059	2.20	.0295
Facilitative Gestures	.72	.518	.049	3.46	.0008
Eye Contact	.72	.531	.013	1.46	.1473
Silences	.73	.543	.012	-1.67	.0962
Nervous Gestures	.74	.548	.005	-1.02	.3057
Laughter	.743	.553	.005	1.10	.2704
Initiations	.745	.555	.002	.54	.5871
Questions, Closed	.745	.556	.001	- .64	.5214
Questions, Open	.746	.557	.001	.56	.5737
Self-disclosures	.746	.557	.0007	.35	.7217
Breaking the Role	.747	.558	.001	- .27	.7834

positively correlate with overall global social skills ratings (Table 30). Silences and SISST Inhibitive scores had significant negative correlations with overall social skills. Correlations among dependent variables are shown in Table 31.

Social Interaction Self Statement Test (SISST)

The Social Interaction Self Statement Test (Glass et al., 1982) was given to subjects after role playing to measure differences between subjects with high facilitative scores and high inhibitive scores. There were no differences between conditions for facilitative scores, inhibitive scores and total scores on the SISST. This lack of significant differences is curious in that it suggests that even though low ATW subjects may have inadequate social skills, at least as measured in the present context, they do not seem to be aware of it. Descriptive statistics for total SISST scores, facilitative scores and inhibitive scores are shown in Tables 32, 33 and 34, respectively.

Summary

There were more significant main effects for ATW scores (n=4) than for any other independent variable. There were main effects for ATW scores on the dependent variables of

Table 30
Correlations with Overall Global Social Skills

Item	Pearson's r
Subject Talk Time	.58 **
Controlling the Scene	.52 **
Facilitative Gestures	.49 **
Physical Attractiveness	.41 **
Silences	-.33 **
Subject Disclosures	.30 **
SISST Inhibitive Score	-.21 **
Eye Contact	.21 **
Initiations	.20 **
Laughter	.16 *
Questions, Closed	.13
Perceptions of Confederates	.11
Confederate Talk time	-.11
Nervous Gestures	.09
SISST Facilitative Score	-.07
Questions, Open	.07
SISST Total Score	-.02
Breaking the Role	.02

*p <.05; **p <.01.

Table 31
Correlations Among Variables

Variable	Overall Social Skills	Subject Talk Time	Confederate Talk Time	Laughter	Nervous Gestures	Facilitative Gestures	Self-disclosures	Silences	Initiations	Eye Contact	Open Questions	Closed Questions	Control of the Scene	Breaking the Role	Physical Attractiveness	SISST Score	Confederate Rating
Overall social skills	1.00																
Subject talk time	.58**	1.00															
Confederate talk time	-.11	-.41**	1.00														
Laughter	.16	.09	-.00	1.00													
Nervous gestures	.09	.14	-.07	.00	1.00												
Facilitative gestures	.49	.39**	-.22**	.15*	.31**	1.00											
Self-disclosures	.30**	.34**	-.11	.09	.09	.12	1.00										
Silences	-.32**	.28**	.11	-.09	-.06	-.12	-.08	1.00									
Initiations	.20**	.21**	-.04	-.10	.01	.06	.21**	-.05	1.00								
Eye contact	.21**	.14	.26**	.08	-.14*	.03	.05	-.07	.04	1.00							
Open questions	.07	.09	-.02	-.14	.02	.03	.00	.02	.24**	-.07	1.00						
Closed questions	.13	.16*	-.04	-.02	.18*	.20*	.26**	.07	.10	-.06	.21**	1.00					
Control of the scene	.52**	.48**	-.11	.05	.03	.22**	.31**	-.39**	.28**	.14*	.15*	.08	1.00				
Breaking the role	.02	.10	-.05	.12	.04	.09	-.09	-.01	.04	.01	.37**	.08	-.08	1.00			
Physical attractiveness	.41**	.31**	.01	.04	.17*	.31**	.21**	-.08	.00	.01	-.01	.27*	.32**	-.02	1.00		
SISST score	-.02	.02	.02	-.00	.06	-.00	-.03	.00	-.07	.05	.06	.08	-.02	-.07	.10	1.00	
Confederate ratings	.10	.06	.08	.03	.14	.10	.14*	.00	-.06	.08	-.04	-.01	.09	-.12	.09	-.20*	1.00

*$p < .05$; **$p < .01$.

Table 32
Means and Standard Deviations for SISST (Total Score)

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	78.80	12.50		
Female Confederate	63	101.80	16.50	2.27	NS
High ATW	61	98.40	18.60		
Low ATW	63	82.80	16.00	1.07	NS
Social Situation	60	94.38	93.32		
Business Situation	64	86.95	74.81	.233	NS
High ATW/Male	30	75.20	12.76		
High ATW/Female	31	121.00	164.12		
Low ATW/Male	31	82.41	11.54		
Low ATW/Female	32	83.31	19.58	2.21	NS
Male/Social Situation	29	78.82	14.21		
Female/Social Situation	31	108.93	128.40		
Male/Business Situation	32	78.90	11.70		
Female/Business Situation	32	95.00	105.43	.236	NS
High/Social Situation	29	103.41	133.45		
Low/Social Situation	31	85.93	18.84		
High/Business Situation	32	94.00	105.45		
Low/Business Situation	32	79.90	12.29	.007	NS
High/Male/Social	14	75.14	15.02		
High/Female/Social	15	129.80	184.02		
High/Male/Business	16	75.25	10.93		
High/Female/Business	16	112.75	148.70		
Low/Male/Social	15	82.26	12.96		
Low/Male/Business	16	82.56	10.47		
Low/Female/Social	16	89.37	22.96		
Low/Female/Business	16	77.25	13.68	.006	NS

*Mean for SISST Total Score = Mean sum of the 30 items of the Social Interaction Self Statement Test.

