BEHAVIORAL, COGNITIVE, MOTIVATIONAL, AND PHYSIOLOGICAL ASPECTS OF SHYNESS IN A DISCLOSURE RECIPROCITY PARADIGM

By

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Abstract

The present study examined behavioral, cognitive, motivational, and physiological differences between shy and non-shy female subjects involved in a social encounter with a same-sex confederate. The encounter took the form of a structured dyadic interaction within a traditional disclosure reciprocity paradigm. The results showed that the shy subjects spoke for shorter periods of time and maintained a characteristically middle level of intimacy, regardless of what had been disclosed to them first. Thus, they overdisclosed to the low intimacy confederate and underdisclosed to the high intimacy one as compared to the non-shy subjects. The shy subjects were more negative about themselves and expected their partners to also be more negative about them. Both shy and non-shy subjects, however, were equally positive about their partners. The shy subjects also reported higher levels of physiological arousal, and indicated that they used a protective style of self-presentation as compared to the acquisitive style used by the non-shy subjects. The confederate and observer ratings of the subjects presented somewhat different patterns of results, differences which were interpreted within the larger framework of the study. Taken together, the results suggest that a complex relationship between behavioral, cognitive, motivational, and physiological factors may exist which contributes to the interpersonal difficulties of the shy individual.
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Introduction

An early observation about human behavior is contained in Aristotle's remark in his *Politics*: "man is by nature a social animal", an observation that continues to be valid to this day. A rapidly changing and increasingly mobile society, however, has necessitated the development of important and ongoing personal relationships beyond those of traditional groups and family ties. This has resulted in an increased interest in psychological constructs that pertain to the process and development of interpersonal relationships. One of the most relevant and pervasive problems in the development of interpersonal relationships is shyness, which can result in timid and often inappropriate overt behaviors as well as emotional, physiological, and cognitive distress in social situations. Although much has been learned about shyness to this point in time, much is still unknown about exactly what makes the shy individual different from those who are not shy. This paper, in addition to reviewing the relevant literature on shyness, will also examine and review the literature on interpersonal judgements, self-disclosure, and self-presentation as it relates to shyness. Further, it will present the results of a study which integrated these various dimensions in an attempt to increase our understanding of shyness.

Shyness

The development of shyness research can be viewed in terms of three temporally overlapping, but conceptually and methodologically distinct phases (Jones, Cheek, & Briggs, 1986). First, there was the descriptive phase, in which shyness was analyzed by medical and psychological practitioners on the
basis of casual and clinical observations. Harry Campbell, a British physician, delivered a detailed report on "morbid shyness" to the British Medical Society in 1896 in which he considered as possible causes and consequences of shyness such factors as heredity, excessive self-consciousness, the disruption of social encounters, and impaired relationship development (Campbell, 1896). Another descriptive approach to shyness was exemplified by psychoanalytic writers such as Hampton (1927) and Lewinsky (1941). Lewinsky, for instance, concluded that shyness represented unconsciously blocked aggression among narcissistic and rigid personality types.

The second phase in the study of shyness was its popularization. For a variety of social reasons in recent years, individuals are more than ever required to initiate new friendships and relationships outside of traditional groups and family ties. This in turn has led to shyness becoming an increasingly important, and disruptive, condition. Surveys indicate that at least 90% of individuals report feeling shy occasionally and 40% indicate that shyness sometimes constitutes a significant problem for them (Zimbardo, 1977). As a result, in the mid to late 1970s several popular books on shyness which contained both empirical evidence and commonsensical advice were written for the general public. Some of the more popular books were Girodo's *Shy? You Don't Have to Be* (1978), *Help for Shy People and Anyone Else Who Ever Felt Ill at Ease on Entering a Room Full of Strangers* (Phillips, 1980), *Overcoming Shyness* (Powell, 1979), *Conquer Shyness* (Teear, 1977), *Shy Person's Guide to a Happier Love Life* (Weber & Miller, 1979), *Shyness: What it is and What to do About it* (Zimbardo, 1977), and *The Shy Child* (Zimbardo & Radl, 1981).

The third, and ongoing, phase in the study of shyness is distinguished by the empirical analysis of the construct and has been marked by an increase in
the number of reports published in research journals. As noted previously, physiological arousal, negative cognitions, and behavioral factors have all been suggested as parameters of importance in shyness. Although researchers have only recently begun to identify the potential causes and consequences of shyness, they have already produced a fairly voluminous body of literature. Therefore, only material which is particularly germane to the present study will be examined in this paper.

The information with respect to the role of physiological arousal in the etiology and maintenance of shyness is somewhat meagre. In one of the few extant studies, Borkovec, Stone, O'Brien, and Kaloupek (1974) found that heartrate was significantly higher in heterosocially anxious males than non-heterosocially anxious males during a brief interaction. Similarly, elevated arousal (increased heartrate) was noted by Lang, Levin, Miller, and Kozak (1983). In a study which involved a series of interpersonal tasks, Beidel, Turner, and Dancu (1985) found that physiological reactivity occurred for the shy subjects in most of the social situations. They reported, however, that it also occurred to some extent among the non-shy subjects. Beidel and her colleagues felt that the physiological mechanism that differentiated the groups was latency to habituation.

Previous research suggests that shyness involves actual differences in conversational and nonverbal behaviors; specifically, less effective and less responsive conversational styles. Pilkonis (1977) divided college students into shy and non-shy groups and found that the shy male subjects tended to talk less, initiate fewer conversations, and look less at the other person during an unstructured social interaction. Daley (1978) found that shy individuals made less eye contact and had a lower frequency of response than did their non-shy counterparts. Similarly, Mandel and Shrauger (1980)
reported that their shy and non-shy groups did in fact differ in their social behavior, including their latency to respond and time spent conversing. They also found that shy subjects engaged in less eye contact, smiled less, and evidenced less facial expressiveness. Cheek and Buss (1981) reported that during unstructured interactions, shy subjects tended to talk less, avert their gaze more, and engage in more self-manipulation (i.e. touching their face) than did their non-shy counterparts. Shy as compared to non-shy individuals have also been shown to exhibit differences in the use of utterances that express objective information (Leary, Johnson, & Knight, 1984).

Recent cognitive-behavioral research has discovered several other differences between shy and non-shy individuals. Shy individuals have been found to negatively evaluate the quality of their social performance (Clark & Arkowitz, 1975), set excessively high standards for the evaluation of that performance (Craighead, Kimball, & Rehak, 1979), remember more negative information about themselves (O'Banion & Arkowitz, 1977), endorse a higher frequency of negative self statements (Cacioppo, Glass, & Merluzzi, 1979), and engage in pathological patterns of attribution about the causes of social successes and failures (Girodo, Dotzenroth, & Stein, 1981).

In terms of the perception of shyness by others, Pilkonis (1977) found that shy as compared to non-shy college students were rated by observers as more shy, less relaxed, less assertive, and less friendly. Mandel and Shrauger (1980) reported that shy subjects were rated as less physically attractive and less interpersonally skillful than their non-shy counterparts. Similarly, Cheek and Buss (1981) reported that the shyness scores of female dyadic participants were correlated with partner ratings for shy, tense, inhibited, and unfriendly. In a study of videotaped monologues, Jones,
Cavert, and Indart (1983) found that a target's shyness scores were significantly correlated with judges' ratings of shyness and anxiety and inversely correlated with ratings of poise and talent.

Another relevant issue to the role of shyness in initial interactions concerns the accuracy with which shy persons process social feedback and, hence, the degree to which they are aware of their interpersonal impact on others. It appears that a series of studies by Jones (Jones, 1981; Jones, Freemon, & Goswick, 1981; Jones, Hobbs, & Hockenbury, 1982; Jones, Sansone, & Helm, 1983) is particularly relevant here in light of the moderate correlations between shyness and loneliness that have been reported by several investigators (Cheek & Busch, 1981; Jones, Freemon, & Goswick, 1981; Maroldo, 1981). Jones found that high lonely as compared to low lonely subjects tended to: rate themselves more negatively following dyadic interactions with strangers, rate their partners more negatively, and indicate that they expected their partners to rate them more negatively. Despite their expectations however, lonely subjects were rarely differentially judged on any of several rating scales.

A study by Jones and Briggs (1984) had shy and non-shy subjects participate in various group activities after which they were asked to rate themselves and their fellow group members on several interpersonal dimensions (i.e. friendly, talkative, warm, etc.). The ratings were made from each of three perspectives: (1) self ratings (2) reflected self ratings—that is, how the participants expected to be rated by other members of their group (3) ratings of other group members. Their results showed that for the most part shyness was inversely correlated with self and reflected self ratings. That is, high shyness was associated with rating oneself and expecting to be rated in a negative fashion (i.e. less friendly, less warm, etc.). In
addition, shyness was significantly correlated with rating others more negatively, and with more negative ratings received by other group members.

A recent study utilized a variation of the experimental paradigm employed in the Jones and Brigg study (Alden & Meleshko, 1988). Subjects participated in structured dyadic interactions which included all four possible combinations of shy and non-shy subjects. Following the interaction, they were asked to rate themselves (self rating), their partner (partner rating), and themselves as they thought their partner would rate them (reflected self rating) on several interpersonal bipolar adjectives (i.e. attractive, friendly, etc.). Consistent with previous results, the interpersonal ratings indicated that the shy subjects perceived themselves, and expected others to perceive them, in a negative fashion. This occurred, however, in the absence of any actual negative evaluation by their partners. A second finding which also was not consistent with previous results, was that the shy subjects did not rate their partners more negatively than did their non-shy counterparts.

Self-Disclosure

Reciprocal self-disclosure is a form of shared interpersonal exchange that is seen as necessary in the development and maintenance of social relationships. People cannot enter into social transactions with others without revealing something of themselves, or being affected by what others reveal to them. It is this interactional nature of self-disclosure that has made it such an important class of behavior. There are a variety of conceptual definitions employed in the self-disclosure literature, each defining a somewhat different subset of self-disclosing behavior. However, in
essence, self-disclosure is the act of verbally revealing oneself to another and in a broad sense it may best be defined as "any information about him/herself which Person A communicates to Person B" (Cozby, 1973).

Self-disclosure, as a concept, originated in the existential and phenomenological philosophies of Husserl, Heidegger, Sartre, Buber, and Merleau-Ponty (Chelune, 1979). In terms of its psychological origins, it can be traced back to 1948 when Kurt Lewin speculated about differences in initial openness with strangers, and intimacy between friends, in Germany and the United States (Lewin, 1948). One of Lewin's students, influenced by his personality theory (Lewin, 1935), developed an instrument to measure the accessibility of self-information. She considered an unwillingness to reveal a particular item of information as an indication that it resided in a more central layer of the personality structure (Rickers-Ovsiankina, 1956). After this early interest of Lewin and his student however, interest in self-disclosure waned.

Unlike the origins of many other concepts in psychology, the beginnings of extensive research into the concept of self-disclosure can be attributed to one individual, Sidney M. Jourard. In the late 1950s, Jourard became interested in studying the mentally healthy personality rather than the maladjusted one. Initially Jourard, a practising psychotherapist, was primarily concerned with the implications of self-disclosure for mental health. Although Jourard suggested that the relationship between self-disclosure and mental health was curvilinear, with either too much or too little disclosure being associated with poor mental health, he concluded that in most instances the more self-disclosure the better (Jourard, 1958a). Jourard asserted that full and open communication promotes growth and "in a healthy interpersonal relationship an individual is willing and able to
communicate all of his real self to the other person" (Jourard, 1958b). Correspondingly, neurotic individuals are unable to know or disclose their real selves. Jourard's (1959) demonstration of the reciprocity effect, which is the tendency of persons in a disclosure exchange to match each other in terms of intimacy and amount, may be considered the point at which the interest in self-disclosure on the part of psychologists was rekindled. Since that time, self-disclosure has become an important area for psychological research, primarily in response to the provocative findings of Jourard's studies.

Self-disclosure is used to refer to both a personality construct and a process variable that occurs during interpersonal interactions (Cozby, 1973). The initial personality research involved numerous attempts by Jourard and others to demonstrate a relationship between disclosure and personal adjustment. Many of the studies used the Jourard Self-Disclosure Questionnaire (JSDQ) as the measure of self-disclosure and the Minnesota Multiphasic Personality Inventory (MMPI) as the index of mental health. The only consistent finding from these studies was that low disclosers scored higher on the MMPI social introversion (Si) subscale (Jourard, 1971; Mullaney, 1964). Jourard (1971) found a positive relationship between disclosure (on the JSDQ) and the Tennessee Self-Concept Scale. In addition, a study using the Pedersen Personality Inventory (Pedersen & Higbee, 1969) and another using a clinical population (Mayo, 1968) found that disclosure on the JSDQ was negatively related to neuroticism.

Personality researchers have also examined the relationship between disclosure and more specific psychological characteristics. External locus of control, on the Rotter I-E Scale, was associated with less reported disclosure on the JSDQ (Ryckman, Sherman, & Burgess, 1973). Disclosure was negatively
correlated with need for approval as measured by the Marlowe-Crowne Social Desirability Scale among college females (Brundage, Derlega, & Cash, 1977; Burhenne & Mirels, 1970) and males institutionalized in a psychiatric hospital (Anchor, Vojtisek, & Berger, 1972). A study with institutionalized schizophrenics found that trait anxiety was positively correlated with disclosure (Anchor, Vojtisek, & Patterson, 1973). In addition, a positive correlation between scores on the Taylor Manifest Anxiety Scale and disclosure among college females was also found (Duckro, Duckro, & Beal, 1976). A study using a behavioral measure of disclosure, however, found no relationship between disclosure and trait anxiety and a negative relationship between disclosure and state anxiety (Post, Wittmaier, & Radin, 1978). In general, most of these personality scale correlates have not been replicated when behavioral measures of disclosure are used rather than the JSDQ (Vondracek, 1969).

