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**Responses to Depressed Persons**

**Running Head: RESPONSES TO DEPRESSED PERSONS**

**The Effects of Sex, Mood and Sex-role**

**Beliefs on Interpersonal Responses to Depressed Persons**

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**Submitted in partial fulfilment of degree of Master of Arts, Clinical Psychology**

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Table of Contents

Introduction.....	1
Sex Differences in Depression.....	1
Interpersonal Responses to Depressed Individuals.....	7
The Present Study.....	12
Methodology.....	12
Screening.....	12
Participants.....	12
Materials.....	12
Procedure.....	14
The Main Study.....	15
Participants.....	15
Materials.....	15
Mood manipulation information sheet.....	16
Videotapes.....	16
Measures.....	19
Visual analogue mood scales.....	19
Desire for Future Interaction Scale.....	21
Femininity-masculinity scale.....	22
Post-experimental questionnaire.....	23
Procedure.....	23
Results.....	24
Sample Description.....	24
Assignment of Participants to the Traditional versus Egalitarian Condition.....	25
Overview of the Analyses.....	25
Pre-analyses Issues.....	28
Conditioning the Data.....	28
Checking Assumptions of MANOVA.....	28
Main Analyses.....	30
Perception of Femininity and Masculinity of Target: Femininity - Masculinity Scale.....	30
Mood Induction: Change in Visual Analogue Mood Scales (VAMS) from Pre- to Post- Exposure to the Videotape... Negative moods (anxiety, sadness, hostility, impatience).....	32
Positive moods (relaxed, friendliness, happiness).....	34
Rejection of Target: Desire For Future Interaction (DFI) Scale.....	35

## Responses to Depressed Persons

Discussion.....	37
Perception of Femininity and Masculinity.....	37
Mood Induction.....	40
Rejection of Target.....	41
Summary of Findings.....	43
Implications of the Results.....	44
Strengths and Limitations of the Present Study.....	45
Directions for Future Research.....	48
References.....	50

Tables

1.	Possible Combinations of Targets and Partners on Videotape....	60
2.	Summary ANOVA Table as a Function of Target Mood and Target Sex on Depression Check Questionnaire (DCQ) Summary Score.....	62
3.	Cell Size.....	64
4.	Within-cell Means (and Standard Deviations) for Participant Sex-Role Egalitarianism Scale (SRES) Score.....	66
5.	Summary ANOVA Table as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on SRES Scores.....	68
6.	Correlation Between the Femininity and Masculinity Summary Scores.....	70
7.	Correlations Among the Negative Visual Analogue Mood Scale (VAMS) Difference Scores.....	72
8.	Correlations Among the Positive Visual Analogue Mood Scale (VAMS) Difference Scores.....	74
9.	Summary Table for MANOVA as a Function of Target Sex, Participant Sex, Target Mood and Participant Sex-Role Beliefs on the Femininity and Masculinity Summary Scores.....	76
10.	Within-cell means (and Standard Deviations) for the Femininity and Masculinity Summary Scores.....	78
11.	Standardized Discriminant Function Coefficient and Structure Loadings for Significant Participant Sex Effect on the Femininity-Masculinity Scale.....	80
12.	Standardized Discriminant Function Coefficient and Structure Loadings for Significant Target Sex by Target Mood Interaction Effect on the Femininity-Masculinity Scale.....	82
13.	Summary Table for MANOVA as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores.....	84
14.	Summary Table for MANOVA as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on the Positive Visual Analogue Mood Scale (VAMS) Difference Scores.....	86
15.	Within-cell means (and Standard Deviations) for the Negative Visual Analogue Mood Scale (VAMS) Difference Scores.....	88
16.	Within-cell means (and Standard Deviations) for the Positive Visual Analogue Mood Scale (VAMS) Difference Scores.....	90
17.	Standardized Discriminant Function Coefficient and Structure Loadings for Significant Target Mood Effect on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores.....	92



## Responses to Depressed Persons

18.	Standardized Discriminant Function Coefficient and Structure Loadings for Significant Interaction Effect between Target Sex and Participant Sex-Role Beliefs on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores.....	94
19.	Standardized Discriminant Function Coefficient and Structure Loadings for Significant Target Mood Effect on the Positive Visual Analogue Mood Scale (VAMS) Difference Scores.....	96
20.	Summary ANOVA Table as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on the Desire For Future Interaction (DFI) Summary Score.....	98
21.	Within-cell Means (and Standard Deviations) for the Desire For Future Interaction (DFI) Summary Score.....	100