Table 33
Means and Standard Deviations for SISST (Facilitative Score)

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	46.72	8.44		
Female Confederate	63	45.92	8.85	.275	NS
High ATW	61	45.14	9.23		
Low ATW	63	47.44	7.91	2.13	NS
Social Situation	60	46.86	8.54		
Business Situation	64	45.79	8.74	.450	NS
High ATW/Male	30	45.10	8.96		
High ATW/Female	31	45.19	9.62		
Low ATW/Male	31	48.29	7.72		
Low ATW/Female	32	46.62	8.13	.338	NS
Male/Social Situation	29	46.03	8.89		
Female/Social Situation	31	47.64	8.27		
Male/Business Situation	32	47.34	8.09		
Female/Business Situation	32	44.25	9.20	2.30	NS
High/Social Situation	29	46.06	9.13		
Low/Social Situation	31	47.61	8.03		
High/Business Situation	32	44.31	9.38		
Low/Business Situation	32	47.28	7.91	.199	NS
High/Male/Social	14	44.71	9.44		
High/Female/Social	15	47.33	8.97		
High/Male/Business	16	45.43	8.83		
High/Female/Business	16	43.18	10.06		
Low/Male/Social	15	47.26	8.49		
Low/Male/Business	16	49.25	7.05		
Low/Female/Social	16	47.93	7.84		
Low/Female/Business	16	45.31	8.45	.002	NS

*Mean for SISST Facilitative Score = Mean sum of 15 positively stated items on the Social Interaction Self Statement Test.

Table 34
Means and Standard Deviations for SISST (Inhibitive Score)

Condition	n	Mean*	SD	F(7,116)	p
Male Confederate	61	32.40	10.56		
Female Confederate	63	33.42	8.97	.580	NS
High ATW	61	31.50	9.16		
Low ATW	63	33.95	10.24	1.87	NS
Social Situation	60	33.75	10.12		
Business Situation	64	31.81	9.40	1.12	NS
High ATW/Male	30	29.63	10.12		
High ATW/Female	31	33.32	7.87		
Low ATW/Male	31	34.38	10.60		
Low ATW/Female	32	33.53	10.04	1.69	NS
Male/Social Situation	29	32.51	11.79		
Female/Social Situation	31	34.90	8.30		
Male/Business Situation	32	31.62	9.47		
Female/Business Situation	32	32.00	9.48	.351	NS
High/Social Situation	29	32.31	9.90		
Low/Social Situation	31	35.09	10.31		
High/Business Situation	32	30.78	8.53		
Low/Business Situation	32	32.84	10.22	.052	NS
High/Male/Social	14	29.78	12.17		
High/Female/Social	15	34.66	6.78		
High/Male/Business	16	29.50	8.35		
High/Female/Business	16	32.06	8.79		
Low/Male/Social	15	35.06	11.23		
Low/Male/Business	16	33.75	10.29		
Low/Female/Social	16	35.12	9.74		
Low/Female/Business	16	31.93	10.40	.004	NS

*Mean for SISST Inhibitive Score = Mean sum of 15 negatively stated items on the Social Interaction Self Statement Test.

social skills, and physical attractiveness (Table 35). Sex of the confederate also showed main effects for the three dependent variables of open-ended questions, closed questions, and confederate talk time (Table 36). The independent variable of situation type was not significantly different for any dependent variables.

A two-way interaction was found between ATW scores and sex of confederate for only one dependent variable -- eye contact. A two-way interaction was also found for sex of confederate by situation type for the dependent variables of overall global social skills and subject talk time, although situation type alone did not yield any significant differences. A three-way interaction of sex of confederate by situation type by ATW was also found for the three dependent variables of subject talk time, confederate talk time, and overall global social skills (see Tables 37 and 38).

Table 35
Significant F Differences by ATW Scores
Analysis of Variance

Item	F(7,116)	P
Facilitative Gestures	6.658	.011
Control of the Scene	6.162	.014
Overall Global Skills	17.515	.001
Physical Attractiveness	5.140	.025

Table 36
Significant F Differences by Sex
Analysis of Variance

Item	F(7,116)	P
Questions, Open	8.124	.005
Questions, Closed	6.810	.010
Confederate Talk Time	12.13	.001

Table 37
Significant Interactional Differences
Analysis of Variance

	F value	p
ATW x Sex		
Eye Contact	5.193	.025
Sex x Situation		
Overall Global Skills	4.68	.033
Subject Talk Time	5.37	.022
Sex x Situation x ATW		
Subject Talk Time	4.77	.031
Confederate Talk Time	4.97	.028
Overall Global Skills	7.10	.009

Table 38
Overall Significant F Findings for all Variables

Variable	Sex of Confederate	ATW Scores	Situation Type	Sex of Confederate X ATW	Sex of Confederate X Situation Type	ATW X Situation Type	Sex X ATW X Situation Type
Overall social skills		17.51*			4.68*		7.10**
Subject talk time					5.37		4.77*
Confederate talk time	12.13*						4.97*
Laughter							
Nervous gestures							
Facilitative gestures		6.65*					
Self-disclosures							
Silences							
Initiations							
Eye contact				5.19*			
Open questions	8.12**						
Closed questions	6.81**						
Control of the scene		6.16*					
Breaking the role							
Physical attractiveness		5.14*					
SISST score							
Confederate ratings		•					

*$p<.05$; **$p<.01$.