Two findings, the "reciprocity effect" and the "liking effect" did emerge from the early self-disclosure research (see reviews by Chaikin & Derlega, 1974; Cozby, 1973). These two effects served in turn to stimulate research interest in self-disclosure as a process variable in interpersonal relationships. The reciprocity effect, or as it is sometimes known the dyadic effect, refers to the tendency of a target person to match the original speaker's level of disclosure. The liking effect is the tendency of a recipient to evaluate more positively, and to be more attracted to, a speaker who discloses more than to one who discloses less.

The typical laboratory reciprocity experiment places the subject in a disclosure exchange situation ostensibly to study conversation, acquaintanceship, or first impressions. The subject's partner is a confederate who starts the dyadic exchange by making either a high or a low
intimacy disclosure. The subject's own disclosure after listening to the confederate's disclosure is the dependent variable. Measures of liking and attraction are also frequently obtained. The results of this manipulation are as robust and reliable as any found in the psychological literature: subjects disclose more intimately after hearing the high intimacy disclosure and tend to give more positive evaluations to the high intimacy confederate (Archer, 1979).

While most of the initial studies in this area focussed on the actual mechanisms of disclosure reciprocity and the liking effect, several more recent studies have attempted to examine the influence that individual differences may play. Specifically, interest has been shown in determining which individuals may display nonreciprocal disclosure patterns and unusual interpersonal judgments. A study by Chaikin, Derlega, Bayma, and Shaw (1975) examined the relationship between neuroticism and disclosure reciprocity. Based on the results from a correlational study by Mayo (1968) of disclosure among hospitalized neurotics, these investigators suggested that nonreciprocal disclosure patterns would be more common for neurotics than for normals. College students scoring high and low on the neuroticism dimension of the Maudsley Personality Inventory were selected as "neurotics" or "normals", respectively, and were asked to participate in a study in which they communicated with a confederate who made either a low or high intimacy disclosure.

As predicted, the confederate's disclosure intimacy level interacted with neuroticism. Normal subjects reciprocated the intimacy of the confederate, disclosing more highly to the intimate than to the superficial confederate. Neurotic subjects, however, were unaffected by the confederate's intimacy as their disclosures were virtually the same in both conditions. The authors
felt that neurotics either have difficulty distinguishing situational cues for appropriate disclosure, or their preoccupation with their own problems simply interferes with an appropriate response.

Chelune, Sultan, and Williams (1980) showed that for female subjects, loneliness was significantly related to an unwillingness to self-disclose to others in hypothetical situations. Solano, Batten, and Parish (1982) investigated the actual disclosure behavior of lonely and non-lonely college students (as measured by the UCLA Loneliness Scale). They hypothesized that lonely people not only perceive themselves as not having disclosed, but also actually do have difficulty in giving and receiving personal information. Their results showed that lonely and non-lonely subjects do indeed differ in self-disclosure, both self-perceived and actual.

A recent study examined self-disclosure among shy and non-shy female college students (Alden & Meleshko, 1988). This study did not utilize a confederate, but instead had the subjects participate in structured dyadic interactions which included all four possible combinations of shy and non-shy subjects. In terms of self-disclosure, there were no differences between the groups in regard to either past self-disclosure or the intimacy level of the topics they disclosed on, with both shy and non-shy subjects choosing relatively non-intimate topics. The duration of the subject's disclosures, however, was significantly affected by their own status as well as the status of their partner. The non-shy subjects exhibited longer durations than did the shy subjects. The status of their partner, however, affected the duration of both the non-shy and shy subjects. Specifically, the non-shy subjects spoke for shorter periods of time when they interacted with a shy partner than when they interacted with a non-shy partner; the shy subjects spoke for longer
periods of time when they interacted with a non-shy partner than when they interacted with a shy one.

The current study is an extension of this recent study by Alden and Meleshko. In the present study, however, an experimental collaborator was used to manipulate the intimacy of self-disclosure, thereby more closely approximating the classic disclosure reciprocity paradigm.

Self-Presentation

According to socioanalytic theory, there is a distinction between the motive for acceptance, approval, and popularity ("getting along") and the motive to acquire power, control, and status ("getting ahead") (Hogan, Jones, & Cheek, 1985). Because the self-presentations instrumental to getting along are often incompatible with the self-presentations for getting ahead, interpersonal relationships are inherently problematic. In most situations, to "get along" only requires that an individual act in such a way as to avoid disapproval. To "get ahead" however, an individual may need to adopt more active and manipulative forms of self-presentation.

Another theory (Arkin, 1981), which postulated that there are two affective-motivational bases for self-presentation, is both more explicit and more amenable to empirical validation. Arkin (1981) elucidated two styles of self-presentation, protective and acquisitive, which arise from two separate and unrelated motivational systems. Protective self-presentation is an attempt to avoid disapproval and is associated with social anxiety, reticence, and conformity, while acquisitive self-presentation serves to enhance favoured treatment in future circumstances. Although the protective and acquisitive
self-presenters may behave similarly in a particular social situation, they are guided by different motives, and their attendant affective reactions can therefore be expected to be different.

In order to test Arkin's (1981) theory of self-presentation, it was necessary to develop an adequate measure of subjects' tendencies to adopt each of the two styles. A study by Wolfe, Lennox, and Cutler (1986) attempted to test Arkin's theory by utilizing the Concern for Appropriateness scale (Lennox & Wolfe, 1984) and the 13-item Self-Monitoring scale (Lennox & Wolfe, 1984). Specifically, they felt that the Concern for Appropriateness scale and its two subscales, Protective Social Comparison and Protective Variability, would enable them to examine protective self-presentation; and the Self-Monitoring scale and its two subscales, Ability to Modify Self-Presentation and Sensitivity to the Expressive Behaviour of Others, would enable them to measure acquisitive self-presentation.

In their study, Wolfe et al (1986) demonstrated that the two scales were essentially orthogonal, and correlated with measures of self-esteem, social anxiety, shyness, and sociability in the directions expected of measures of protective and acquisitive self-presentation. It was essential that the two scales be orthogonal, as they are supposedly measuring two separate and independent systems of motivation. While these results were promising, they did not go very far toward supporting the conjecture that the Lennox and Wolfe scales are valid measures of the motives of self-presentation—something that the authors acknowledge.

In the present study, we wished to examine the concepts of protective and acquisitive self-presentation in the context of self-disclosure. Social situations involving self-disclosure seem especially likely to evoke these two styles of self-presentation. Perhaps the most interesting aspect is that
although the two types of self-presenters may actually exhibit fairly similar behaviors, their motives and attendant affective reactions may be quite different. This theoretical position may help explain why, although virtually no one would argue that the interpersonal experience is vastly different for shy and non-shy individuals, some studies have found very little in the way of actual behavioral differences.

The Present Study

To summarize, previous research suggests that shyness is a relatively common feature of personality and experience that is associated with a variety of unpleasant physiological, cognitive, and affective responses to social stimuli as well as certain behavioral inadequacies. In an extension of these previous findings, clinically oriented investigators have recently begun to introduce and evaluate treatment strategies designed to alleviate the problematic aspects of shyness. Although the treatment strategy deemed appropriate depends to a large extent on how individual researchers conceptualize shyness, most of the clinically relevant research has focused on either social skills training designed to alleviate behavioral deficits (Twentyman & McFall, 1975; Marzillier, Lambert, & Kellett, 1977; Alden & Cappe, 1986), or on the cognitive treatment of the negative self-evaluations, faulty attributions, distorted thinking, unrealistic expectations, and irrational beliefs that appear to accompany shyness (Kanter & Goldfried, 1979; Malkiewich & Merluzzi, 1980; Glass & Shea, 1986).

The research up to this point in time has shown that both social skills training and cognitive approaches are effective in the treatment of shyness.
The results of these treatment outcome studies have been somewhat equivocal, however, in the sense that neither one of these treatment strategies has been shown to be superior to the other. Essentially, they both work, but in less than an absolute fashion. This has led some researchers to recommend that further empirical analysis be conducted to determine the exact nature of the behavioral and cognitive differences specific to shyness. Particularly relevant here is a review by Alden and Cappe (1986) in which they note that the behavioral differences between shy and non-shy groups have usually involved behaviors such as eye contact, smiling, or conversational pauses that are not so much process skills, in the sense of complex chains of responses to be learned, as they are behavioral expressions of anxiety. They recommend that future research should focus on other-directed process variables rather than on self-focused discrete, molecular behaviors. Consistent with this and the recommendations of other researchers, the present study was designed to investigate behavioral performance, interpersonal perception and judgement, and physiological arousal, among shy and non-shy individuals during a social interaction.

Arguably, one of the most important process variables in the development of interpersonal relationships is mutual self-disclosure. The present study employed a structured dyadic interaction as the experimental paradigm in an attempt to determine whether differences in disclosure reciprocity exist between shy and non-shy subjects. In this study we began to investigate the factors that might underly disclosure reciprocity. Most previous studies have concluded that if a behavioral difference exists, it is the result of a skills deficit. Some of these studies, however, have neglected to consider the possibility that shy individuals may be capable of a behavior but for some reason refuse to exhibit it. This study examined much more closely the issue
of whether an actual skills deficit exists, or if whether what appears to be a behavioral inadequacy may actually be a result of a cognitive deficit or distortion. If the shy subjects do not reciprocate the confederate's disclosure, the study will determine whether or not they recognized the difference in intimacy, and if they recognized the difference, why they still failed to reciprocate their partner's intimacy level. While intimacy of disclosure is often the major focus in reciprocity studies, many feel that amount of disclosure is also an important factor. Therefore, consistent with this view an additional behavioral measure, the duration of the subjects' disclosures, was also recorded.

A self-report physiological arousal scale (Chambless, Caputo, Bright, & Gallagher, 1984) was included to determine whether differences in physiological reactivity exist. In light of the problems inherent in self-report measures, a more objective measure of physiological arousal would have been preferable. As it was extremely important that the dyadic interaction be as natural as possible however, it was decided that objective physiological measurement would be detrimental as it would make the interaction seem excessively artificial.

The study also examined several cognitive factors relating to interpersonal perception and judgement. A series of interpersonal rating tasks examined how the subjects perceived themselves, their partners, and how they expected their partners to perceive them. This allowed the experimenter to determine whether the self-image of the shy and non-shy subjects differed. The confederate and observer ratings of the subjects examined whether shy subjects are differentially evaluated by others. While some previous research suggests that shy individuals also negatively evaluate their partners, other research suggests that this is not the case. As the "partners", due to the
use of confederates, were the same for both shy and non-shy subjects, the experiment will help clarify these previous equivocal findings.

Recently, interest has been shown into the motivational aspects of different styles of self-presentation. The theory which has received the most attention elucidates two styles of self-presentation, protective and acquisitive (Arkin 1981). The existing research has either focused on developing scales to measure the constructs, or has utilized them as independent variables. These concepts of self-presentation seem especially applicable to the present study, as there may be motivational differences behind the self-presentation of shy and non-shy subjects. Rather than utilizing protective and acquisitive self-presentation as independent variables, the present study attempted to situationally modify these concepts and utilize them as dependent variables. If differences are found between the shy and non-shy subjects, it would not only lend credence to the validity of these self-presentation constructs, but also possibly provide an explanation for any behavioral differences that may exist between the groups.

Hypotheses

1. Duration and Intimacy of the Subjects' Disclosures

Previous research suggests that both a main effect for shyness and a shyness by intimacy interaction should occur for the duration of the subjects' disclosures. The non-shy subjects should disclose for a longer period of time than the shy subjects in both the high intimacy and low intimacy conditions, leading to a main effect for shyness. Previous
disclosure reciprocity research suggests that there may also be an interaction. Specifically, the non-shy subjects should disclose for a longer period of time in the high intimacy condition than in the low intimacy one, while the shy subjects may exhibit similar durations in both intimacy conditions.

One of the most robust findings in the psychological literature relates to the phenomenon of disclosure reciprocity. This is the tendency of normal subjects to match the intimacy level of a confederate's disclosure. It is expected that the non-shy subjects in this experiment will conform to the reciprocity principle and match both the low and high intimacy confederate disclosures, leading to a main effect for intimacy. An interaction is also expected, however, as it is hypothesized that the shy subjects will exhibit non-reciprocal disclosure patterns. It is felt that this may take the form of low intimacy disclosures by the shy subjects in response to both the high and low intimacy confederate disclosures. Previous research with shy subjects and clinical exposure to shy patients has led the author to believe that the shy individual may have a particular problem with intimacy. Providing a further basis for this hypothesis are a study by Chaikin et al (1975) which found non-reciprocal patterns of disclosure for neurotic subjects and one by Trower (1980), which found that socially unskilled patients were behaviorally consistent even in the face of others (their partners) changing their behavior.

2. Postdisclosure Subject Self-Report Measures

These measures include the subjects' ratings of self, partner, and reflected self on several interpersonal bipolar adjective scales, the
physiological arousal scale, and the protective and acquisitive self-presentation scale. Previous research suggests that there should be a main effect for shyness here. Shy subjects, as compared to non-shy subjects, should report higher levels of physiological arousal, evaluate themselves, and expect their partners to evaluate them, more negatively, and utilize a protective, rather than an acquisitive style of self-presentation.