Figure

1. Interaction effect of participant sex by target mood on participant rejection of target on the Desire for Future Interaction (DFI) Scale..... 102

## Responses to Depressed Persons

### Appendices

A.	Personal Belief Questionnaire (Sex-Role Egalitarianism Scale)..	104
B.	Identification Sheet.....	108
C.	Reasons for Screening.....	110
D.	Description of the Study on Person Perception.....	112
E.	Informed Consent Form.....	114
F.	Information Sheet (Depressed Male Target).....	116
G.	Information Sheet (Depressed Female Target).....	118
H.	Information Sheet (Nondepressed Male Target).....	120
I.	Information Sheet (Nondepressed Female Target).....	122
J.	Depression Check Questionnaire.....	124
K.	Questionnaire A (Visual Analogue Mood Scales - before viewing videotape).....	127
L.	Questionnaire B (Visual Analogue Mood Scales - after viewing videotape).....	130
M.	Questionnaire C (Desire For Future Interaction Questionnaire).....	133
N.	Questionnaire D (Femininity-Masculinity Scale).....	136
O.	Questionnaire E (Post-experimental questionnaire).....	139
P.	Debriefing.....	149

## Responses to Depressed Persons

### Abstract

This study examined interpersonal reactions to depressed individuals as a function of the sex of a depressed person, and the sex and sex-role beliefs of the respondent. Egalitarian and traditional participants of both sexes viewed videotapes of an interaction between a clinically depressed individual and a partner. All possible combinations of sex pairings between the depressed individual and the partner were used. Participants viewed the videotapes which contained a partner who was of the same sex as them. Participants' change in moods, interpersonal reaction and ratings of masculinity/femininity of the depressed person were assessed. Results indicated that exposure to depressed individuals was associated with increased negative moods (sadness, hostility and impatience) and decreased positive moods (happiness, friendliness and relaxation). Depressed individuals were also seen as more feminine and less masculine than their nondepressed counterparts. Additionally, females, but not males, rejected depressed people more than nondepressed people. Traditional individuals rejected depressed males more than nondepressed males. Egalitarian participants rejected depressed females more than nondepressed females. Overall, the results support previous works that depression is seen as feminine (Hammen & Peters, 1978; Landrine, 1988; Tan & Maxton, 1993) and that it induces negative moods in others (e.g., Boswell & Murray, 1981; Gotlib & Beatty, 1985; Hammen & Peters, 1978; Strack & Coyne, 1983; Siegal & Alloy, 1990; Tan & Maxton, 1993). Interpersonal rejection seems to be affected jointly by the sex of the depressed person

**Responses to Depressed Persons**

**and of the respondent and the respondent's sex-role beliefs.**

## Introduction

### Sex Differences in Depression

Sex differences in the prevalence rates of depression have been well documented in the literature. Women outnumber men in the disorder by a ratio of approximately 2:1 in investigations of clinically treated cases and in community based studies conducted across different cultures (Amenson & Lewinsohn, 1981; Logan & Kaschak, 1979; Nolen-Hoeksema, 1987). Theorists have put forth various explanations, which have been reviewed extensively by Nolen-Hoeksema (1987), to account for the sex difference and are generally divided into two camps. The first believes that the sex difference is real while the second asserts that it is an artifactual finding.

Proponents of the first camp come from a variety of perspectives which include the biological, psychoanalytical and psychosocial. Reviews of research from the biological perspective on the sex difference in depression suggest several hypotheses (Nolen-Hoeksema, 1987, 1990). Some theorists propose that women predominate in depression because the biological make-up of women increases their susceptibility to depression due to periods of significant hormonal fluctuations, such as the premenstrual period, the postpartum period, pregnancy and menopause (Amenson & Lewinsohn, 1981; Nolen-Hoeksema, 1987, 1990). Others postulate that women are more susceptible to depression than men because of a genetic predisposition to depression among women that implicates a gene on the X chromosome. Given that women have two X chromosomes, they may be at greater

risk for developing depression (Amenson & Lewinsohn, 1981; Nolen-Hoeksema, 1987, 1990). According to theorists from a psychoanalytic perspective, women are at a greater risk of developing depression because of penis envy. Hence, women are only interested in relationships with men in order to get back a part of themselves they feel they have lost, namely, their penis (Mitchell, 1974). Consequently, when their relationships with men end, depression results as they must cope with another loss (Mitchell, 1974).