C H A P T E R I V

DISCUSSION

The results of the experiment are complex. There are no clear-cut conclusions but several important significant findings.

The most important finding in this study was that male subjects did interact differently with female confederates depending on whether they were in a business or social situation and more importantly, whether they had high/liberal or low/conservative attitudes towards women. Low male subjects were consistently rated as having poorer overall global social skills than were high male subjects. The significant interactional differences of sex of confederate by situation type, and sex of confederate by situation type by ATW score, affirm these different ways of interacting, but do not clearly point out any other consistent trends.

Low/conservative male subjects talked the least to females in business situations and the most, compared to all groups, to females in social situations. These low subjects also talked more to men in business situations and less to men in social situations.

Low ATW scorers also used the least amount of eye contact with women in business situations, while they used

the most eye contact with men in business situations. When this type of situation is excluded from the analysis, low ATW scorers interacting with females made the least eye contact, while high ATW scorers interacting with males made the most eye contact. Subjects with more eye contact were also rated as being more socially skilled.

Low ATW men were also more passive (least able to control conversations) with females in business situations, but they were more active (most able to control conversations) with females in social situations. This finding supports the hypothesis that the type of situation makes a difference for low ATW subjects. They interact differently with women depending on whether the situation is social or business/ "interactive." Low subjects were more flirtatious (more in control of conversation, more talkative) with females in social situations.

Low ATW male subjects interacting in business situations used the least amount of facilitative gestures when they interacted with females. High ATW male subjects in business situations interacting with male confederates used the most facilitative gestures. If subjects had a high attitude towards women, they used significantly more facilitative gestures. The higher use of facilitative gestures is connected with higher overall social skills.

Subjects asked fewer open-ended and closed questions when they interacted with a male confederate than when they

interacted with a female confederate. It is difficult to accurately interpret this finding, but it may be hypothesized that subjects tried harder to engage females in conversation by asking more questions. It could also be hypothesized that the subject's use of more questions, both open-ended ones and closed ones, is a manner of control (i.e., not allowing the woman to express and elaborate on her own thoughts and opinions).

This study has found many statistically significant findings. Thus, it is necessary to try to understand how these findings might best be explained.

Physical Influences

The variable of physical attractiveness was able to differentiate high ATW scorers from low ATW scorers. This variable was very subjective and even required additional training and reliability checking to reach an adequate inter-rater reliability coefficient. Although this study did not find physical attractiveness of the subject to be a significant contributor to global overall social skills, there is much evidence throughout the literature that physical attractiveness does affect ratings (Richardson, Hastorf & Dombusch, 1964).

It could be hypothesized that physical appearance might influence the manner in which one interacts. An individual

may be less "interactive" if the other individual is a physically handicapped person or is disabled in some way. An individual may also be more "interactive" if he or she is particularly attracted to a physically appealing person of the opposite sex.

It is difficult to ignore that low ATW scorers were rated less attractive than high ATW scorers, and it might be speculated that less attractive subjects may actually have poorer attitudes towards both women and men. This theory could be more fully explored with future research.

Social Influence

It seems crucial to take into account numerous social factors that could contribute to an understanding of these findings.

Ethnic/Cultural Factors

Ethnic/cultural factors may play a significant role in the interactional process. Children from a particular ethnic subculture may, for example, be taught that direct eye contact is a sign of disrespect, while other cultures may use eye contact as a form of obtaining power through intimidation (i.e., "staring someone down"). Various cultural backgrounds also differ on the role of women in

their society. Subjects coming from strong patriarchal cultural backgrounds, where women are kept home and not allowed to work, might have difficulties interacting in a "business" situation with a woman.

Religious Factors

A subject who was raised in a conservative religious orientation, where there is a more traditional definition of the roles of women, might have a different set of attitudes than someone raised in a liberal religious orientation.

Geographical Factors

Where a subject was raised during his/her early childhood years may influence his/her perception of women. There might be attitudinal differences between subjects from urban and rural settings and from different parts of the country (i.e., North vs. South, or New England vs. Mid West).

Family Factors

One of the most important factors in a child's development of attitudes and morals is directly related to the effects of modeling by his/her parents. There are

differences in degrees of authority and respect within different socioeconomic status groups. Do children raised in single-parent, female-headed households have better attitudes towards women? Do subjects who come from situations where there is physical abuse and the modelling is not positive learn the necessary skills for positive interactions with women? Would a subject who was an only child differ in his interactions from a subject who was from a large family? Family information and socioeconomic status would be necessary to help form more conclusive evidence about social skills differences.

Age of Subject Factors

Would an 18-year-old subject have different attitudes towards women than a 22-year-old subject? Would their interactional styles be different? In terms of adolescent development, a 22-year-old would presumably have a slightly more matured level of social poise and interpersonal skills than an 18-year-old.