There may also be an interaction. While there is no previous research in this regard, it is hypothesized that the shy subjects may report higher levels of physiological arousal in the high intimacy confederate disclosure condition than in the low intimacy one. The non-shy subjects are expected to display the same level of arousal in both conditions. It is felt that this may be one result of the shy subjects' hypothesized inability to match the high intimacy disclosures of the confederates. It is also hypothesized that this inability to match confederate intimacy may cause the shy subjects to evaluate themselves, and expect their partners to evaluate them, more negatively in the high intimacy condition than in the low intimacy one.

Another very robust psychological finding is the "liking effect". This is the tendency for subjects to evaluate a confederate who discloses in an intimate fashion more positively than one who discloses in a non-intimate fashion. Previous research suggests that a main effect for shyness should not occur as both shy and non-shy subjects should rate their partners equally in the low intimacy condition. However, either a main effect for intimacy or an interaction is expected. The non-shy subjects should rate the confederate in the high intimacy disclosure condition more positively than the confederate in the low intimacy one.
If the shy subjects display the same pattern of partner evaluation, there will be a main effect for intimacy. However, if the shy subjects, as hypothesized, show higher levels of physiological arousal and more negative self evaluations in the high intimacy condition, it is possible they may actually evaluate the high intimacy confederate more negatively. If this is the case, there would be an interaction here.

3. **Confederate and Observer Ratings of the Subjects**

   Previous studies paint a somewhat confusing picture as to whether shy individuals are perceived in a negative fashion by others. In general, it appears that if trained raters are utilized, shy subjects are indeed more negatively evaluated than are non-shy individuals. It would seem, however, that it is more important to determine how shy individuals are perceived by peers and individuals they meet on a daily basis. The results are somewhat contradictory in this regard. This study did not train the confederates and observers on the interpersonal ratings, but instead allowed them to rate the subjects in a subjective manner. Neither a main effect nor an interaction was expected here. It is hypothesized that the shy subjects and the non-shy subjects will be evaluated equally, as the untrained confederates and observers should function more as peers than as trained raters.
Method

Subjects and Design Overview

Female students (n=489) in several introductory psychology classes at the University of British Columbia completed the Social Avoidance and Distress Scale (SAD; Watson & Friend, 1979) as part of a larger questionnaire package. A widely used measure of shyness, the SAD consists of 28 true-false items designed to measure social avoidance and social distress. Scores range from 0 to 28 with higher scores reflecting a greater degree of social avoidance and distress. Watson and Friend (1969) reported the following data in support of the reliability and homogeneity of the SAD: (1) mean point-biserial item-total correlation of .77 (2) KR-20 of .94 (3) one-month test-retest reliability of .68. A one-month test-retest correlation of .86 was obtained by independent investigators (Girodo, Dotzenroth, & Stein, 1981).

Those with SAD scores ≤ 2 (approximately the lower quartile; 24.7%) were classified as potential non-shy subjects, while subjects with SAD scores > 12 (approximately the upper quartile; 21.7%) were classified as potential shy subjects. To eliminate extraneous variability, married students and students over the age of 22 were eliminated from the subject pool. The 100 volunteer subjects, who received partial course credit for their participation, were later contacted by telephone and a mutually convenient time was arranged for them to participate in an experimental session. Both shy and non-shy subjects were randomly assigned to the high or low intimacy confederate disclosure experimental conditions.

The 50 non-shy subjects were between 17 and 20 years of age (Mean=18.28), and had SAD scores 0 ≤ 2 (Mean=0.90). The 50 shy subjects were between 17 and 22 years of age (Mean=18.50), and had SAD scores 12 ≤ 27 (Mean=17.06).
During the experimental sessions, which utilized a dyadic interaction paradigm, subjects alternated with a female confederate in disclosing information about themselves. The confederate always spoke first and either disclosed information that was relatively superficial and non-intimate, or quite personal and highly intimate. Thus, the experiment utilized a 2 (subject status: shy or non-shy) x 2 (level of confederate disclosure: high or low intimacy) factorial design.

**Stimulus Materials and Procedure**

When the subject arrived for the experiment, she was greeted by the experimenter and seated so that she faced a female confederate across a small coffee table. To enhance the deception, the confederate arrived three minutes after the subject was scheduled to be there and apologized for being late, stating that her class had been across campus. On those occasions when the subject was more than 3 minutes late, the confederate entered the room and was already seated when the subject arrived. The experimental room contained two comfortable lounge type chairs, lamps, end tables, and a coffee table. Every attempt was made to make the setting as comfortable and naturalistic as possible.

The subject and confederate were given clipboards containing a subject consent form, instructions, and a topic list. After the consent forms were signed, the experimenter read through the instructions (Appendix 1) with the dyad. The subjects were presented with the rationale that the experiment was a study of different conversational strategies employed by people in first-meeting situations. They were told that the study would entail them having a short, structured interaction with their partner, who was presented as a fellow subject. The subjects were instructed to choose a topic from the
provided topic list, write a number beside the topic indicating which disclosure it was (i.e. first, second, etc), and then disclose on that topic to their partner. They were told to then listen while their partner chose a topic and talked about it. They were instructed to alternate back and forth until both of them had chosen, and disclosed on, 4 topics. It was stressed that they were to listen, and not ask questions, when their partner was speaking. The subjects were told that time was not a major issue and that when they had said all they had to say, that was fine. In the interests of maintaining temporal scheduling constraints, however, it was mentioned that on the "upper end", they should try to limit any given disclosure to 3 to 4 minutes.

Using pre-assigned subject numbers it was arranged so that the confederate would always self-disclose first. This was "naturally accomplished" by giving the confederate the high subject identification number in a "high number starts first" arrangement. The subjects were told that the male experimenter would be behind a one way mirror, ostensibly to monitor the conversation. It was stressed that they were not being audio or video taped in any manner. A previous study found this to be less offensive to the subjects than was the presence of a tape recorder (Alden & Meleshko, 1988).\(^1\) At this point, the experimenter asked if there were any questions. To enhance the deception, the confederate asked a question relating to topic selection. After answering

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\(^1\) In the present study, a question on the structured debriefing form asked if the subjects would feel more comfortable (1) with the experimenter behind the one-way mirror, (2) being audiotaped, but having no one behind the mirror, or (3) whether there would be no difference between the two. Although the nature of the data collection does not allow conclusions to be drawn, it was interesting to note that 68 subjects preferred the experimenter behind the mirror, 14 indicated a preference for being audiotaped with no one watching, and 18 felt there would be no difference. There was no difference between the various conditions.
this question, and any the subject may have asked, the experimenter told them
to turn to the topic list. They were told to take their time and examine the
topic list carefully while the experimenter left the room and went to the
observation gallery. After an appropriate period of time to "examine" the
topics, the confederate began her first disclosure.

Confederates and Observers: The experiment utilized two female confederates,
each of whom interacted with approximately an equal number of subjects in all
conditions. There were also two female observers. The observers were seated
behind a one-way mirror, out of the subjects' sight. The experimental room
was equipped with a sound system by which the observers could listen to the
interaction. Once again, care was taken so that the two observers were
equally balanced across both confederates and conditions. The confederates
and observers were blind to the hypotheses and experimental design.

During the interaction, both the observer and the confederate
(surreptitiously, while she pretended to number her next topic choice) rated
each of the subjects' disclosures for intimacy using a verbally anchored 7
point Likert scale.

Discussion Topics and Manipulation of Confederate Intimacy: The topic list
(Appendix 2) contained 19 items which had been previously rated for intimacy
and was comprised of an approximately equal number of low, medium, and high
intimacy topics (Jourard, 1971; Appendix 12). In the low intimacy condition,
the confederates disclosed on uniformly non-intimate topics (topics 9, 16, 11,
17: Mean intimacy = 4.705). They discussed relatively superficial issues and
revealed little, if anything, of a personal or emotional nature (Appendixes

2 The original topic list contained 21 items. It was felt, however, that
two of the topics were inappropriate and as a result items 4 and 7 were
deleted.
11, 12, 13, 14). In the high intimacy condition, the confederates began with a medium intimacy topic and proceeded to disclose on increasingly more intimate ones (topics 7, 5, 10, 3: Mean intimacy = 3.21). The information they revealed was private, personal, and emotional in nature (Appendixes 15, 16, 17, 18).

**Derivation and Validation of Disclosures:** The confederates' disclosures were scripted so that the nature and content of their disclosures would be the same for all the subjects within a given intimacy condition. It was essential that the subjects accurately perceived the difference in intimacy between the disclosures in the two conditions. Although a difference in intimacy was essential, it was felt that a minimal difference between the scripts for the two conditions should be achieved in terms of their (a) appropriateness for a first-meeting situation, and (b) degree of positiveness or negativeness they conveyed. To address these issues, the four research assistants rated each initial script, and any subsequent revisions, on 7-point Likert scales which assessed: not intimate/very intimate, unrevealing/revealing, negativity/positivity of content, inappropriateness/appropriateness for a first meeting situation, and unlikeable/likeable perception of a person disclosing such material.

The high intimacy scripts were perceived as more intimate (Mean=6.5) and more revealing (Mean=6.25) than were the non-intimate scripts (Means=3.0 and 3.75 respectively). While the non-intimate scripts were seen as slightly more appropriate for a first meeting situation (Mean=5.75) than were the highly intimate scripts (Mean=4.25), they were seen as being equally positive in content (Means=6.0 and 6.25 for the low and high intimacy scripts respectively). Further, a person would be seen as almost equally likeable whether they disclosed the non-intimate material (Mean=5.5) or the highly
intimate material (Mean=6.25). This indicates that the two sets of scripts were indeed perceived differently in terms of intimacy, but that there was little or no difference in their positivity or appropriateness.

The non-intimate disclosures ranged between 203 and 237 words (Mean=217) and took an average of 80.41 and 79.81 seconds to deliver, for the first and second confederate respectively. The highly intimate disclosures ranged between 197 and 251 words (Mean=224) and took an average of 85.74 and 87.08 seconds to deliver, once again for the first and second confederate respectively. Checklists were developed to determine whether subjects within each intimacy condition were being presented with substantially the same material, or content, by the confederates (Appendixes 19 and 20). The checklists summarized major content areas and consisted of between 12 and 15 items for each disclosure. As the confederates spoke, the observers placed a check mark beside each content item the confederate mentioned, or left blank those that they missed.

The two women who served as confederates had practised extensively and were able to provide verbatim accounts of the four high intimacy and four low intimacy disclosures. The confederates were also trained in terms of behavioral and verbal response issues. They were to sit back in their chair, maintain good but not constant eye contact, and listen attentively while the subject spoke. Ideally, they were to maintain an attentive, but emotionally neutral facial expression. The confederates were to be careful, however, that their facial expression matched the nature of the subject's disclosures when deemed necessary (i.e. if the subject made a joke, they would smile). They were not to comment or speak in response to the subject's disclosure unless it was absolutely unavoidable. On these occasions, they were to try and use a non-committal type of expression (i.e. un huh, umm, etc.)
Postdisclosure Impressions and Debriefing: After the completion of the interaction, the experimenter re-entered the room and gave both the subject and the confederate the postdisclosure questionnaires. At this point, ostensibly so that their ratings of each other would be confidential, the confederate was taken to another room. This was accomplished by saying that the person who was "lucky" enough to speak first was also "lucky" enough to be the one to move. The confederate asked if she should take her books and coat with her and was told that she should, as it was likely she and her partner would finish the questionnaires at different times.

The subjects rated themselves, their partners, and themselves as they felt their partner would rate them (reflected self) on several interpersonal bipolar adjectives. They also completed scales designed to measure physiological arousal and self-presentation style (protective and acquisitive). The confederate and observer also independently rated the subjects on the same interpersonal bipolar adjectives and rated their overall, or global, impression of the intimacy of the subject's disclosures.

After the subject completed the postdisclosure questionnaires, the experimenter conducted a structured, funnel type debriefing designed to probe for subject suspicion. Due to suspicions that their partner was actually a confederate, the data of three subjects was removed from any subsequent statistical analyses. Following the debriefing, the subjects were informed of the nature of the experiment, asked to maintain confidentiality, given their experimental participation credit slips, thanked for participating, and dismissed.

Pilot Study: A preliminary study (n=12) was conducted utilizing subjects with SAD scores of between 6 and 8. Their data were not included in the statistical analyses reported in this paper. The pilot study served three
major purposes. First, although the confederates had extensively practised their disclosures, this allowed them to "fine tune" their presentation. It also allowed the experimenter to observe any behavioral differences between the two confederates and make appropriate adjustments. Second, an examination of the data provided by the manipulation check allowed the experimenter to determine that the experimental manipulation appeared to be successful. Third, the intimacy ratings of the subjects' disclosures by the confederates and observers were examined. They were discussed and slight adjustments in utilizing the scales were made until it was felt that interrater agreement was acceptable.

Dependent Variables

There were 3 major categories of dependent measures: (1) Duration and intimacy of the subjects' disclosures, (2) Postdisclosure subject self-report measures, (3) postdisclosure confederate and observer ratings of the subjects. There were several measures within each of these categories.

1. Duration and intimacy of the subjects' disclosures

The experimenter used a stopwatch to measure the duration (in seconds) of each of the subject's disclosures. This measure was the average of each subject's four disclosures with a level of accuracy of one-tenth of a second.

There were 3 different measures of the intimacy of the subjects' disclosures. The modified Jourard Topic List contained 19 topics with corresponding intimacy values ranging from 2.21 to 4.98. The mean of the intimacy values corresponding to the four disclosures of each subject was utilized as one measure of intimacy. While this provided a measure of the intimacy of disclosure, the experimenter noticed in a previous study
(Alden & Meleshko, 1988) that disclosures on the same topic occasionally varied in terms of intimacy. For example, one subject stated that the unhappiest moment in her life was when she went back to a store to get a dress she really liked and found that it had been sold. The unhappiest moment for another subject was the day her brother, who had been mentally ill for some time, committed suicide. To address this problem, the present study contained two additional measures of the intimacy of the subjects' disclosures.