Numerous theories have been generated from the psychosocial perspective to account for the sex difference in depression. One position states that because women have been socialized to place great emphasis on and define themselves according to their relationships with men (Gilligan, 1982), they are more prone to depression when relationships break up because they lose their sense of self-worth and self-definition (Gilligan, 1982). Other sex-role theorists propose that because the social status of women in society is undervalued and secondary to the social status of men, women are at greater risk of developing depression (Gove & Tudor, 1973). This devaluation of the female sex role is associated with lesser female privileges (Beere, King, Beere, & King, 1984; Gove & Tudor, 1973), including fewer employment and educational opportunities, greater poverty (McGrath, Keita, Strickland, & Russo, 1992), and lack of gratification from the traditional feminine role in a society that values masculinity (Gove & Tudor, 1973; Rendely, Holmstrom, & Karp, 1984). Other sex-role theorists propose that depression may be the result of factors such as greater stress associated with the multiplicity of roles (e.g., employee, housewife, mother) adopted

by women in our society (McGrath et al., 1992) or the conflict women may experience between their internal beliefs regarding the female sex role (such as being independent and assertive) and society's prescribed female sex role (such as being dependent and submissive) (Chevron, Quinlan, & Blatt, 1978; Glazebrook, 1986).

In extensive reviews of the literature examining the proposed etiological theories for the predominance of women in depression, Nolen-Hoeksema (1987, 1990) concluded that both the hormonal and genetic biological explanations, as well as the various sex-role explanations, have not been well supported. Furthermore, the psychoanalytic explanation for the sex difference in depression was criticized for lack of experimental support (Nolen-Hoeksema, 1987, 1990).

The second camp dismisses the documented sex difference in depression and cites artifactual factors to explain the phenomenon. Specifically, sex differences in symptom expression and coping style and sex bias in the mental health system are invoked. Arguments have been made that the predominance of women in depression is the result of the differences in the way that men and women respond to their depression. Women are more likely to report crying episodes whereas men are more likely to report somatic complaints (Hammen & Padesky, 1977; Kleinke, Staneski & Mason, 1982; Oliver & Toner, 1990; Padesky & Hammen, 1981; Warren, 1983) which may result in a greater chance of women being diagnosed as depressed. Furthermore, men appear to recognize their depression less readily than women, and therefore may be less likely to report it (Kessler, Brown, & Broman, 1981). Even when they do acknowledge their distress, they are less likely to seek help, compared



to women who usually turn to friends, counsellors, or psychotherapists (Chino & Funabiki, 1984; Funabiki, Bologna, Pepping, & FitzGerald, 1980; Hammen & Padesky, 1977; Padesky & Hammen, 1981). Possibly, men avoid help-seeking because it is considered weak and unmasculine. This unwillingness of men to seek help could account for the under-representation of men in clinical settings (Hammen & Padesky, 1977). However, in reviewing the research, Nolen-Hoeksema (1987, 1990) concluded that support for the hypothesis that sex differences in help-seeking behaviour account for the under-representation of men among the depressed is inconsistent.

Research has also shown that men and women cope differently with their feelings of depression. Women tend to think more about their depression, while men typically engage in avoidance or denial behaviour (Chino & Funabiki, 1984; Conway, Giannopoulos, & Stiefenhofer, 1990; Funabiki et al., 1980; Morrow & Nolen-Hoeksema, 1990) by keeping busy in order to distract themselves from their depression (Chino & Funabiki, 1984; Conway et al., 1990; Funabiki et al., 1980). Nolen-Hoeksema (1987) refers to the female strategy of coping with depression as rumination. Ruminative responses to depression include isolating oneself and thinking about one's depressive symptoms such as sadness, apathy and fatigue and continuously talking to others about how depressed one feels (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1987, 1990). Perhaps because women ruminate and respond emotionally while men avoid or deny their depression through behavioral means, the former may be in a better position to recognize their depression and report

it (Warren, 1983). Alternatively, rumination may perpetuate or increase depression, thereby contributing to the under-representation of men in epidemiological studies of depression (Katz & Bertelson, 1993; Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1987).