Psychological Influence

In order to understand why certain subjects behaved in certain ways, it might be helpful to look at certain psychological influences.

Attitudes and Fears of Sexuality Factors

Because subjects were adolescent male undergraduate students, developmentally it is consistent that there might be anxiety around interpersonal interactions with the opposite sex. These fears and attitudes might be manifested with an increased bravado-type reaction formation which would overtly mask those fears. Subjects who might have been extremely anxious interacting with a female confederate might have tried hard to impress her in order to avoid feeling inadequate.

These fears of sexuality might also be manifested in a more self-fulfilling prophecy. A subject believes that he is inadequate, and cannot succeed, in his interactions with women, so he does not even attempt to maintain an interesting conversation. By putting himself down and avoiding the situation, he further confirms his own feelings of inadequacy and actually does not succeed in the interaction. A subject may be able to cover up these self-doubting feelings on a paper-and-pencil measure such as the SSIST and demonstrate enough overt behaviors to appear somewhat competent, but his attitude of expected failure may remain the same.

Motivation and Intimidation Factors

For lack of more descriptive terms, a subject's motivation and "degree of intimidation" might also be noted. Aside from the two credits offered to each subject, it became apparent that two credits offered by a male caller were not as motivating as two credits offered by a female caller. Significantly more subjects participated when a female called and offered the same thing. Could another type of motivation, perhaps sexual motivation, be a factor in subject participation? Future research might look at differences in subject performance based on a subject's preconception of the interview, following a call by a female caller. Were subject performances different depending on whether they thought they would be interacting with a male or female confederate and were they disappointed if they interacted with a male confederate, thinking that they were going to interact with a female?

The question of intimidation is a more hypothetical one: Do subjects "act better" when they know they are being videotaped or do they "act more?" A subject who reacts to the idea of being taped might show more bravado to cover up his fears of the situation, or a subject might do very little for fear of being recorded as "foolish." It would be interesting if some subjects could be videotaped and some

not videotaped to see if performances would differ due to videotaping anxiety .

Situations of the Moment Factor

One of the most significant influences in any type of interaction is often the hardest to measure or detect. Personal problems, personal incidents, situations that may have recently occurred, even political occurrences may greatly affect an interaction. One might speculate that these subjects might have acted differently if a recent rape had occurred and the campus was actively searching for the assailant. Would a subject still say he wanted to go to a party "to pick up some fast chicks" (quote from one role play subject) if he thought the experiment might be connected to that incident? One actual subject, whose data was not used, began crying during the experimental session because he had recently discovered that his girlfriend was pregnant. Although these influences are not always present, it must be noted as a possible contributing factor to the findings.

Limitations of this Study and Implications for Future Research

Design Problems

When assessing the significant findings of this research, it is important to look at some of the difficulties of this experiment.

In addition to the technical/mechanical difficulties of this project, the paper-and-pencil measures seemed to be unproductive. Although the Social Interaction Self-Statement Test is a good research tool for assessing self-statements, it did not adequately contribute to or assess social skills differences. The ratings of the confederate were not helpful in assessing social skills differences, either because subjects really did not want to rate confederates severely or because confederates truly performed uniformly as they had been directed. The variable that looked at whether the subject could remain in his role without "breaking the role" was also noncontributory to assessing social skills.

Confederate Reactions

When all the data had been collected, confederates felt that they would have also liked to rate the subject with

whom they had just interacted. Confederates felt that they had strong reactions to certain subjects (i.e., feeling uncomfortable with a subject even though the subject was carrying on a good conversation). Confederates said that voice tone (how loudly the subject spoke), whether and how the subject shook their hands after the role play (each subject was offered a "Thank you handshake"), and the type of topics the subjects initiated, all contributed to how socially skilled/socially effective the confederate felt the subject had been.

Subject Population

With all studies of students, the issue is raised as to whether the student population can adequately represent a larger population. There is no question that student subjects are appropriate for dating-type role plays, but whether they are appropriate for business situation role plays remains inconclusive. These subjects are still adolescents and are still discovering and developing their own identities. A replication study with adults with more business/life experience would provide even more useful information.

Recommendations for Future Research

It would greatly enrich the data of any experimental study such as this one to obtain more information about parental background, socioeconomic status, religious orientation, family size, and cultural/ethnic background. This information might make experimental findings more complex, but would greatly add to the "total picture" in social skills research. This study might have been even more conclusive with the integration of individual differences.

Conclusion

In conclusion, the findings demonstrated that men do interact differently with men and women in different types of situations. Men with higher overall social skills scores were also found to have more liberal attitudes towards women or perhaps, men with more liberal attitudes towards women have higher/better social skills. It is impossible to determine cause and effect from the data.

These findings could be useful in a more practical sense. As a result of these findings, it appears that it might be beneficial for industry/business to provide general social skills training (i.e., workshops, seminars, orientation) for all employees to improve attitudes towards

and interactions with women employees and women associates. If male co-workers could more effectively interact with female co-workers, then perhaps there would be fewer possibilities for sexual discrimination, resentment, and sexual harassment. Modelling, role playing and video-recording may help teach people who are unaware of their reactions -- or unaware of how to react -- that there are more appropriate and effective ways to interact in the work place.