A confederate and an observer rated each of the subject's disclosures for intimacy on a 7-point Likert scale (Appendixes 8 and 9). This scale was descriptively anchored (Appendix 10) as it was hoped that in accordance with previous studies, interrater reliability would be sufficiently high as to allow confederate and observer ratings to be averaged across subjects. The mean of the ratings for the four disclosures of each subject constituted the second measure of subject intimacy. After the conclusion of the interaction, each subject was also rated by a confederate and an observer on their impressions of the subject's overall intimacy (Appendixes 8 and 9, number 9). This comprised the third measure of the intimacy of the subjects' disclosures. Interrater reliability was also computed on this global measure of subject intimacy.

2. Postdisclosure subject self-report measures

The subjects completed 5 different questionnaire/rating forms after the completion of the disclosure portion of the experiment. They rated themselves (Appendix 3), their partners (Appendix 4), and themselves as they felt their partner would rate them—reflected self—(Appendix 5).
These ratings consisted of a variety of interpersonal bipolar adjectives which were basically positive versus negative in nature. Previous research has shown that these ratings should show robust patterns of intercorrelations across these three perspectives. However, correlations were computed for these ratings to ensure that the patterns of intercorrelations were indeed present, and robust enough, that composite scores could be obtained for self, partner, and reflected self.

A self-report physiological arousal scale (Appendix 6) was modified from one which was designed for use with individuals suffering from panic attacks (Chambless et al, 1984). Some of the symptoms were not considered applicable to the present study and sample, and thus were deleted. The individual items on this scale are additively combined to yield a total score for physiological arousal. Due to the modification of the original scale, however, a principal components analysis was conducted to determine whether the psychometric properties of the scale had been compromised by the modifications.

A self-report scale was developed to measure protective and acquisitive styles of self-presentation (Appendix 7). The selected items were modified to reflect the nature of the experimental paradigm. This mainly involved integrating phrases such as "during the conversation, "My partner", "the topics", into the items. Consistent with the recommendations of Wolfe et al (1986), items were selected from the Concern for Appropriateness Scale (Lennox & Wolfe, 1984) and the 13-item Self-Monitoring Scale (Lennox & Wolfe, 1984). The experimenter also utilized items from the Fear of Negative Evaluation Scale (FNE; Watson & Friend, 1969), as it was felt that some of the items from this scale reflected the motivational aspects of protective self-presentation not
captured in the Concern for Appropriateness Scale. Modification of the items from the Ability to Modify Self-Presentation subscale of the Self-Monitoring Scale yielded 7 items designed to measure acquisitive self-presentation. Protective self-presentation was measured by modifications of items 5, 6, 8, and 15 from the Concern for Appropriateness scale and items 7, 8, 14, and 25 from the FNE scale.

The psychometric properties of these scales have been extensively examined previously. As modified subsets of their items were used in this study, however, analyses were conducted to examine psychometric aspects of the protective and acquisitive measures.

3. Postdisclosure confederate and observer ratings of the subjects

The confederates and observers independently rated the subjects on the same interpersonal bipolar adjectives that the subjects rated themselves, their partners, and their reflected selves. It was expected that these ratings would show a pattern of intercorrelations similar to the subjects' ratings, thus allowing composite scores to be obtained. As it was felt that the impact of being involved in the interaction as compared to being behind the one-way mirror might have a differential effect, interrater reliabilities were not computed for these ratings. Instead, the ratings of the confederates and the observers were considered distinct and were statistically examined independently. In addition, the confederates also completed 3 items (Appendix 8, numbers 10, 11, 12) designed to measure how at ease, or comfortable, they felt during the dyadic interactions.
Results

PRELIMINARY ANALYSES

Subject Selection

A 2 (shyness) x 2 (confederate intimacy) ANOVA on the subjects' SAD scores produced the expected significant main effect for shyness, $F_{(1, 749.92)} = 749.92$, $p < .001$. It also produced two unexpected outcomes, a main effect for intimacy, $F_{(5, 501)} = 5.01$, $p < .05$, which was further qualified by a significant shyness by intimacy interaction, $F_{(5, 501)} = 7.35$, $p < .01$. Subsequent analyses revealed that, although subjects had been randomly assigned, the SAD scores of the two cells of shy subjects were significantly different (Means=18.52 for the low intimacy shy subjects and 15.60 for the high-intimacy shy subjects). To determine whether this difference affected the pattern of results, two additional groupings of subjects were artificially created in which the SAD scores did not significantly differ between the two conditions. All major statistical analyses conducted in the study were repeated on these two groups. While actual probability values varied somewhat, in no instance was a significant (or non-significant) result from the initial analyses reversed. Therefore, the experimenter feels that the experimental manipulation, and not the difference in SAD scores, accounts for the results of this study.

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3 The first grouping of subjects was created by dropping the 4 shy subjects in the low intimacy condition with SAD scores $\geq 24$ as there were no shy subjects in the high intimacy condition with SAD scores $\geq 24$. This resulted in the shy subjects in the low intimacy condition (n=21) having a mean SAD score of 17.29 while the shy subjects in the high intimacy condition (n=25) had a mean SAD score of 15.60. The second grouping was created by matching the SAD scores of shy subjects in the two conditions. This resulted in the shy subjects in the low intimacy condition (n=20) having a mean SAD score of 17.04 while the shy subjects in the high intimacy condition (n=20) had a mean SAD score of 16.36.
Manipulation Checks

In order to provide a satisfactory test of the hypotheses, it was essential that the subjects in the high and low intimacy conditions differed in their assessments of how intimate and revealing their partner's disclosures were. The form on which the subjects rated their partners included two items designed to assess the manipulation of confederate intimacy: using a 7-point Likert scale, subjects rated (a) unrevealing/revealing (b) non-intimate/very intimate. A 2 (shyness) x 2 (confederate intimacy) MANOVA of these two items produced only one significant outcome, a main effect for confederate intimacy, $F_{(2,91)}=94.06$, $p < .001$. Followup univariate F-tests revealed that subjects assigned to the high intimacy condition reported that their partners were significantly more intimate (Mean=5.74) than did subjects assigned to the low intimacy condition (Mean=2.86), $F_{(1,92)}=188.51$, $p < .001$. They also reported that they were significantly more revealing (Means=5.96 and 4.38 respectively), $F_{(1,92)}=46.20$, $p < .001$. Thus, the manipulation of confederate intimacy was effective.

Interrater Reliability

Interrater reliabilities for the verbally anchored intimacy ratings of each of the subjects' disclosures were .92, .90, .84, and .86 for the 4 combinations of confederates (2) and observers (2). The reliability for the global rating of subject intimacy computed over all ratings was .85. For some of the subjects (n=24), both of the observers were present so that it could be determined whether they were using the intimacy ratings in a substantively similar manner. The observer/observer reliabilities were .95 and .92, for the anchored and global intimacy measures respectively. In view of these satisfactory levels of interrater reliability, confederate and observer
ratings of the intimacy of the subjects' disclosures were averaged prior to the final data analyses.

Confederate Consistency Checks

As the number of items on the checklists designed to examine the consistency of the confederates' presentation in terms of disclosure content varied, it was decided to use percentages to facilitate comparisons. The first confederate included 99.81% (Range: 98.3% to 100%) and 99.29% (Range: 96% to 100%) of the content in her low intimacy and high intimacy disclosures respectively. The second confederate included 96.10% (Range: 93.10% to 100%) and 97.57% (Range: 90% to 100%). This suggests that the subjects within a given intimacy condition were presented with virtually the same content by the confederates.

As two confederates were utilized in the experiment, all major multivariate analyses were conducted with the confederate as a factor. The 2 (confederate) x 2 (shyness) x 2 (intimacy) MANOVA'S produced no main or interaction effects for the confederate variable and thus it will not be mentioned in the subsequent analyses.

Composite Scores for the Interpersonal Bipolar Adjectives

To determine whether the interpersonal bipolar adjectives could be additively combined, Pearson correlation coefficients were computed independently for the subjects' ratings of self, partner, reflected-self, and for the confederate and observer ratings of the subjects. It was necessary that the pattern of correlations be the same for the subjects' ratings of self, partner, reflected self, and the confederate and observer ratings of the
subjects for composite scores to be utilized. The correlation coefficients can be seen in Tables 1 to 5.

Table 1. Subjects' Ratings of Self: Interpersonal Adjective Correlations

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* = p < .05; ** = p < .01; *** = p < .001
Table 2. Subjects' Ratings of Partner: Interpersonal Adjective Correlations

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Shy/Not Shy

Anxious/Calm .45***

*=p < .05; **=p < .01; ***=p < .001

Table 3. Subjects' Ratings of Reflected Self: Interpersonal Adjective Correlations

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Shy/Not Shy

Anxious/Calm .64***

*=p < .05; **=p < .01; ***=p < .001
Table 4. Confederates' Ratings of Subjects: Interpersonal Adjective Correlations

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Shy/Not Shy

Anxious/Calm .70***

*=p <.05; **=p <.01; ***=p <.001

Table 5. Observers' Ratings of Subjects: Interpersonal Adjective Correlations

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<tbody>
<tr>
<td>Attractive/Unattractive</td>
<td>1.00</td>
<td>.45***</td>
<td>.64***</td>
<td>.50***</td>
</tr>
<tr>
<td>Friendly/Unfriendly</td>
<td>1.00</td>
<td>.63***</td>
<td>.61***</td>
<td></td>
</tr>
<tr>
<td>Likeable/Unlikeable</td>
<td>1.00</td>
<td>.77***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting/Boring</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shy/Not Shy

Anxious/Calm .81***

*=p <.05; **=p <.01; ***=p <.001
The attractive/unattractive, friendly/unfriendly, likeable/unlikeable, and interesting/boring ratings were all moderately to highly correlated. They were all significantly correlated, with virtually all (27 of 30) of the correlations significant at $p < .001$. This suggested that the subjects, confederates, and observers all tended to use these ratings in substantively the same fashion. Beyond the statistical relationship, there also appears to be a logical relationship between these adjectives. They seem to comprise part of what might be termed an individual's interpersonal image on a positive versus negative continuum. Therefore, it was decided to additively combine the scores on these items into a composite score of "Interpersonal Image".

The anxious/calm and shy/not shy ratings also showed a robust pattern of moderate to high correlations with all of the correlations significant at $p < .001$. Once again, there appears to be a logical relationship in addition to the statistical one. These ratings appear to constitute what might be termed interpersonal comfort versus discomfort. Thus, it was decided to additively combine the scores on these items into a composite score for "Interpersonal Comfort".

The confederate also rated how at ease, or comfortable, she was during the interaction. The three items were all scored so that a higher score indicated a more positive feeling (i.e. uncomfortable-1; comfortable-7). The intercorrelations for these three items were .76, .65, and .84, all significant at $p < .001$. This indicates that the confederates utilized these items in a substantially similar fashion, thus allowing them to be additively combined.
DEPENDENT VARIABLES

Analyses of the Duration and Intimacy of the Subjects' Disclosures

The duration of the subjects' disclosures and the 3 measures of the intimacy of their disclosures were analyzed by means of a 2 (shyness) x 2 (confederate intimacy) MANOVA. The MANOVA produced three significant outcomes, a main effect for shyness, $F(4, 93) = 6.85, p < .001$, a main effect for intimacy, $F(4, 93) = 14.51, p < .001$, and a shyness x intimacy interaction, $F(4, 93) = 4.42, p < .005$.

Duration of the Subjects' Disclosures: Followup univariate F-tests revealed a main effect for shyness, $F(1, 96) = 22.24, p < .001$, and a main effect for intimacy, $F(1, 96) = 11.10, p < .001$. The non-shy subjects disclosed for a significantly longer period of time (Mean=119.89 seconds) than did the shy subjects (Mean=86.66 seconds). Both shy and non-shy subjects, however, were more disclosive, in terms of duration, in response to the high intimacy confederate (Mean=115.02 seconds) than they were in response to the low intimacy one (Mean=91.54 seconds).

Intimacy of the Subjects' Disclosures: The followup univariate F-tests revealed that while there were no significant main effects for shyness for the three measures of the intimacy of the subjects' disclosures, there were significant main effects for intimacy, and significant shyness by intimacy interactions. These can be seen in Table 6.
Table 6. Followup Univariate F-tests: Intimacy of the Subjects' Disclosures

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jourard Intimacy Values</td>
<td>6.03</td>
<td>(1,96)</td>
<td>51.40</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Mean Ratings of Each Disclosure</td>
<td>50.20</td>
<td>(1,96)</td>
<td>45.42</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Overall Intimacy Rating</td>
<td>63.20</td>
<td>(1,96)</td>
<td>39.95</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Interaction: Shyness x Confederate Intimacy

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jourard Intimacy Values</td>
<td>.62</td>
<td>(1,96)</td>
<td>5.31</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Mean Ratings of Each Disclosure</td>
<td>3.90</td>
<td>(1,96)</td>
<td>3.53</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Overall Intimacy Rating</td>
<td>11.90</td>
<td>(1,96)</td>
<td>7.52</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

The main effects for confederate intimacy reflect the finding that subjects who interacted with a highly intimate confederate were more intimate in their own self-disclosures than were those who interacted with a non-intimate confederate on all three intimacy measures (Table 7).