Another factor that has been proposed to account for the sex differences in the prevalence rates of depression is sex bias in the mental health system itself. The oft-cited classic study by Broverman, Broverman, Clarkson, Rosenkrantz and Vogel (1970) demonstrated a sex bias in clinicians' definition of mental health, in which the male sex role characteristics (e.g., confident, ambitious and independent) were held as a standard for mental health. However, Widiger and Settle (1987) concluded that the Broverman et al's study was flawed and that the results could be accounted for by an imbalance of male-valued and female-valued items.

Some claim that characteristics of the traditional female role (e.g., tearfulness, emotionality and low self-esteem) overlap greatly with the symptomatology of depression (Franks, 1986). Because of this, depression is often viewed as feminine (Franks, 1986; Hammen & Peters, 1978; Tinsley, Sullivan-Guest, & McGuire, 1984; Warren, 1983). Research supports this position by demonstrating that depressed people are generally rated as more feminine than nondepressed controls (Hammen & Peters, 1978; Landrine, 1988; Tan & Maxton, 1993).

Due to its feminine sex-typing, depression may be incongruent with the traditional male sex role. According to Dave and Brannon (as cited in Warren, 1983, p. 150-151), the four main characteristics of the traditional male sex role include the

" 1) avoidance of all things feminine, 2) achievement, competence, and success, 3) toughness, confidence, and self-reliance, and 4) the aura of aggression, violence, and daring". Therefore, depressed men may be less likely to display or acknowledge depression because the disorder is equated with weakness, self-pity, powerlessness, lack of control, and femininity (Warren, 1983), the last characteristic in men being associated with homosexuality (McCreary, 1994). Research also shows an inverse relationship between masculinity and the expression of depressive symptoms (Feather, 1985). While this may be interpreted to mean that masculinity protects one from depression, it may also mean that masculine individuals do not express depressive symptomatology. In contrast, women have not been socialized to see depression as a weakness as it is very much in keeping with their traditional sex role (Warren, 1983) and therefore, they may be more willing to display symptoms of depression. The prohibition of men to display depression because of the nature of their sex role may account for the greater female to male ratio in depression.

Many of the explanations researchers have proposed to account for the predominance of women among the depressed have not been found to be adequate explanations in themselves for why women are at twice the risk of developing depression in our society (Nolen-Hoeksema, 1987). The association of depression with femininity has been reported in several studies. Its implications within the context of interpersonal responses to depression has not been pursued and may present an interesting line of inquiry to determine whether it leads to differential responses to depressed men and women. This, in turn, may have implications for sex differences

in depression prevalence rates.

### Interpersonal Responses to Depressed Individuals

A substantial body of research confirms that depressed individuals are interpersonally rejected more than others (for a review, see Marcus & Nardone, 1992). The issue of interpersonal responses to depression was initiated by Coyne's (1976a) interpersonal model of depression which describes how negative responses to depressed individuals serves to maintain or exacerbate depression. Coyne predicted that a depressed individual would induce negative moods (e.g., sadness, hostility and depression) in others and would consequently be rejected by them. He asserted that a depressed individual displays depressive behaviours to test the relationship s/he has with others which are initially met with sympathy and positive verbal assurance. However, the depressed person doubts the sincerity of these positive responses and continues to display depressive behaviours which are met by more positive reassurances. After repeated and unsuccessful attempts to assure the depressed person, the partner, although continuing to behave positively towards the depressed person, may begin to feel hostile. The depressed person senses the incongruity between the affective and verbal behaviour of the partner, but continues to test the relationship through depressive behaviours because s/he feels insecure. The interactional dynamics between the depressed person and the partner may maintain or exacerbate the depression, leading to hospitalization of the former.

Coyne's (1976b) initial empirical test of his model indicated that depressed individuals induced greater negative moods (sadness, hostility, and anxiety) in others

and were socially rejected more. Since Coyne's original corroboration of his model, several more works by others have been produced.