The findings of this research might also prove to be clinically significant in areas such as jury selection. If the law profession could observe the behavioral variables correlated with high attitudes towards women, such as eye contact, control of the scene, overall global social skills, facilitative gestures, etc., it might help those in the profession to choose jurors who have more liberal attitudes towards women. This may be especially important in cases of rape and sexual harassment. The ability to recognize the behavioral components of social skills would be useful in overall lawyer training.

In light of these findings and implications, it must be asked whether there are two separate sets of social skills, heterosocial and heterointeractive. This question is difficult to answer because traditional heterosocial skills are in a state of transition. Originally, social class, background, etc. would define whether a person would use

heterosocial or heterointeractive skills with a person of the opposite sex. With increasing numbers of women entering the work force, the traditional role of women is changing. As this role continues to change, there will be even more of a change in sexual and role perception. With this change of role perception there will have to be a change of role reciprocity and expectations. Continued research may prove that heterointeractive skills may actually be more appropriate in all cross gender contacts, regardless of whether they occur in social or business situations.

APPENDIX

APPENDIX A

ATTITUDES TOWARD WOMEN

The statements listed below describe attitudes toward the role of women in society which different people have. There are no right or wrong answers, only opinions. You are asked to express your feelings about each statement by indicating whether you (A) Agree strongly, (B) Agree mildly, (C) Disagree mildly, or (D) Disagree strongly. Please indicate your opinion by marking the column on the OPSCAN sheet which corresponds to the alternative which best describes your personal attitude. Please respond to every item.

Agree strongly / Agree mildly / Disagree mildly / Disagree strongly
(A) (B) (C) (D)

1.	Women have an obligation to be faithful to their husbands.	A B C D
2.	Swearing and obscenity is more repulsive in the speech of a woman than a man.	A B C D
3.	The satisfaction of her husband's sexual desires is a fundamental obligation of every wife.	A B C D
4.	Divorced men should help support their children, but should not be required to pay alimony if their wives are capable of working.	A B C D
5.	Under ordinary circumstances, men should be expected to pay all the expenses while they're out on a date.	A B C D
6.	Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day.	A B C D
7.	It is all right for wives to have an occasional, casual, extramarital affair.	A B C D
8.	Special attentions, like standing up for a woman who comes into a room or giving her a seat on a crowded bus, are outmoded and should be discontinued.	A B C D
9.	Vocational and professional schools should admit the best qualified students, independent of sex.	A B C D

Agree strongly (A) / Agree mildly (B) / Disagree mildly (C) / Disagree strongly (D)

10.	Both husband and wife should be allowed the same grounds for divorce.	A	B	C	D
11.	Telling dirty jokes should be mostly a masculine prerogative.	A	B	C	D
12.	Husbands and wives should be equal partners in planning the family budget.	A	B	C	D
13.	Men should continue to show courtesies to women such as holding open the door or helping them on with their coats.	A	B	C	D
14.	Women should claim alimony not as persons incapable of self-support, but only when there are children to provide for or when the burden of starting life anew after the divorce is obviously heavier for the wife.	A	B	C	D
15.	Intoxication among women is worse than intoxication among men.	A	B	C	D
16.	The initiative in dating should come from the man.	A	B	C	D
17.	Under modern economic conditions with women being active outside the home, men should share in household tasks such as washing dishes and doing the laundry.	A	B	C	D
18.	It is insulting to women to have the "obey" clause in the marriage service.	A	B	C	D
19.	There should be a strict merit system in job appointment and promotion without regard to sex.	A	B	C	D
20.	A woman should be as free as a man to propose marriage.	A	B	C	D
21.	Parental authority and responsibility for discipline of the children should be equally divided between husband and wife.	A	B	C	D
22.	Women should worry less about their rights and more about becoming good wives and mothers.	A	B	C	D

Agree strongly (A) / Agree mildly (B) / Disagree mildly (C) / Disagree strongly (D)

23.	Women earning as much as their dates should bear equally the expense when they go out together.	A B C D
24.	Women should assume their rightful place in business and all the professions along with men.	A B C D
25.	A woman should not expect to go to exactly the same places or to have quite the same freedom of action as a man.	A B C D
26.	Sons in a family should be given more encouragement to go to college than daughters.	A B C D
27.	It is ridiculous for a woman to run a locomotive and for a man to darn socks.	A B C D
28.	It is childish for a woman to assert herself by retaining her maiden name after marriage.	A B C D
29.	Society should regard the services rendered by the women workers as valuable as those of men.	A B C D
30.	It is only fair that male workers should receive more pay than women for identical work.	A B C D
31.	In general, the father should have greater authority than the mother in the bringing up of children.	A B C D
32.	Women should be encouraged not to become sexually intimate with anyone before marriage, even their fiances.	A B C D
33.	Women should demand money for household and personal expenses as a right rather than as a gift.	A B C D
34.	The husband should not be favored by law over the wife in the disposal of family property or income.	A B C D
35.	Wifely submission is an outworn virtue.	A B C D
36.	There are some professions and types of businesses that are more suitable for men than women.	A B C D

Agree strongly (A) / Agree mildly (B) / Disagree mildly (C) / Disagree strongly (D)