Table 7. Intimacy Values of the Subjects' Disclosures

<table>
<thead>
<tr>
<th></th>
<th>Low Intimacy</th>
<th>High Intimacy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Shy n=25</td>
<td>Shy n=25</td>
</tr>
<tr>
<td>Jourard Intimacy Values</td>
<td>4.45</td>
<td>4.25</td>
</tr>
<tr>
<td>Ratings of Each Disclosure</td>
<td>2.05</td>
<td>2.43</td>
</tr>
<tr>
<td>Overall Intimacy Ratings</td>
<td>2.02</td>
<td>2.56</td>
</tr>
</tbody>
</table>

Note: A higher number reflects a more non-intimate disclosure on the Jourard intimacy values, contrary to the other two intimacy measures where a higher number reflects a more intimate disclosure.

This type of outcome is one that is typically cited as evidence for a disclosure reciprocity effect. Thus, as hypothesized, the very robust effect of disclosure reciprocity was indeed operative in this study.
In terms of the hypotheses guiding this research, the more interesting result was the shyness x confederate intimacy interaction. Followup univariate F-tests revealed that two of the intimacy measures produced significant interactions (Table 6). These interactions are illustrated in Figure 1, Panel A (Jourard Intimacy Values) and Panel B (Overall Intimacy Rating).

Figure 1. Intimacy of the Subjects' Disclosures as a Function of Shyness and the Intimacy of the Confederates' Disclosures

Panel A: Jourard Intimacy Values  Panel B: Overall Intimacy Ratings

These figures show that the shy subjects were somewhat less intimate than the non-shy subjects when exposed to the highly intimate confederate, but were somewhat more intimate than the non-shy subjects when exposed to the non-intimate confederate. The shyness x intimacy interaction for the third measure of subject intimacy (the mean intimacy of each subject's four
disclosures), was only marginally significant, $F_{1,96}=3.53$, $p = .06$, but exhibited the same pattern of results.

Subsequent simple main effects analyses revealed a somewhat different pattern of results for the Jourard intimacy values (Table 8) and the overall intimacy ratings (Table 9) respectively.

Table 8.  **Simple Main Effects for the Shyness by Intimacy Interaction: Jourard Intimacy Values**

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shyness at Low Intimacy</td>
<td>.4802</td>
<td>1</td>
<td>4.09</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Shyness at High Intimacy</td>
<td>.1741</td>
<td>1</td>
<td>1.48</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Error</td>
<td>.1173</td>
<td>96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9.  **Simple Main Effects for the Shyness by Intimacy Interaction: Overall Intimacy Rating**

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shyness at Low Intimacy</td>
<td>3.645</td>
<td>1</td>
<td>2.30</td>
<td>&gt;.05</td>
</tr>
<tr>
<td>Shyness at High Intimacy</td>
<td>8.820</td>
<td>1</td>
<td>5.58</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Error</td>
<td>1.582</td>
<td>96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The simple effects analyses of the Jourard values indicates that the shy subjects were significantly more intimate than the non-shy subjects when exposed to a non-intimate confederate. The analyses of the overall intimacy rating revealed that the shy subjects were significantly less intimate than the non-shy subjects when exposed to the highly intimate confederate. When examined separately, these two results tend to suggest a somewhat different pattern of non-reciprocal disclosure for the shy subjects. The key here, however, is that taken together the measures of the intimacy of the subjects' disclosures strongly suggest that the shy subjects display non-reciprocal
disclosure as compared to the non-shy subjects. Although the exact pattern is not conclusively shown by these results, the results do tend to suggest that the shy subjects are more moderate in their disclosure. Specifically, they are more intimate than the non-shy subjects in response to the non-intimate confederate, but less intimate than the non-shy subjects in response to the highly intimate confederate.

Analyses of the Postdisclosure Subject Self-Report Measures

The subjects rated themselves, their partners, and their reflected selves, and scores for interpersonal image and interpersonal comfort were obtained for each of these three perspectives. They also completed a physiological arousal scale, and a scale which measured protective and acquisitive self-presentation styles. As the physiological arousal scale was a modified version of the original, a principal components analysis was conducted. This analysis revealed the presence of single factor accounting for 50.2% of the variance. The factor loadings can be seen in Table 10.

Table 10. Physiological Arousal Factor Matrix

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Heart beating faster</td>
<td>.85</td>
</tr>
<tr>
<td>3</td>
<td>Feeling short of breath</td>
<td>.77</td>
</tr>
<tr>
<td>6</td>
<td>Lump in throat</td>
<td>.77</td>
</tr>
<tr>
<td>8</td>
<td>Dry throat</td>
<td>.73</td>
</tr>
<tr>
<td>1</td>
<td>Pressure in chest</td>
<td>.69</td>
</tr>
<tr>
<td>5</td>
<td>Butterflies or knot in stomach</td>
<td>.64</td>
</tr>
<tr>
<td>7</td>
<td>Sweating</td>
<td>.61</td>
</tr>
</tbody>
</table>

The results of the principal components analysis strongly suggested that the individual items could be additively combined to yield a total score.
A principal components analysis was also conducted on the scale which measured protective and acquisitive self-presentation styles. The unrotated factor structure indicated that a two factor solution was optimal. A varimax rotation revealed that the protective items loaded on a first factor accounting for 31% of the variance, while the acquisitive items loaded on a second factor accounting for 17% of the variance. The exact factor loadings can be seen in Table 11.
Table 11.  Factor Matrix for the Protective and Acquisitive Self-Presentation Style Scale

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Because I was uncertain about what to do in this situation, I looked to my partner for cues.</td>
<td>.78  -.19</td>
</tr>
<tr>
<td>8</td>
<td>I talked about the same things my partner did because I didn't want to appear foolish.</td>
<td>.71  -.19</td>
</tr>
<tr>
<td>14</td>
<td>During the conversation, I tried to behave in such a way that I wouldn't draw attention to myself.</td>
<td>.71  -.20</td>
</tr>
<tr>
<td>12</td>
<td>I watched my partner's reactions because I was afraid she might find fault with me.</td>
<td>.69  -.16</td>
</tr>
<tr>
<td>4</td>
<td>I was careful about what I said because I was afraid that I might say or do something wrong.</td>
<td>.63  .04</td>
</tr>
<tr>
<td>13</td>
<td>I talked about things I wanted to talk about, regardless of what my partner did.(R)</td>
<td>.57  .23</td>
</tr>
<tr>
<td>6</td>
<td>I talked about things I thought my partner wanted me to talk about.</td>
<td>.53  .32</td>
</tr>
<tr>
<td>15</td>
<td>I didn't talk about the topics I wanted to because I was afraid my partner would disapprove of them</td>
<td>.52  -.01</td>
</tr>
<tr>
<td>3</td>
<td>I was able to control the way I came across to my partner so that I gave the impression I wanted to give.</td>
<td>.04  .79</td>
</tr>
<tr>
<td>7</td>
<td>I had no difficulty making a good impression during the conversation because I felt it was to my advantage to do so.</td>
<td>-.17  .70</td>
</tr>
<tr>
<td>1</td>
<td>Once I knew what the situation called for, it was easy for me to regulate my behavior.</td>
<td>-.18  .65</td>
</tr>
<tr>
<td>9</td>
<td>I enjoyed talking about myself in this situation because I felt confident that my partner was interested in what I was saying.</td>
<td>-.43  .59</td>
</tr>
<tr>
<td>2</td>
<td>I tried to pay attention to the reactions of my partner to avoid being inappropriate.(R)</td>
<td>.40  .59</td>
</tr>
<tr>
<td>5</td>
<td>If I felt that I wasn't giving the impression I wanted to give, I feel I could have easily changed it.</td>
<td>-.06  .57</td>
</tr>
<tr>
<td>11</td>
<td>Regardless of what my partner did, I felt that I could control the situation.</td>
<td>-.39  .55</td>
</tr>
</tbody>
</table>

Note: (R) denotes items scored in a reverse direction
The 9 postdisclosure subject self-report measures were analyzed by means of a 2 (shyness) x 2 (confederate intimacy) MANOVA. The MANOVA produced two significant outcomes, a main effect for intimacy $F_{(1,96)}=2.59$, $p < .05$, and a main effect for shyness $F_{(1,96)}=10.19$, $p < .001$.

Followup univariate F-tests on the intimacy main effect revealed two significant outcomes; the subjects' ratings of their partners' interpersonal image, $F_{(1,96)}=6.18$, $p < .05$, and their interpersonal comfort, $F_{(1,96)}=8.39$, $p < .005$. The highly intimate confederates were seen as having a more positive interpersonal image (Mean=24.30) than were the non-intimate confederates (Mean=23.10). They were also evaluated more positively in terms of their interpersonal comfort (Means=12.06 and 11.08 respectively, for the high and low intimacy confederates). This is the type of outcome typically cited as support for the "liking effect". Thus, as hypothesized, this very robust psychological effect was present in this study.

Of greater interest was the main effect for shyness. The outcomes revealed by the followup univariate F-tests are shown in Table 12.

Table 12. **Subjects' Self-Report Measures: Followup Univariate F-tests on the Main Effect for Shyness**

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Rating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Interpersonal Image</td>
<td>353.44</td>
<td>(1,96)</td>
<td>36.49</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>(b) Interpersonal Comfort</td>
<td>309.76</td>
<td>(1,96)</td>
<td>51.86</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Reflected Self-Rating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Interpersonal Image</td>
<td>345.96</td>
<td>(1,96)</td>
<td>38.86</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>(b) Interpersonal Comfort</td>
<td>292.41</td>
<td>(1,96)</td>
<td>63.80</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Physiological Arousal</td>
<td>789.61</td>
<td>(1,96)</td>
<td>22.92</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self-Presentation Style</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Acquisitive</td>
<td>1,459.24</td>
<td>(1,96)</td>
<td>44.70</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>(b) Protective</td>
<td>1,528.81</td>
<td>(1,96)</td>
<td>31.59</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
The non-shy subjects were significantly more positive about their own interpersonal image (Mean=21.54), and interpersonal comfort (Mean=10.66), than were their shy counterparts (Means=17.78 and 7.14 for image and comfort respectively). The non-shy subjects also felt that their partners were going to be more positive about them in terms of both interpersonal image (Mean=21.04) and interpersonal comfort (Mean=10.48) than were the shy subjects (Means=17.32 and 7.06 for image and comfort respectively). In addition to more negative self and reflected self ratings, the shy subjects also reported being more physiologically aroused (Mean=16.14) than did the non-shy subjects (Mean=10.52).

The non-shy subjects were more likely to utilize an acquisitively motivated style of self-presentation (Mean=34.38) than were the shy subjects (Mean=26.74). Conversely, the shy subjects were more likely to use a protective style of self-presentation (Mean=28.55) than were their non-shy counterparts (Mean=20.74). These two results complement each other nicely as they tend to suggest that an individual uses one of the styles, in the relative absence of the other.

Taken together, these results suggest several things. The shy subjects see themselves, and expect others to see them, more negatively in the sense of both interpersonal image and comfort. They report being more physiologically aroused, and appear to utilize a largely protective style of self-presentation.

Analyses of the Confederate and Observer Ratings of the Subjects

The confederates and observers rated the subjects on both their interpersonal image and comfort. The confederates also rated how comfortable
they themselves felt during the interactions. The five measures of confederate and observer ratings were analyzed by means of a 2 (shyness) x 2 (confederate intimacy) MANOVA. The MANOVA produced two significant outcomes, a main effect for intimacy, $F(1, 92) = 3.04, p < .05$, and a main effect for shyness, $F(1, 92) = 8.69, p < .001$. 

Followup univariate F-tests on the intimacy main effect revealed a significant outcome for the confederates' ratings of the subjects' interpersonal image, $F(1, 90) = 5.87, p < .05$. The confederates had a more positive interpersonal image of the subjects in the high intimacy confederate disclosure condition (Mean=20.78) than of the subjects in the low intimacy one (Mean=18.36). As the subjects in the high intimacy confederate disclosure condition were also more intimate themselves, this indicates that the "liking effect" operated on the confederates' ratings of the subjects' interpersonal image. The liking effect did not extend to the confederates' ratings of the subjects' interpersonal comfort. The absence of a significant outcome here for the observers' ratings of interpersonal image and comfort indicates that the "liking effect" did not play a role in their ratings of the subjects.

The outcomes of the followup univariate F-tests on the shyness main effect are shown in Table 13.
Table 13. Confederate and Observer Ratings of the Subjects: Followup
Univariate F-tests on the Main Effect for Shyness

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confederates' Ratings of Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Interpersonal Image</td>
<td>127.69</td>
<td>(1,96)</td>
<td>5.12</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>(b) Interpersonal Comfort</td>
<td>304.16</td>
<td>(1,96)</td>
<td>39.03</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Observers' Rating of Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Interpersonal Comfort</td>
<td>151.29</td>
<td>(1,96)</td>
<td>28.95</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Confederates' Rating of Self-Comfort</td>
<td>114.29</td>
<td>(1,96)</td>
<td>4.43</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

The confederates were more positive in their ratings of the non-shy subjects' interpersonal image (Mean=20.87) and interpersonal comfort (Mean=11.46) than they were in their ratings of the shy subjects (Means=18.44 and 7.54 for image and comfort respectively). The observers were also more positive in their ratings of the non-shy subjects' interpersonal comfort (Mean=12.08) than they were in their ratings of the shy subjects (Mean=9.62). There was no significant difference, however, in the observers' ratings of the subjects' interpersonal image. In addition to being more positive about the non-shy subjects in terms of both their interpersonal image and comfort, the confederates themselves felt more comfortable during their interactions with the non-shy subjects (Mean=18.02) than they did with the shy subjects (Mean=15.88).