Several of these studies have used a stranger interaction paradigm where the depressed person is not previously known to the partner or subject. The depressed person, typically referred to as the "target", may be an actual depressed person or a confederate enacting a depressed role. The target may be presented to the partner or subject in various ways. Some studies have used face-to-face interactions (Blumberg & Hokanson, 1983; Gotlib & Robinson, 1982; Herr, Perkins, & Whitley, 1990; Howes & Hokanson, 1979; McNeil, Arkowitz, & Pritchard, 1987; Stephens, Hokanson, & Welker, 1987; Strack & Coyne, 1983; Tan & Stoppard, 1994) or telephone interactions (Hammen & Peters, 1978; King & Hellar, 1984) lasting between fifteen and twenty minutes, while others present the target in a videotape (Elliot, Yoder, & Umlauf, 1990), audiotape (Boswell & Murray, 1981), or written transcript (Gotlib & Beatty, 1985; Hammen & Peters, 1977; Tan & Maxton, 1993). Others have examined interactions between roommates (Burchill & Stiles, 1988; Howes, Hokanson, & Lowenstein, 1985; Joiner, Alfano, & Metalsky, 1992, 1993; Siegal & Alloy, 1990) and marital relationships (Sacco, Dumont, & Dow, 1993). Studies that use strangers, by definition, look at short-term interactions (Gotlib & Robinson, 1982; Hammen & Peters, 1978; King & Hellar, 1984; McNeil et al., 1987; Strack & Coyne, 1983; Tan & Stoppard, 1994, 1996). Those that examine roommates and spouses may follow these individuals over a period of time (Burchill & Stiles, 1988; Joiner et al., 1993; Sacco et al., 1993; Siegal & Alloy, 1990). Some

argue against the use of the stranger paradigm and advocate the use of familiar others in research on interpersonal consequences of depression (Doerfler & Chaplin, 1985). The justification is that the latter paradigm provides a more valid test as depressed persons may be able to mask their depression with strangers (Coyne, Kahn, & Gotlib, in press, as cited in Coyne, 1985). Nevertheless, it is still acknowledged that the use of strangers provides results that are unconfounded by a history of negative interactions (Coyne, 1985). As well, any effects found with strangers serves as powerful evidence for the effects of depression on interpersonal responses (Coyne 1985).

A review of the literature investigating responses to depressed individuals reveals that several of these studies have found support for Coyne's mood induction hypothesis (Boswell & Murray, 1981; Elliot et al. 1990; Gotlib & Beatty, 1985; Hammen & Peters, 1978; Howes et al., 1985; Joiner et al, 1992; Strack & Coyne, 1983; Sacco et al, 1993; Siegel & Alloy, 1990; Tan & Maxton, 1993), while others have not (Burchill & Stiles, 1988; Gotlib & Robinson, 1982; King & Hellar, 1984; McNeil et al., 1987; Tan & Stoppard, 1994). Coyne's rejection hypothesis has also received inconsistent support. Numerous researchers have confirmed the hypothesis (Boswell & Murray, 1981; Burchill & Stiles, 1988; Elliot et al., 1990; Gotlib & Beatty, 1985; Hammen & Peters, 1977; Hammen & Peters, 1978; Herr et al., 1990; Howes & Hokanson, 1979; Siegel & Alloy, 1990; Stephens et al., 1987; Strack & Coyne, 1983; Tan & Maxton, 1993; Tan & Stoppard, 1994), while others have failed to do so (Gotlib & Robinson, 1982; Joiner et al, 1992; King & Hellar, 1984; McNeil

et al, 1987). Segrin and Dillard (1992) performed a meta-analysis on the studies examining Coyne's rejection and mood induction hypotheses and reported that rejection is a more robust phenomenon than negative mood induction. As well, Marcus and Nardone (1992) found that support for Coyne's model strengthens as the intimacy of the relationship between depressed people and their interactional partners increases.

Coyne's model primarily serves to describe the interpersonal processes involved in responses to depressed individuals and does not address the characteristics of the individuals involved that may moderate the result of the interactions. Given that previous works have mostly focussed on the interpersonal sequelae of depression, it is necessary to obtain a broader perspective. To this end, research efforts could turn to examining the different characteristics of the depressed person and the others involved that may predict negative interpersonal reactions. Given the link between depression and femininity and sex roles as discussed in the previous section, the sex and sex-role beliefs of the individuals involved in the depressive interactions are factors that merit consideration.

To date, very little research attention has been paid to the effects of sex on interpersonal responses to depression. One of the earliest works that was carried out by Hammen and Peters (1977) found that depressed males were rejected more than depressed females. Other works reported rejection of depressed females (Frank, Elliot, Wonderlich, Corcoran, Umlauf, & Ashkanazi, 1987), rejection of depressed individuals by males (Siegal & Alloy, 1990; Tan & Maxton, 1993; Tan & Stoppard,

1994), rejection of depressed males by females (Tan & Maxton, 1993) and rejection with an opposite-sex depressed individual (Hammen & Peters, 1978). Overall, the handful of investigations into the effects of sex have produced conflicting findings.