37.	Women should be concerned with their duties of childrearing and house-tending, rather than with desires for professional and business careers.	A	B	C	D
38.	The intellectual leadership of a community should be largely in the hands of men.	A	B	C	D
39.	A wife should make every effort to minimize irritation and inconvenience to the male head of the family.	A	B	C	D
40.	There should be no greater barrier to an unmarried woman having sex with a casual acquaintance than having dinner with him.	A	B	C	D
41.	Economic and social freedom is worth far more to women than acceptance of the ideal of femininity which has been set by men.	A	B	C	D
42.	Women should take the passive role in courtship.	A	B	C	D
43.	On the average, women should be regarded as less capable of contribution to economic production than are men.	A	B	C	D
44.	The intellectual equality of woman with man is perfectly obvious.	A	B	C	D
45.	Women should have full control of their persons and give or withhold sex intimacy as they choose.	A	B	C	D
46.	The husband has, in general, no obligations to inform his wife of his financial plans.	A	B	C	D
47.	There are many jobs in which men should be given preference over women in being hired or promoted.	A	B	C	D
48.	Women with children should not work outside the home if they don't have to financially.	A	B	C	D
49.	Women should be given equal opportunity with men for apprenticeship in the various trades.	A	B	C	D

Agree strongly (A) / Agree mildly (B) / Disagree mildly (C) / Disagree strongly (D)

50. The relative amounts of time and energy to be devoted to household duties on the one hand, and to a career on the other, should be determined by personal desires and interests, rather than by sex. A B C D

51. As head of the household, the husband should have more responsibility for the family's financial plans than his wife. A B C D

52. If both husband and wife agree that sexual fidelity isn't important, there's no reason why both shouldn't have extramarital affairs if they want to. A B C D

53. The husband should be regarded as the legal representative of the family group in all matters of law. A B C D

54. The modern girl is entitled to the same freedom from regulation and control that is given to the modern boy. A B C D

55. Most women need and want the kind or protection and support that men have traditionally given them. A B C D

****

Background Information

Please answer each of the following questions, marking the appropriate response on your OPSCAN.

56. What year in school are you?

1) freshman
2) sophomore
3) junior
4) senior
5) other

57. Age

1) 17-18
2) 19-20
3) 21-22
4) 23-24
5) 25+

58. Ethnic Identification

1) Caucasian
2) Afro-American
3) Hispanic
4) Asian American
5) Other

59. Marital Status

1) Single
2) Married
3) Separated
4) Divorced
5) Other

60. Are you currently involved in a ralationship?

1) Yes
2) No

61. How often do you date or see someone?

1) Daily
2) Weekly
3) Twice a month
4) Monthly
5) Less than once a month

62. Major

1) Psychology
2) Math and Sciences
3) Arts
4) Humanities
5) Undecided or Other

63. Have you ever worked in a job before?

1) Yes
2) No

64. If Yes, what type?

1) Office/business
2) Restaurant/store
3) Recreation/education
4) Laborer/farmer
5) Other

65. If selected, would you be willing to participate in the rest of the study?

1) Yes
2) No

APPENDIX B

The Social Interaction Self-Statement Test

It is obvious that people think a variety of things when they are involved in different social situations.

Below is a list of things which you may have thought to yourself at some time before, during and after the interaction in which you were just engaged. Read each item and decide how frequently you may have been thinking a similar thought before, during and after the interaction. Utilize the following scale to indicate the nature of your thoughts:

1 = hardly ever had the thought
2 = rarely had the thought
3 = sometimes had the thought
4 = often had the thought
5 = very often had the thought

Please answer as honestly as possible.

1.	When I can't think of anything to say I can feel myself getting anxious.	1 2 3 4 5
2.	I can usually talk to girls/guys pretty well.	1 2 3 4 5
3.	I hope I don't make a fool of myself.	1 2 3 4 5
4.	I'm beginning to feel more at ease.	1 2 3 4 5
5.	I'm really afraid of what he/she will think of me.	1 2 3 4 5
6.	No worries, no fears, no anxieties.	1 2 3 4 5
7.	I'm scared to death.	1 2 3 4 5
8.	He/she probably won't think I'm interesting.	1 2 3 4 5
9.	Maybe I can put her/him at east by starting things going.	1 2 3 4 5
10.	Instead of worrying I can figure out how best to get to know her/him.	1 2 3 4 5
11.	I'm not too comfortably meeting people so things are bound to go wrong.	1 2 3 4 5

12.	What the heck, the worst that can happen is she/he won't like me.	1 2 3 4 5
13.	He/se may want to talk to me as much as I want to talk to her/him.	1 2 3 4 5
14.	This will be a good opportunity.	1 2 3 4 5
15.	If I blow this conversation, I'll really lose my confidence.	1 2 3 4 5
16.	What I say will probably sound stupid.	1 2 3 4 5
17.	What do I have to lose? It's worth a try.	1 2 3 4 5
18.	This is an awkward situation but I can handle it.	1 2 3 4 5
19.	Wow - I don't want to do this.	1 2 3 4 5
20.	It would upset me if he/she didn't answer me.	1 2 3 4 5
21.	I've just got to make a good impression on him/her or I'll feel terrible.	1 2 3 4 5
22.	You're such an inhibited idiot.	1 2 3 4 5
23.	I'll probably "bomb out" anyway.	1 2 3 4 5
24.	I can handle anything.	1 2 3 4 5
25.	Even if things don't go well, it's no catastrophe.	1 2 3 4 5
26.	I feel awkward and dumb; he/she is bound to notice.	1 2 3 4 5
27.	We probably have a lot in common.	1 2 3 4 5
28.	Maybe we'll hit it off real well.	1 2 3 4 5
29.	I wish I could leave and avoid the whole situation.	1 2 3 4 5
30.	Ah! Throw caution to the wind.	1 2 3 4 5

APPENDIX C

PERSON PERCEPTION QUESTIONNAIRE

The person with whom you have just role played is a trained confederate. In order to standardize interactions with each confederate, it is necessary to measure each of his or her interactions.