Discussion

It is worthwhile noting that there were no significant main effects for shyness on any of the three measures of the intimacy of the subjects'
disclosure. That is, shy subjects were neither more nor less intimate than were non-shy subjects. Instead, differences appeared only when the intimacy level of the confederate's disclosure was considered. The shyness x confederate interactions suggest that the shy subjects appeared to maintain a characteristically middle level of intimacy, regardless of what may have been disclosed to them first. In contrast, non-shy subjects used the confederate's intimacy as a cue, or indicator, regarding what was appropriate for their own disclosure, and then closely matched this with a similar level of intimacy. Thus, relative to the non-shy subjects, shy subjects tended to overdisclose to the low intimacy confederate and underdisclose to the high intimacy one.

The results of this study strongly suggest that shyness is related to non-reciprocal disclosure, rather than to any characteristically high or low level of disclosure. These results are consistent with two previous studies that have examined the relationship between mental health and self-disclosure. In a correlational study concerned with the reciprocity norm, Mayo (1968) found that hospitalized neurotics reported non-reciprocal patterns of disclosure with others more than did normal subjects. In a study utilizing a disclosure reciprocity paradigm, Chaiken et al. (1975) found a pattern of non-reciprocal disclosure for neurotic subjects similar to the patterns exhibited by the shy subjects in this study. Specifically, the neurotics were less intimate in response to a highly intimate confederate and more intimate in response to a non-intimate confederate than were the normal subjects.

Although there was no significant interaction for the duration of the subjects' disclosures, there were main effects for both shyness and intimacy. The main effect for intimacy, in the absence of a shyness by intimacy interaction, indicates that both shy and non-shy subjects disclosed for longer periods of time in response to the high intimacy confederate than they did in
response to the low intimacy one. The main effect for shyness, however, revealed that the shy subjects spoke for shorter periods of time than did the non-shy subjects, but that this difference was consistent across intimacy conditions. Thus, behaviorally, we see that the shy subjects spoke for shorter periods of time, and reciprocated the confederates' intimacy to a lesser degree, than did the non-shy subjects.

In addition to the behavioral issues, this study also examined several other factors potentially related to shyness. Previous studies have reported somewhat conflicting results as to how shy individuals perceive themselves, perceive others, and how others perceive the shy individuals. For example, one study (Jones & Briggs, 1984) reported that shy subjects negatively evaluated their partners, but another study (Alden & Meleshko, 1988) found no difference between the partner ratings of shy and non-shy subjects. Although several studies (Pilkonis, 1977; Cheek & Buss, 1981; Jones et al., 1983) have reported a relationship between shyness and being negatively evaluated by one's partner, another study (Alden & Meleshko, 1988) found no difference, suggesting that shy individuals may not be universally negatively evaluated by others.

The statistical analyses used in some of these studies have been correlational in nature and, thus, have examined relationships rather than absolute differences between the experimental groups (Jones et al., 1983; Jones & Briggs, 1984). It seems, however, that even after taking this into account, there are unexplained differences between the results in various studies. Upon further review, it appears that there are two major factors which may be somewhat more complex than they have been conceptualized to this point in time. The first factor concerns the adjectives which have been used to obtain the interpersonal ratings. These adjectives have tended to vary
from study to study. Of even greater importance, however, is that most studies have failed to consider that different dimensions may underlie what appear to be a group of related adjectives. The present study has shown that individuals do indeed seem to utilize various adjectives in a similar fashion, thus suggesting the presence of different underlying dimensions. The patterns of correlations suggest there are at least two major dimensions which underlie the bipolar adjectives used in this study, interpersonal comfort and interpersonal image. Negative ratings on one dimension do not necessitate negative ratings on another dimension, nor do they justify global conclusions of negative (or positive) evaluation. Shy subjects may be rated negatively on the comfort dimension, for example, yet be perceived as positive on the image dimension. Thus, we can see that viewing different adjectives as measuring a single, positive versus negative dimension, may have contributed to the conflicting results obtained in various studies.

The second major factor relates to contextual variables in the various studies. Was there an actual face-to-face interaction between the experimental participants and, if so, what was the nature and format of the exchange? Were the individuals evaluating the shy subjects interactively involved with them, or were they a removed, and possibly affectively neutral, rater or observer? By considering these various facets separately, we might be better able to interpret and understand the differences which occur. For example, Cheek and Buss (1981) obtained peer ratings following a brief, unstructured interaction while Alden and Meleshko (1988) also used peer ratings, but they followed a structured interaction. On the other hand, Pilkonis (1977) utilized the ratings of confederates who were involved in the interaction and two types of observers who were not involved, those who were
present and viewed the encounter live, and those who viewed the encounter on videotape.

The main effect for intimacy found for the subjects' ratings of their partner's interpersonal image and comfort is quite interesting, especially in the absence of either a main effect for shyness or an interaction. Both the shy and non-shy subjects were more positive about the interpersonal image and comfort of the highly intimate confederate than they were about the image and comfort of the non-intimate confederate. Thus, both shy and non-shy subjects conformed to one of the most robust effects found in the psychological literature, the "liking effect". In addition, the absence of a main effect for shyness, or an interaction, indicates that the shy individuals in this study did not negatively evaluate their partners, or find them less attractive, than did the non-shy individuals.

This study also found that shy subjects were more negative, and expected their partners to be more negative, about both their interpersonal image and comfort. This outcome is consistent with results reported by Jones and Briggs (1984) and Alden and Meleshko (1988). It was hypothesized that shy subjects may have been more negative about themselves in the high intimacy condition than in the low intimacy one, largely as a result of their hypothesized non-reciprocal disclosure in the high intimacy condition. As we have seen, however, the shy subjects tended to exhibit non-reciprocal disclosure, as compared to the non-shy subjects, in both the high and low intimacy conditions. Thus, the presence of a main effect for shyness here appears to be consistent with their non-reciprocal disclosure in both confederate intimacy conditions.

It appears that shy individuals see themselves, and expect others to see them, as being more interpersonally uncomfortable (anxious, shy). The shy
subjects also have, and expect others to have, a negative sense of their interpersonal image (unattractive, unfriendly, boring, and unlikeable). This dimension would appear to comprise, in part, what is often referred to as self-esteem. One can only empathize with individuals who must enter a social encounter with a negative sense of self-image and a sense of interpersonal discomfort, both of which will be perceived by their partner.

Although shy individuals expect others to perceive them negatively, a key question is whether this actually occurs. The results in this study suggest that it may depend on the extent of the raters' involvement in the interaction: are they an actual participant or a removed observer? The shyness main effect for the confederates' ratings of the subjects interpersonal image and comfort, suggests that the shy subjects are indeed perceived more negatively by those who interact with them. The confederates viewed the shy subjects more negatively in terms of both their interpersonal image (unattractive, unlikeable, unfriendly, and boring) and their interpersonal comfort (anxious and shy). Equally important, the confederates themselves felt less comfortable when interacting with the shy subjects than with the non-shy subjects. This causes one to wonder if shy individuals may exhibit certain behaviors that enable others to identify the shy person's interpersonal discomfort and whether, once this identification is made, it necessarily results in other people not only feeling more uncomfortable with the shy individuals, but of having a more negative impression of their interpersonal image.

The observers' ratings of the subjects provide a somewhat different perspective on this issue. The observers, similarly to the confederates, rated the shy subjects as more interpersonally uncomfortable than the non-shy subjects. They did not, however, perceive the shy and non-shy subjects any
differently in terms of their interpersonal image. Thus, although the observers saw the shy subjects as being less comfortable in terms of self-presentation (more anxious and shy), they did not view them as less interpersonally attractive. This suggests that shy individuals do exhibit certain behavioral cues that allow their interpersonal discomfort to be identified and evaluated, but that, once identified, the shy individual's interpersonal discomfort does not necessarily lead to a more negative evaluation of her interpersonal image.

Why was the experience different for the confederates as compared to the observers? That the confederates were in the room and interacting with the shy subjects seems to be the obvious answer, but it is an answer that begs the question. Interestingly, there was also a intimacy main effect for the confederates' ratings of the subject's interpersonal image, indicating that the confederates were subject to the "liking effect"; they had a more positive interpersonal image of the subjects in the high intimacy condition. There was no main effect for intimacy for the observers' ratings of the subjects. Taken together, this suggests that the confederates were more affected by the nature and intimacy of the subjects' disclosures than were the observers. Keeping in mind both this, and the fact that the shy subjects displayed non-reciprocal disclosure as compared to the non-shy subjects in both conditions, a possible interpretation is suggested for the shyness main effect for the confederates' ratings of the subjects' interpersonal image, and their ratings of how comfortable they themselves were. The differences in the confederate and observer ratings of the subjects indicates that it is not so much the shy individuals' interpersonal discomfort that caused people to feel less comfortable with them and subsequently evaluate them more negatively, as it is
their non-reciprocal disclosure. Basically, it is what they say, not how they say it.

The subjects' self-report of their physiological arousal examines another important dimension of shyness. There was a main effect for shyness for this measure, revealing that the shy subjects in both the high and low intimacy conditions reported being more physiologically aroused than their non-shy counterparts. It was hypothesized that as a result of their non-reciprocal disclosure, the shy subjects in the high intimacy condition would report higher levels of physiological arousal than the shy subjects in the low intimacy condition. As the shy subjects, however, exhibited non-reciprocal disclosure in both confederate intimacy conditions, it is not surprising, and indeed consistent, that their reported level of physiological arousal would be similar in both conditions.

The author realizes that the measure of arousal was a self-report rather than a physiological one. There is no way to know whether the shy subjects were experiencing higher levels of arousal as would be reflected on physiological measures. It would seem, however, that arousal as reflected by the subject's self-report would still have implications for the shy individual's performance. Higher levels of perceived arousal are consistent with the shy subjects' view of themselves, and their reflected-selves, as being more interpersonally uncomfortable. It is also possible that the shy subjects' higher levels of physiological arousal provided the cues that were utilized by the confederates and observers in their ratings of the shy subjects' interpersonal discomfort. This last point is only speculative, however, as the design of the present study was not conducive to a more concrete conclusion in this regard.
An extremely interesting result, and one that is consistent with many of the other outcomes in this study, relates to the subjects' self-report as to whether they utilized an acquisitive or a protective style of self-presentation during the interaction. There were main effects for shyness on both the protective and acquisitive self-presentation measures. Specifically, the non-shy subjects were more likely to utilize an acquisitive style of self-presentation than were the shy subjects, while the shy subjects were more likely to utilize a protective style than were the non-shy subjects. It seems then, that the shy subjects largely utilized a protective self-presentation style in the relative absence of an acquisitive style. The non-shy subjects, on the other hand, appear to have mainly used an acquisitive style of self-presentation in the relative absence of a protective style.

Arkin (1981) postulated that although the protective and acquisitive self-presenters may behave similarly in a particular social situation, they are guided by different motives, and their attendant affective reactions can therefore be expected to be different. Acquisitive self-presentation is a positive portrayal of the self motivated by a desire to enhance favoured treatment in future circumstances by garnering approval. Protective self-presentation might best be conceptualized as a conservatism motivated by an attempt to avoid disapproval. Implicit in this, is that individuals who rely on each style should exhibit distinctive patterns of behavior and affect that are consistent with their motives.

In the present study, the non-shy subjects indicated they utilized an acquisitive style of self-presentation during the interactions. Other aspects of the study showed that they spoke for a relatively longer period of time and reciprocated the confederate's intimacy level in both the high and low intimacy conditions. They were more positive, and expected others to be more
positive, about both their interpersonal image and comfort. The confederates not only felt more comfortable with the non-shy subjects, they were also more positive about their interpersonal image and comfort. The non-shy subjects also reported relatively low levels of physiological arousal. This pattern of results seems quite consistent with Arkin's view of the socially competent and confident acquisitive self-presenter attempting to enhance favoured treatment in future circumstances.

The shy subjects indicated they utilized a largely protective style of self-presentation during the interaction. They also spoke for a relatively shorter duration and exhibited non-reciprocal disclosure, as compared to the non-shy subjects, in response to both the highly intimate and non-intimate confederates. Especially important was that, as a rule, their disclosures tended to maintain a characteristically middle level of intimacy. They reported higher levels of physiological arousal and were more negative, and expected others to be more negative, about both their interpersonal image and comfort. The confederates were indeed more negative about the shy subjects in terms of their interpersonal image and comfort, and were also themselves more uncomfortable when interacting with the shy subjects. Here as well, we see that this pattern of results is largely consistent with Arkin's conceptualization of the conservative, socially hesitant, protective self-presenter attempting to avoid disapproval.

The question remains to be answered as to why shy individuals have developed non-reciprocal patterns of self-disclosure. First, perhaps shy individuals simply do not perceive the situational cues that should influence their disclosure. The fact that there was no difference between the shy and non-shy subjects in their perception of how revealing and intimate their partners were, suggests that this is not the case. The shy subjects were just
as accurate as the non-shy subjects in their perception of how intimate and revealing their partners were.

A second, basically skills deficit explanation would be that shy individuals accurately perceive the situational cues, but lack the skills necessary to reciprocate the intimacy. This explanation also seems to fall somewhat short. It does not appear that shy individuals are unable to disclose, but rather that they are unable to reciprocate disclosure to the same extent as do non-shy individuals. Taken together, this indicates that shy individuals accurately perceive the intimacy difference and have the skills necessary for reciprocity, but for some reason still fail to display reciprocal patterns of disclosure. There appear to be three possible explanations as to why shy individuals fail to reciprocate disclosure to the same extent as do non-shy individuals.