Sex is an important characteristic to consider in predictions of interpersonal consequences of depression because of sex-related differences in communication style. Women display more positive social behaviour in interactions than men (Carli, 1989; Flaherty & Richman, 1989; Mabry, 1985). They also show more solidarity and more positive affect towards their interactional partners, while men tend to display more disagreements and engage in the giving of opinions and advice (Carli, 1989). These sex differences in communication style between men and women are particularly evident in same-sex dyads (Carli, 1989). Female partners appear to lessen the self-reported anxiety level of the depressed individual in interactions (Tan & Stoppard, 1996) who displays depressive behaviours to a lesser degree (Tan & Stoppard, 1994) in response to female partners who may be more supportive and accepting. Rejection was found to be least in depressed female - female partner dyads (Tan & Stoppard, 1994). Thus far, no study has looked at sex-role beliefs as a factor in interpersonal responses to depression. Given the link between depression and femininity and sex roles, as discussed in the previous section, as well as the confound between sex and sex-role beliefs in which males tend to be more traditional than females (Beere et al, 1984; Steinberg, Leichner, & Harper, 1987), sex-role beliefs need to be considered jointly with sex to provide a clearer understanding on the effects of sex on interpersonal responses to depression.



### The Present Study

This present study investigated the effects of sex of the depressed individual ("target") and the respondent (i.e., the individual reacting to the target) and respondent sex-role beliefs on responses to depression. The design of the study was 2 (Respondent Sex) x 2 (Target Sex) x 2 (Target Mood: depressed/nondepressed) x 2 (Respondent Sex-role Beliefs: traditional vs. egalitarian). Respondents viewed a videotape featuring a spontaneous 15-minute interaction between a depressed or nondepressed target and a nondepressed partner. The partner, who was not visible on the videotape, was of the same sex as the respondent. The respondent's following reactions to the target were assessed: social rejection of the target, the inducement of negative mood by the target, and the respondent's perception of the target's masculinity and femininity. Hypotheses of the study were as follows:

1. Depressed targets will be perceived as more feminine than nondepressed targets.
2. Depressed targets will induce greater negative mood than nondepressed targets.
3. Depressed targets will be rejected more than nondepressed targets by male respondents.
4. Depressed males will be rejected more by traditional respondents than by egalitarian respondents.

### Methodology

#### I. Screening

#### Participants

A screening with 642 undergraduate volunteers was conducted to identify egalitarian and traditional participants for the main study.

### Materials

The Sex-Role Egalitarianism Scale (SRES; King & King, 1993) was used to identify traditional and egalitarian subjects (Appendix A). Sex-role egalitarianism is a bidirectional concept encompassing judgments of both women and men in their sex-role behaviours. The questionnaire's content reflects seven strongly correlated aspects of an adult's life, marital roles, parental roles, employment roles, social-interpersonal-heterosexual roles, educational roles, family and/or work involvement, and other.

Form BB, one of the two short forms of the SRES, was used in the study. Form BB was found to be highly correlated with the two alternate full forms, Forms B and K, of the SRES on the same occasion ( $r=.95$ ,  $r=.89$ , respectively) (King & King, 1993). King and King (1993) also report a high correlation between Forms BB and B during a six-week interval ( $r=.75$ ). The SRES short form BB shows good internal consistency (.94). King and King (1993) reported a good test-retest reliability coefficient of .88 for the SRES short form BB with a time lapse of three to four weeks between testing periods. These coefficients indicate that scores on the SRES short form BB are consistent across testing periods. An equivalence coefficient of .87 was also reported by King and King (1993), indicating consistency of measurement across the two alternate short forms of the SRES. Convergent validity has been established for the full form of the SRES. Correlations between the full form SRES and other measures of sex-role egalitarianism have been found to range between the

.60s and .80s (King & King, 1993). The full form SRES also demonstrates discriminant validity. In examining correlations between SRES scores and scores on the Edwards' Social Desirability Scale, Beere et al. (1984) state that the resulting low values suggest that the SRES is not measuring a general tendency to respond in a socially desirable manner.