Please place a check mark on each of the following scales as it best describes your feelings about the person with whom you have just interacted.

I BELIEVE THIS PERSON IS:

assertive:___:___:___:___:___:___:___:unassertive
inappropriate:___:___:___:___:___:___:___:appropriate
tactless:___:___:___:___:___:___:___:tactful
inoffensive:___:___:___:___:___:___:___:offensive
truthful:___:___:___:___:___:___:___:untruthful
educated:___:___:___:___:___:___:___:uneducated
unfriendly:___:___:___:___:___:___:___:friendly
agreeable:___:___:___:___:___:___:___:disagreeable
unpleasant:___:___:___:___:___:___:___:pleasant
inconsiderate:___:___:___:___:___:___:___:considerate
rigid:___:___:___:___:___:___:___:flexible
open minded:___:___:___:___:___:___:___:close minded
sympathetic:___:___:___:___:___:___:___:unsympathetic
bad natured:___:___:___:___:___:___:___:good natured
unfair:___:___:___:___:___:___:___:fair
kind:___:___:___:___:___:___:___:cruel
honest:___:___:___:___:___:___:___:dishonest
unlikable:___:___:___:___:___:___:___:likable
thoughtless:___:___:___:___:___:___:___:thoughtful
unintelligent:___:___:___:___:___:___:___:intelligent
cold:___:___:___:___:___:___:___:warm
superior:___:___:___:___:___:___:___:inferior
socially skilled:___:___:___:___:___:___:___:unsocially skilled
passive:___:___:___:___:___:___:___:active
boring:___:___:___:___:___:___:___:interesting
serious:___:___:___:___:___:___:___:humorous
unattractive:___:___:___:___:___:___:___:attractive
feminine:___:___:___:___:___:___:___:masculine
unemotional:___:___:___:___:___:___:___:emotional

31. How much would you like to work with this person?
A great deal: ___:___:___:___:___:___:___: Not at all

32. How much would you like to get to know this person better?
A great deal: ___:___:___:___:___:___:___: Not at all

33. How comfortable were you interacting with this person?
Extremely Extremely
Uncomfortable:___:___:___:___:___:___:___:Comfortable

34. How easy was it for you to get into these role play situations?
Very hard: ___:___:___:___:___:___:___:Very easy

35. How close do you think your role play resembled your usual behavior in similar situations?
A great deal: ___:___:___:___:___:___:___:Not at all

36. How often have you been in situations similar to these?
A great deal: ___:___:___:___:___:___:___:Not at all

37. Please rate this experience of role playing:

boring:___:___:___:___:___:___:___:interesting
pleasant:___:___:___:___:___:___:___:unpleasant
unfair:___:___:___:___:___:___:___:fair
accurate:___:___:___:___:___:___:___:inaccurate

APPENDIX D

Interests and Activities Questionnaire

Please indicate your agreement with the items below by placing an appropriate number in front of each item, as follows:

1 = disagree
2 = disagree more than agree
3 = agree more than disagree
4 = agree

___ 1. I have been a member of a 4-H or Future Farmers of America or other agricultural groups.

___ 2. I like to watch people for movements and mannerisms that set them apart from other people.

___ 3. I am good at faking things.

___ 4. I am able to exclude everything from my mind, construct a new, imaginary world, and feel for a time that it is real.

___ 5. I can imitate at least three different well-known people.

___ 6. I like to tinker with mechanical or electrical things, work on cars or repair household appliances, etc.

___ 7. People tell me I am a good storyteller.

___ 8. I have a serious interest in creative activities such as painting, writing, designing, and the like.

___ 9. If asked to play the part of an elderly person living alone in a big city, I could do so convincingly.

___ 10. I am sometimes able to get so absorbed in fantasy that I forget about my present self and become someone else in my imagination.

___ 11. I would make a good forest ranger.

___ 12. I have had the experience of telling a story with elaborations to make it sound better and then having the elaborations seem as real to me as the actual experience.

___ 13. I do not have a good memory for the way people move, gesture, and make facial expressions.

___ 14. I have participated in a high school or college play or other amateur theater production.

___ 15. I can make just about anybody believe anything I say or do.

___ 16. I like to ride a bicycle.

___ 17. I like to imitate the way people talk, move, gesture, and make facial expressions.

___ 18. While watching a movie or show I sometimes become so involved that I feel myself participating in the action.

___ 19. If asked to play the part of a Russian peasant, I could do so convincingly.

___ 20. I often try to guess what people are thinking before they tell me.

___ 21. If asked to draw someone riding a horse, I could do so convincingly.

___ 22. If I wish, I can imagine (or daydream) some things so vividly that they hold my attention in the way a good movie or story does.

___ 23. When telling a story I like to play the parts of all the different people involved.

___ 24. If asked to play the part of a "hillbilly" factory worker whom everyone makes fun of, I could do so sympathetically.