It is possible that shy individuals may be unaware of the social norms prescribing when people should disclose, and when they should not; or they may be aware of them, but due to excessive self-preoccupation, or perhaps motivation, may still fail to observe them. Unfortunately, the design of the present study does not allow us to determine whether or not shy individuals are aware of the social norms prescribing appropriate disclosure. This potential explanation will have to be addressed in future studies. A second possibility is that shy individuals may be so self-preoccupied with their own anxiety and problems that they do not realize that they are exhibiting non-reciprocal disclosure. There seems to be a fair amount of merit to this explanation as the shy individuals in this study reported higher levels of physiological arousal as well as negative cognitions and affect.

The shy individual may have a history of such unsatisfactory interpersonal relationships that she develops a pattern of moderate disclosure, regardless
of the situation. She may feel that by utilizing such a pattern of disclosure, she will not be labelled cold and superficial as if she did not disclose at all. At the same time, she will not risk the ridicule of overdisclosure. This defensive, conservative strategy would appear to be very consistent with the finding that the shy subjects maintained a characteristically moderate level of disclosure and indicated that they utilized a largely protective style of self-presentation. Thus, it seems that shy individuals may enter social situations with very different motives than non-shy individuals. Further, these motivational differences may have major implications for the shy individual's interpersonal difficulties.

As directionality cannot be assumed, it may also be possible that non-reciprocal disclosure plays a causal role in shyness. Certainly, the social consequences (withdrawal, rejection, etc.) resulting from a failure to follow reciprocal patterns of disclosure would be devastating. It may well be that shyness and associated symptoms such as physiological arousal, negative cognitions, and motivational differences, are consequences, rather than causes or co-effects, of the individual's failure to follow reciprocal patterns of disclosure.

Unfortunately for the shy individual, this pattern of behavior may prevent her from forming meaningful relationships with others. If she overdiscloses at the wrong time, she will elicit rejection and withdrawal from others. On the other hand, she may be unable to form close attachments with others as a result of her failure to disclose when it is appropriate to do so as part of a developing relationship.

The generalizations made by the author must be qualified due to certain limitations of the present study. First, although the paradigm closely approximated a first-meeting situation, it was, nonetheless, still a somewhat
structured and artificial interaction. In addition, it represents only one of a potential range of social-evaluative interactions which individuals must enter. Thus, it remains to be shown that these results are consistent across a variety of interpersonal situations. A more stringent limitation on generalizability is the fact that all the subjects and both confederates were women. While there is no a priori reason to believe that a similar pattern of results would not be obtained for mixed or male dyads, once again this cannot be assumed.

Another facet, which is not so much a limitation of the present study as it is a suggestion for future studies, relates to the fact that only one personality disposition (shyness) was utilized as an independent variable. Due to the complexity of the questions addressed here, in retrospect the inclusion of several other personality dispositions as independent variables may have allowed for a more concise interpretation of the results. Self-consciousness (Fenigstein, Scheier, & Buss, 1975) and sociability (Cheek & Buss, 1981) are two which seem particularly relevant, and which should be considered in any future studies of this nature.

Consistent with the recommendations of Alden and Cappe (1986), and the results of this study, future research should continue to focus on other-directed process variables rather than on self-focused, discrete, molecular behaviors. The process variables appear to have much greater implications for the interpersonal impact and difficulties of the shy individual. Both future research and treatment programs should also be cognizant that behaviorally, the key issue may not be a deficit in the absolute sense so much as it may be an appropriateness, or normative deficit.

In summary, the purpose of this study was to examine possible behavioral, cognitive, motivational, and physiological differences between shy and non-shy
individuals involved in a social encounter. The results indicate that shy individuals do indeed exhibit behavioral differences. As compared to the non-shy subjects, the shy subjects spoke for shorter periods of time, overdisclosed to the low intimacy confederate, and under disclosed to the high intimacy one.

The shy subjects had a negative impression of their own interpersonal image, and a sense of interpersonal discomfort, both of which they felt would be perceived by their partner. Although both the confederates and observers did indeed perceive the shy subjects' interpersonal discomfort, only the confederates had a negative perception of their interpersonal image. This suggests that shyness, in and of itself, does not necessarily lead to global negative evaluation by others. Interestingly, the shy subjects not only did not negatively evaluate their partners, they actually conformed to the "liking effect" and were more positive about the highly intimate confederate than they were about the non-intimate one. The shy subjects also reported higher levels of physiological arousal in both intimacy conditions.

Taken together, the results partially support a position suggesting that the actual motivations, and purpose, of shy individuals in social situations may differ from the motivations and purpose of non-shy individuals. Specifically, the shy subjects used a protective style of self-presentation in the relative absence of an acquisitive style, while the non-shy subjects mainly used an acquisitive style of self-presentation in the relative absence of a protective style.
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Appendix 1.

INSTRUCTIONS

When people meet and begin to get to know each other they usually do it by talking about themselves. This involves both speaking and listening. In this study, we are looking at different conversational strategies that people use when they first meet someone. We would like you to get to know each other, to talk about yourself and listen as your partner talks about herself so that you become better acquainted.

We need to structure this somewhat, so what we would like you to do is to take turns talking and listening. I will give you a list of some topics for you to talk about. The person with the higher identification number will go first. That person will choose one of the topics and talk briefly about it. The other person's task is to listen. Then the other person will choose a topic and talk about it while the person who spoke first now becomes the listener. Because we must structure this somewhat, we must ask that you do not speak or ask questions when it is your turn to be the listener. As well, when you have said all you have to say on a topic, maybe let your partner know by saying something like "finished" or "your turn". You will continue to alternate back and forth until you have both chosen and spoken on 4 topics. As you choose each topic, please place a number beside it indicating whether it was the first one you picked, the second, etc.

As I said, we want you to get to know each other. Please be as honest and open as you can. Try to be as straightforward and truthful with the other person as you hope they will be with you.
Appendix 2.

1. What are your views on the way a husband and wife should live their marriage?
2. What are your usual ways of dealing with depression, anxiety and anger?
3. What are the actions you have most regretted doing in your life and why?
4. What are the ways in which you feel you are most maladjusted or immature?
5. What are your guiltiest secrets?
6. What are the habits and reactions of yours which bother you at present?
7. What are the sources of strain and dissatisfaction in your relationship with the opposite sex (or your marriage)?
8. What are your favorite forms of erotic play and sexual lovemaking?
9. What are your hobbies, how do you best like to spend your spare time?
10. What were the occasions in your life on which you were the happiest?
11. What are the aspects of your daily life that satisfy and bother you?
12. What characteristics of yourself give you cause for pride and satisfaction?
13. Who are the persons in your life whom you most resent; why?
14. Who are the people with whom you have been sexually intimate. What were the circumstances of your relationship with each?
15. What are the unhappiest moments in your life; why?
16. What are your preferences and dislikes in music?
17. What are your personal goals for the next 10 years or so?
18. What are the circumstances under which you become depressed and when your feelings are hurt?
19. What are your most common sexual fantasies?
Appendix 3.

Self-Rating

We are interested in how you would rate your behavior during this interaction. Please rate yourself on each of the items below.

For example, on item 1, if you saw yourself as being attractive during the discussion, you would circle a 1 or a 2. The more attractive you perceived yourself to be during the discussion, the lower the number you would circle. The same thing applies if you perceived yourself as unattractive. The more unattractive you perceived yourself to be, the higher the number you would circle.

Your ratings are completely confidential and are coded only by number, so try to be as frank and honest as you can. BE SURE THAT EVERY ITEM IS ANSWERED.

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<td>8. shy</td>
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Please answer the following question.

9. How intimate were you during the interaction? That is, how personal was the information about yourself that you gave to your partner. Was the information you disclosed extremely private and personal or was it fairly superficial?

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Appendix 4.

Partner Rating

We are interested in how you would rate your partner's behavior during this interaction. Please rate your partner on each of the items below.

For example, on item 1, if your partner strikes you as attractive, you would circle a 1 or a 2. The more attractive you believe her to be, the lower the number you would circle. The same thing applies if you regard her as unattractive. The more unattractive you believe her to be, the higher the number you would circle.

Your ratings are completely confidential. The other person will not see these ratings, so try to be as frank and honest as you can. BE SURE THAT EVERY ITEM IS ANSWERED.

1. attractive 1 2 3 4 5 6 7 unattractive
2. friendly 1 2 3 4 5 6 7 unfriendly
3. closed 1 2 3 4 5 6 7 open
4. anxious 1 2 3 4 5 6 7 calm
5. revealing 1 2 3 4 5 6 7 unrevealing
6. unlikeable 1 2 3 4 5 6 7 likeable
7. interesting 1 2 3 4 5 6 7 boring
8. shy 1 2 3 4 5 6 7 not shy

Please answer the following question.

9. How intimate was your partner? That is, how personal was the information she gave you. Was the information your partner disclosed of an extremely private and personal nature or was it fairly superficial?

   not very (average) extremely intimate
   1 2 3 4 5 6 7
Appendix 5.

Partner's Perception of You

Please rate how you believe your partner saw you during the discussion. That is, how do you think your partner would rate you on these items.

For example, on item 1, if you believe your partner saw you as being attractive, you would circle a 1 or a 2. The more attractive you believe your partner saw you as, the lower the number you would want to circle. The same thing applies to unattractive. If you believe that your partner saw you as unattractive, you would circle a high number. The more unattractive you believe she saw you as, the higher the number you would want to choose.

Your ratings are completely confidential and are coded only by number, so try to be as frank and honest as you can. BE SURE THAT EVERY ITEM IS ANSWERED.

If this isn't clear, please ask for further help.

1. attractive 1 2 3 4 5 6 7 unattractive
2. friendly 1 2 3 4 5 6 7 unfriendly
3. closed 1 2 3 4 5 6 7 open
4. anxious 1 2 3 4 5 6 7 calm
5. revealing 1 2 3 4 5 6 7 unrevealing
6. unlikeable 1 2 3 4 5 6 7 likeable
7. interesting 1 2 3 4 5 6 7 boring
8. shy 1 2 3 4 5 6 7 not shy

Please answer the following questions.

9. Do you believe your partner saw you as being intimate during the discussion. That is, did your partner perceive you to be disclosing extremely private and personal information or fairly superficial information?

not very (average) 1 2 3 4 5 6 7 extremely intimate

intimate
Appendix 6.

INSTRUCTIONS

These items deal with certain bodily sensations you may or may not have been experiencing during the conversation you just had with your partner. Remember when completing these questions to answer according to how you felt during the conversation, NOT according to how you now feel.

Read the following items and indicate to what extent you were experiencing each of the bodily sensations by circling the appropriate number.

For example, on item 1, if you felt no pressure in your chest during the conversation you would circle a 1. If you felt a fair amount of pressure, you might circle a 4 or 5. If you felt an extreme amount of pressure, you would circle a 7.

PLEASE BE SURE THAT EVERY ITEM IS ANSWERED.

Pressure in chest:
not at all  1  2  3  4  5  6  7  extreme

Heart beating faster:
not at all  1  2  3  4  5  6  7  extreme

Feeling short of breath:
not at all  1  2  3  4  5  6  7  extreme

Dizziness:
not at all  1  2  3  4  5  6  7  extreme

Butterflies or knot in stomach:
not at all  1  2  3  4  5  6  7  extreme

Lump in throat:
not at all  1  2  3  4  5  6  7  extreme

Sweating:
not at all  1  2  3  4  5  6  7  extreme

Dry throat:
not at all  1  2  3  4  5  6  7  extreme
Appendix 7.

To what extent does each of the following statements accurately describe your feelings and reactions during the conversation?

1. Once I knew what the situation called for, it was easy for me to regulate my behaviour.

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2. I tried to pay attention to the reactions of my partner to avoid being inappropriate.

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3. I was able to control the way I came across to my partner so that I gave the impression I wanted to give.

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4. I was careful about what I said because I was afraid that I might say or do something wrong.

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5. If I felt that I wasn't giving the impression I wanted to give, I feel I could have easily changed it.

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6. I talked about things I thought my partner wanted me to talk about.

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7. I had no difficulty making a good impression during the conversation because I felt it was to my advantage to do so.

8. I talked about the same things my partner did because I didn't want to appear foolish.

9. I enjoyed talking about myself in this situation because I felt confident that my partner was interested in what I was saying.

10. Because I was uncertain about what to do in this situation, I looked to my partner for cues.

11. Regardless of what my partner did, I felt that I could control the situation.

12. I watched my partner's reactions because I was afraid she might find fault with me.

13. I talked about things I wanted to talk about, regardless of what my partner did.
14. During the conversation, I tried to behave in such a way that I wouldn't draw attention to myself.

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15. I didn't talk about the topics I wanted to because I was afraid my partner would disapprove of them.

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Appendix 8.

CONFEDERATE RATINGS OF SUBJECTS

How intimate were the subjects' disclosures?

First Disclosure
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Second Disclosure
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Third Disclosure
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Fourth Disclosure
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Rate the subjects in terms of the following behavioral items.

1. attractive  1  2  3  4  5  6  7  unattractive
2. friendly  1  2  3  4  5  6  7  unfriendly
3. closed  1  2  3  4  5  6  7  open
4. anxious  1  2  3  4  5  6  7  calm
5. revealing  1  2  3  4  5  6  7  unrevealing
6. unlikeable  1  2  3  4  5  6  7  likeable
7. interesting  1  2  3  4  5  6  7  boring
8. shy  1  2  3  4  5  6  7  not shy

9. How intimate was the subject. That is, how personal were the topics she discussed. Were they highly personal and intimate or were they superficial.

very nonintimate  1  2  3  4  5  6  7  extremely intimate

Rate how you felt during the interaction with the subject.