The SRES short form (BB) consists of 25 questions which measure the respondent's attitudes toward the equality of men and women. It requires the respondent to make a judgement regarding men and women engaging in nontraditional roles (King & King, 1993). The respondent must choose and circle an answer to each question on a 5-point Likert-type scale ranging from "Strongly Agree" to "Strongly Disagree". The range of possible scores is 25-125. Higher scores reflect greater egalitarianism while lower scores are associated with greater traditionalism. King and King (1993) have previously administered Form BB of the SRES to 467 individuals and found a mean score of 105.61, with a standard deviation of 13.42. For purposes of identifying egalitarian and traditional participants for the study, those who scored greater than 105 on the questionnaire were assigned to the egalitarian condition, and those who scored 105 or below were assigned to the traditional condition. An identification sheet stapled to the front of the questionnaire provided the necessary information to contact participants who met the criteria for traditional and egalitarian sex-role beliefs (Appendix B).

### Procedure

The researcher explained to the participants the reason for the screening

process (Appendix C). Participants were then asked to fill out an identification sheet and the SRES, which they were told examined people's beliefs about the differences between men and women. The students were then thanked for their time. Individuals who scored greater than 105 on the SRES were classified as the egalitarian group of participants. Those whose scored 105 or below were categorized as the traditional participants. An equal number of egalitarian and traditional individuals from each sex were invited to participate in the main study.

## II. The Main Study

### Participants

Participants were 241 Introductory Psychology students who were screened for their traditional or egalitarian sex-role beliefs in the screening phase of the study (60 traditional males, 57 traditional females, 64 egalitarian females, and 60 egalitarian males). In return for their participation, participants received one grade point towards their Introductory Psychology grade.

### Materials

Materials for this study included the following:

- a. an information sheet outlining the nature and procedure of the study (Appendix D)
- b. an Informed Consent Form (Appendix E)
- c. an information sheet on the target for mood manipulation (Appendices F, G, H and I -for more information, please see below)
- d. videotapes for target sex and target mood manipulation (for more information,

please see below).

Mood manipulation information sheet. Target mood was manipulated through the mood manipulation information sheet that was read by participants prior to their watching a videotape of the target. There were altogether four versions of the information sheet corresponding to the videotapes (Appendices F, G, H, and I for depressed male target, depressed female target, nondepressed male target, and nondepressed female target, respectively). Each sheet contained a checklist of 19 depressive symptoms ostensibly completed by the target prior to him/her being videotaped. The checklist was based on the Centre for Epidemiologic Studies Depression Scale (CES-D Scale, Radloff, 1977). In the depressed condition, most of the depressive symptoms were endorsed, while in the nondepressed condition, most of the depressive symptoms were denied.

Videotapes. Depressed and nondepressed targets of both sexes were presented in a conversation format through videotapes. Videotapes, rather than live interactions, were used to present the targets to preserve greater consistency in the stimulus (exposure to the targets) across conditions. A total of eight videotapes were made to reflect the eight conditions defined by the sex of the target, mood of the target, and sex of the partner. The targets and partners were undergraduate student volunteers who agreed to have their videotapes used in a program of research involving four studies, which included the present study. To ensure that their interactions on the videotapes were not influenced by their knowledge of the specific research questions of the studies, they were not privy to the hypotheses of the studies

prior to the videotaping. However, they were given sufficient information and the opportunity to ask questions prior to their videotape participation for them to make an informed consent. They were also informed that they had the right to ask further questions after the videotaping and to withdraw the use of their videotapes at anytime. They were given feedback on the results of the studies in which their videotapes had been used.

Clinical assessment of depressed and nondepressed targets and of nondepressed partners were carried out by a registered clinical psychologist using the Beck Depression Inventory (BDI, Beck, 1978) and the computerized version of the Quick Diagnostic Interview Schedule (QDIS-III-R, Marcus, Robins, & Bucholz, 1989). There is ample evidence to support the use of the BDI in the assessment of depression severity (see Beck, Steer, & Garbin, 1988). The QDIS-III-R was utilized to diagnose Major Depressive Episode (MDE) as defined by the diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders III-R (DSM-III-R, American Psychiatric Association, 1987). QDIS-III-R was used instead of the DIS structured interview for several reasons. First, it reduces error variance associated with administration (e.g., sex, tone of interviewer voice, speed of administration) (Blouin, Perez, & Blouin, 1988). Second, its kappa reliability for several diagnostic categories, including MDE, has been established to be within an acceptable range (Blouin et al., 1988). Third, its computerized administration is time- and labour-effective and user-friendly.