___ 25. I have had the experience of imagining something so hard that it became almost real for me.

___ 26. I have participated in high school or college athletics.

___ 27. I am good at playing the game of charades (acting out a concept in pantomime so that others can guess its meaning).

___ 28. When talking with people, I pay more attention to what they say than how they say it.

___ 29. I have a good memory for voices and the way people talk.

___ 30. When I read a novel, I become very involved, experiencing what's going on, joining in with the action and characters.

___ 31. I would make a good physician.

___ 32. People always seem to know when I'm not telling the complete truth.

___ 33. After acting in a play myself, or seeing a play or movie, I have felt partly as though I were one of the characters.

___ 34. I can usually "put on a show" and liven things up without being self-conscious about it.

___ 35. When I dance I often lose myself in the music and movement.

___ 36. If given a chance for free parachute lessons, I would accept the offer.

___ 37. I am good at mimicking accents.

___ 38. I like to imagine myself as being various types of people.

___ 39. When telling a story I'm more interested in presenting the facts rather than creating a mood.

___ 40. If asked to play the part of a tightrope walker with hiccups, I could do a convincing job of it.

APPENDIX E

Informational Survey

Please mark directly on this page. Please answer all questions. Thank you.

1. Choose a number between 1-50. _____

2. Write the month of your birthday. _____

3. Your birth order (1=oldest) _____

4. Total number of children in your family _____

5. Put an X anywhere on this line:
   ----

6. What number is your favorite letter of the alphabet (i.e., A=1, Z=26)? _____

7. How many times per month do you call your parents: _____

8. How many times per month do your parents call you. _____

9. How many times have you seen the movie Star Wars? _____

10. How many psychology courses have you taken? _____

11. What is your favorite color? _____
    Red/Pink/Orange/Yellow/Green/Blue/ Purple/ White/Black
    1 2 3 4 5 6 7 8 9

12. What type of shoes are you wearing right now? _____
    Sneakers/Boots/Workboots/Dress-shoes/Casual Shoes
    1 2 3 4 5

13. Which sport do you prefer to play? _____
    Baseball/Basketball/Tennis/Football/Running/Swimming
    1 2 3 4 5 6

14. Which of those sports do you prefer to watch? _____

15. Your height in inches. _____

16. What is the ideal age to get married? _____

17. What is the last digit of your telephone number? _____

18. How many tapes or albums do you own? _____

APPENDIX F

Informed Consent

The purpose of this study is to look at ways that people interact in role play situations. You will be asked to "act as you normally would in a situation like this". You will be interacting with another student in three five-minute role play situations which will be videotaped.

Try not to be nervous. There are no right or wrong ways. We understand that these situations may seem artificial, but imagine how you would normally interact.

After the role playing, you will be asked to fill out 4 questionnaires. The entire procedure will take a little over one hour and two experimental credits will be given.

You are free to withdraw from this study at any time without loss of credit. All information will be confidential and all subjects will be assigned numbers for identification purposes. The experimenter will be willing to answer any inquiries by contacting her at Tobin 504. Please do not discuss this study with any other students.

Thank you for your participation.

Linda D. Scott, Experimenter

I understand the informed consent and agree to participate.

APPENDIX G

Role Play A (Social Situation)

1. You are at a party, sitting by yourself waiting for some friends to show up. There's an empty seat next to you. A girl/guy you've noticed around who is standing across the room walks up to where you are sitting and says:

"HI, MY NAME IS _____, IS ANYONE SITTING HERE?"

2. You are at the Hatch, waiting on line for lunch; a guy/girl you've seen in your dorm is standing behind you. You hate to eat alone and would enjoy having lunch with him/her. He/she looks at your tray and says:

"WHAT'S GOOD FOR LUNCH TODAY"?

3. You've been assigned to work with a girl/guy you don't know from your psychology class on a project to decrease class absenteeism. You're waiting for her/him in the library when he/she enters the room, puts down some books and says:

"THIS LOOKS LIKE IT'S GOING TO BE A TOUGH PROJECT!"

Role Play B (Business Situation)

1. You are at work, sitting by yourself waiting for a staff meeting to start. There's an empty seat next to you. Another worker you've noticed around who is standing across the room, walks up to where you're sitting and says:

"HI, MY NAME IS _____, IS ANYONE SITTING HERE?"

2. You are at the office cafeteria waiting on line for lunch; a co-worker you've seen in the xerox room is standing behind you. You hate to eat alone and would enjoy having lunch with him/her. He/she looks at your tray and says:

"WHAT'S GOOD FOR LUNCH TODAY"?

3. You've been assigned to work with a co-worker you don't know very well from another department on a project to decrease absenteeism. You're waiting for her/him in the records room when he/she enters the room, puts down some folders and says:

"THIS LOOKS LIKE IT'S GOING TO BE A TOUGH PROJECT!"

APPENDIX H

Debriefing

The person with whom you have just interacted is a trained research assistant. He/she has been instructed to let you run the conversation.

The purpose of this study is to note differences in how people interact in either a social or a business role play situation. It is important to determine whether one set of social skills is acceptable in all situations or whether separate sets of social skills are needed in different situations.

Thank you for your time and participation. If you have any questions about the study, please feel free to contact me at Tobin 504. Thank you for not discussing this study with other students.

Linda D. Scott, Experimenter

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