10. comfortable  1  2  3  4  5  6  7  uncomfortable
11. inappropriate  1  2  3  4  5  6  7  appropriate
12. anxious  1  2  3  4  5  6  7  calm
Appendix 9.

OBSERVER RATINGS OF SUBJECTS

How intimate were the subjects' disclosures?

First Disclosure  
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Second Disclosure  
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Third Disclosure  
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Fourth Disclosure  
very nonintimate  1  2  3  4  5  6  7  extremely intimate

Rate the subjects in terms of the following behavioral items.

1. attractive  1  2  3  4  5  6  7  unattractive
2. friendly  1  2  3  4  5  6  7  unfriendly
3. closed  1  2  3  4  5  6  7  open
4. anxious  1  2  3  4  5  6  7  calm
5. revealing  1  2  3  4  5  6  7  unrevealing
6. unlikeable  1  2  3  4  5  6  7  likeable
7. interesting  1  2  3  4  5  6  7  boring
8. shy  1  2  3  4  5  6  7  not shy

9. How intimate was the subject. That is, how personal were the topics she discussed. Were they highly personal and intimate or were they superficial.

very nonintimate  1  2  3  4  5  6  7  extremely intimate
Appendix 10.

Intimacy Scale Anchors

1. **Very Nonintimate**
   The person talked about very superficial issues. She said nothing about herself that was of a personal, emotional, secret, or embarrassing nature. For instance, she discussed movies, music, what she is taking at university, what she does with her spare time, or superficial descriptions of herself and/or family.

3. **Somewhat Nonintimate**
   The person talked about somewhat more personal issues, but not at an intimate level. Generally, she said very little about herself that was of a personal, emotional, secret, or embarrassing nature. For instance, she discussed career and familial goals, what her boyfriend is like, minor conflicts with her parents, or minor disagreements with her siblings.

5. **Somewhat Intimate**
   The person talked about some fairly intimate issues, but tended to do so in a descriptive rather than an emotional or personal manner. She said things about herself that were quite personal, emotional, secret, or embarrassing, but perhaps not consistently so, or perhaps in a fashion that made you feel she was holding something back. For instance, she described her parents divorce, family problems, or failing at school without actually revealing her personal feelings and emotions.

7. **Very Intimate**
   The person talked about some very intimate issues. She said things about herself that were of an extremely personal, emotional, secret, or embarrassing nature. For instance, she discussed relationship problems, serious conflicts with her parents, feelings of guilt or inadequacy, death of a family member, or aspects of her parents' divorce that bother her.
Topic #9: What are your hobbies; how do you best like to spend your time?

Well, there are a lot of things I like to do, but to tell you the truth, now that I've started university I don't have quite as much spare time as I used to.

Let's see ... I don't exercise regularly, ... as far as working out or running, but I do like sports. In the winter I like to ski. I like baseball and play in a co-ed league. It's more of a "fun" league than a real competitive one, which is nice. I like to swim and I love the sun and the beach. Whenever it's nice in the summer, I try to spend as much time as I can outside.

I like spending time with my friends, maybe going to a movie, or a club, or a party. The clubs are nice because you can dance, and I love dancing. But parties are nice too because it's easier to talk to people and get to know them.

I enjoy relaxing at home sometimes as well. I like to read, fiction usually. I guess my favorite author would be Stephen King. I'm not that big on watching T.V., but I usually try to watch the Cosby Show and L.A. Law.
Appendix 12.

Non-Intimate: Second Disclosure

Topic #16: What are your likes and dislikes in music?

Read topic.

I guess what I like to listen to really depends on the mood I'm in. I really like INXS a lot, especially their older stuff. And U-2 .... their concert last year was pretty good. George Michael and Bon Jove aren't bad either. Oh, I also like Tracey Chapman, she's really got something to say.

I also really like some of the older music from the 60's. I guess some of my favourites would be the Rolling Stones, the Doors, Led Zeppelin, and Rod Stewart.

I enjoy classical music if I'm in the right kind of mood. I don't listen to it very often, but it can be really relaxing once in a while.

Let's see ... I don't really hate anything, but there are definitely some types of music that I'd rather not listen to. I don't like opera, ... (look down) ... I hate to say it (smile) but I find it boring. That might be because I don't really understand it. I listen to heavy metal once in a while, but I don't like the really hard core stuff.

What else ... oh, except for K.D. Lang I don't like country music, and I absolutely despise Tiffany. I also can't stand listening to top 40 disco type music on stations like LG73 either.

Well, I guess that's about it, ... your turn.
Appendix 13.

Non-Intimate: Third Disclosure

Topic #11: What are the aspects of your daily life that satisfy and bother you?

Read topic.

Well, one of the biggest aspects of my life right now is university. It's more interesting than high school. It's more challenging and you feel like you're learning something here. Mind you, Math 100 isn't that great, but the rest of the courses are okay. I enjoy my Lit course, ... and my Psych course is pretty good too. I'm making new friends here and the profs aren't that bad. One thing I like is that no one tells you what to do. You can study or eat when you want.

It would be nice to have a car though; it's such a pain having to take the bus. It's always packed and you have to stand while it crawls through traffic. It wouldn't be as bad if you could get a seat, at least you could read. And the bus driver is always sitting there in his shirt, with the heat cranked up, while everyone else just about dies. I have to get up earlier now too, which isn't very thrilling either.

It'd be great if I could get a place of my own near the university. Then I wouldn't have to get up so early or take the bus.

Well, ... I guess that's about it.
Appendix 14.

Non-Intimate: Fourth Disclosure

Topic #17: What are your personal goals for the next ten years or so?

Read topic.

I guess everyone's goal is to get their degree. After that, well ... I'm not sure. I'd sort of like to start working, ... but I'd also really like to do some travelling. I've always wanted to go to Europe and Australia. After I graduate it would be great to go to Europe for 6 months and then to Australia for another 6 months. There are so many interesting things to see and do in Europe. I've always wanted to see Paris, and it'd be great to spend some time in Switzerland in the Alps. And Australia, what can I say. There are beaches and sun, and more beaches and more sun. And I just love their accents. Don't ask me how I'm going to afford it, but it would be nice. I guess I'll probably wait and see what I feel like in my 4th year and then decide what to do.

I like Vancouver and would like to stay here, but if I was offered a good job somewhere else I'd definitely go. I could always move back later if I missed it.

Let's see, what else ... I'd like to get married some day, but not for a long time. It would be nice to finish school and do a little travelling first. I guess you could say my main priority is to do some travelling in the next 10 years.

Well, I guess that's about it.
Appendix 15.

High Intimacy: First Disclosure

Topic #7: What are the sources of strain and dissatisfaction in your relationship with the opposite sex?

Read topic.

I've been going out with the same guy for the past year now. We get along pretty well in a lot of ways; he's a university student too and we like a lot of the same things. But lately, I've started to wonder if I care about him as much as I thought I did.

He just doesn't seem very affectionate I guess. It really bothers me that he never gives me a kiss, or a hug, just on the spur of the moment. And in public, he never touches me, or lets me touch him, when there are other people around.

And even though we've been going out for a year, he just... well... doesn't seem very committed. I keep getting the feeling he fits me into his schedule, rather than fitting his schedule to us. Like, ... he'll cancel our plans if something comes up with the "guys". But he'll never cancel something with them if I really want to do something. I guess what it really is, is that he thinks in terms of "I", instead of "we".

Actually, I don't feel as close to him any more... I don't feel like I need him the way I used to. He's always saying we should maybe go out with other people. To tell you the truth, I think that might be a good idea. Considering how many good looking guys there are out there, I think I'm going to have a lot more fun than he thinks.
Appendix 16.

High Intimacy: Second Disclosure

Topic #5: What are your guiltiest secrets?

Read topic.

Let's see, my guiltiest secrets ... well I've always had this thing for whips and chains, [smile]. Only kidding, just checking to see if you're paying attention.

Actually it was something that happened last summer. I told my Mom that I was going camping to the Okanogan with my girlfriend for a couple of weeks, but I really went to Penticton with a bunch of my friends and our boyfriends. It was great! We'd spend all day on the beach suntanning and sleeping and then party all night. God, it was pretty wild. It was the first holiday I've even been on that I needed to rest up after.

I guess the reason I feel so guilty about it is because I lied to my Mom. We've always been open with each other and I've always been honest with her. It's almost like she's an older sister sometimes, as well as a mother. I've never lied to her before, at least not about something major. I'll probably tell her about it some day. I'm not sure when, but some day.

I guess that's not very "guilty", huh? The whips and chains thing probably would have been a lot more interesting [smile].
Appendix 17.

High Intimacy: Third Disclosure

Topic #10: What were the occasions in your life on which you were the happiest?

Read topic.

Actually, the happiest I've ever been has been the past month [pause; look down]. My mom and dad got back together again. [Look up] They've been separated for the past couple of years.

It's so nice to have a "family" again. Everybody's so happy; we're all walking around the house with smiles on our faces. My mom and dad seem really happy. They're always together; I think they really missed each other. They're always smiling and laughing, I haven't heard my mom laugh like that in ages. She's been like a different person since dad came back; she had been so "serious" and down all the time before. They're like a couple of kids, I keep catching them kissing and hugging all the time, sometimes in the strangest places. I'd never realized before the "romantic possibilities" a laundry room had.

It sounds stupid, but even our dog seems happier. It's hard to describe; it's just nice to be around the house ... to have a family again. I've started to spend more time at home. I had started going out a lot because it just ... I don't know ... didn't feel right at home. But now it's just great.
High Intimacy: Fourth Disclosure

Topic #3: What are the actions you have most regretted doing in your life and why?

Read topic.

When my dad left, ... after my dad left, I refused to talk to him or see him. He used to come over for supper once every couple of weeks, but I would always go out. When he phoned I wouldn't talk to him. My mom and sister said I should talk to him; they kept telling me that he loved me, but I just couldn't. I was so mad at him, I felt that everything was his fault. I couldn't understand why he wanted to hurt us, ... I convinced myself that he was having a great time going out with all sorts of exciting women. It got to the point where I felt that I really hated him.

Then when he moved back in, it was really awkward for a while. I was so happy that he was back, that our family was together again; but I still hated him. Finally, one night we had a real long talk. I started to realize that my mom was just as much to blame for the separation as he was. And I found out that he didn't have such a great time; he spent more time sitting at home crying than he did going out. And when I realized how much he loved me, and just how badly I'd hurt him, I felt pretty bad. We both started crying and I realized I really didn't hate him; I love him very, very much. We understand each other better, and we're closer now than we ever were, so I guess it wasn't all bad.
Appendix 19.

Confederate's Name: __________________________
Observer's Name: __________________________

Subject #: ________

NON-INTIMATE

#1: Hobbies, How You Spend Your Time

___ started university
___ not as much spare time
___ don't exercise regularly
___ like sports
___ ski
___ play baseball
___ fun league
___ spend time outside
___ out with friends
___ clubs; like dancing
___ parties; get to know people
___ read; fiction
___ Stephen King
___ not big on T.V.
___ watch Cosby Show and L.A. Law

#2: Likes & Dislikes in Music

___ depends on mood I'm in
___ INXS
___ U-2, concert was incredible
___ George Michael, Bon Jove
___ older music from 60's
___ Stones, Doors, Zeppelin, etc.
___ classical music occasionally
___ types I don't like
___ opera: boring
___ don't understand opera
___ heavy metal once in a while
___ don't like country
___ despise Tiffany
___ don't like Top 40 disco type
#3: Daily Life

- more interesting
- more challenging, feel like you learn something
- don't like Math 100
- like Lit and Psych
- making new friends
- no one tells you what to do
- study or eat when you want
- nice to have car
- bus is a pain
- always packed
- nice to get seat
- bus driver, shirt, heat cranked up
- have to get up earlier
- great to get place near university

#4: Personal Goals

- get degree
- start working
- like to travel
- Europe for 6 months; Australia for 6 months
- interesting things in Europe
- Paris
- Switzerland and Alps
- beaches and sun, more beaches and more sun
- love their accents
- how to afford it
- decide in 4th year
- like to stay in Vancouver, but would move
- could always move back
- get married some day
- main priority is some travelling
Appendix 20.

Confederate's Name: ______________________
Observer's Name: ______________________
Subject #: __________

HIGH INTIMACY

#1: Problems With Boyfriend

___ going out for past year
___ things in common
___ wondering if I care as much
___ doesn't seem affectionate
___ kiss or hug on spur of moment
___ no touching in public
___ doesn't seem committed
___ cancelling plans
___ thinks I, not we
___ not as close
___ go out with other people
___ good looking guys

#2: Guiltiest Secret

___ whips and chains
___ happened last summer
___ told mom about trip with girlfriend
___ went with boyfriends
___ suntanning and sleeping on beach
___ partying all night
___ had to rest up after
___ guilty because I lied to mom
___ never lied about something major
___ like older sister as well as mom
___ tell her someday
___ whips & chains better
#3: Happiest Occasion

past month
mom and dad back together after 2 years
nice to have family again
everybody happy and smiling
think they missed each other
always together
mom had been so serious
mom like different person now
like a couple of kids
laundry room (romantic possibilities)
even dog happier
spending more time at home

#4: Actions You Have Most Regretted

refused to see dad
go out when he came over
refused to talk to him on phone
mom & sister said "he loves you"
mad; felt everything was his fault
great time; going out with exciting women
felt I hated him
awkward when he moved back
long talk one night
mom was as much to blame
he didn't have great time; crying
how much I loved him; how much I'd hurt him
both started crying; really love him
positive aspects