For the videotaping, depressed targets had to meet the cutoff score of 20

(moderately depressed) on the BDI and to have met the DSM-III-R criteria for MDE. All depressed targets were aware of their depression and identified themselves as such prior to their contacting the researchers about the research project. None of them were on medication, although some of them had had counselling before. Nondepressed targets and the partners who were also nondepressed, had a BDI score of less than seven. They also did not meet the diagnostic criteria for depression on the QDIS-III-R. All the depressed and nondepressed targets, and the partners, received a listing of counselling services available in the community for their information in the event that they or someone else they know required the services. None of the depressed targets wanted a referral for their depression. Table 1 presents the BDI scores of the targets and partners.

In the videotape, the targets were portrayed engaging in a dyadic conversation with either a male or female partner. Only the target was presented in the videotape as the partner was off-camera. The target and the partner were strangers to each other and asked to become acquainted with each other in a 15-minute conversation. Both were also blind to the mood of the other. Although their conversation was unstructured so as not to influence the interactional dynamics between the two interactants, both target and partner were asked not to reveal their last names or any other identifying information. The target was also instructed privately beforehand not to label him/herself as depressed. Both target and partner were, however, free to comment about their thoughts and opinions or describe their feelings about topics that may be discussed during the conversation. Some topics suggested to the interactants

to initiate the conversation included their experience with the university life, their hobby, and likes and dislikes. Generally, the conversations in all the eight videotapes developed revolved around these suggested topics.

A validity check was conducted to determine whether the manipulation of target mood through the videos was successful. Fifty-nine student volunteers (28 males and 31 females) viewed the eight videotapes and filled out the Depression Check Questionnaire (DCQ, Appendix J) (Tan & Stoppard, 1994) which measures depressive behaviours and interpersonal impact of the target. A Cronbach's alpha of .88 indicated high internal consistency for the measure.

A 2-way analysis of variance (ANOVA) was performed on the summary score of the DCQ (Table 2). Higher DCQ scores indicate greater depressive behaviours. Results revealed a significant effect of target mood. Depressed targets ( $M=48.60$ ) were perceived by participants as displaying significantly more depressive symptoms and providing a more negative interpersonal impact than nondepressed targets ( $M=36.72$ ). These results indicate that the manipulation of target mood was successful.

### Measures

Visual analogue mood scales. Visual Analogue Mood Scales (VAMS; Aitken, 1969) were utilized to assess mood induction. As VAMS have been shown to measure fluctuations in mood (van Kemmerade, Cohen-kettenis, Cohen, & Gooren, 1989), they were used to assess each participant's mood before (Appendix K) and after (Appendix L) exposure to the target to determine mood change. The moods



assessed included four negative moods (anxiety, hostility, sadness and impatience) and three positive moods (happiness, relaxation and friendliness). Each VAMS consisted of a 10 centimetre line. One end of the line represented the complete absence of the mood assessed and the other end represented the maximum amount of that mood. Negative and positive moods were assessed separately for two related reasons. First, negative mood induction may be reflected either as an increase in negative moods or a decrease in positive moods. Previous studies have focussed on the former (i.e., negative moods) but not the latter (i.e., positive moods). Second, the VAMS have a floor effect. For example, the lowest rating on a VAMS "sad" scale is "absence of sadness". This scale would not be able to detect negative mood induction in an individual who was happy to begin with, but became less happy but not sad, during the course of exposure to the target. On both the pre- and post-exposure VAMS "sad" scale, this particular individual would mark "0", giving the erroneous impression that no negative mood induction occurred.

There are many advantages to using visual analogue scales (VAS) to assess changes in mood over other mood scales. Their greatest advantage is that they are a sensitive measure because they allow the participant to record minimal changes in the construct that is being assessed (Davies, Burrows & Poynton, 1975; Gift, 1989; Little & McPhail, 1973; Zeally & Aitken, 1969). Further advantages include the brief nature of the scales, independence of the vocabulary level of the participant, and the simplicity and ease in utilization and scoring (Freyd, 1923; Gift, 1989).

VAS have been shown to exhibit good validity and reliability in assessing

mood in depressed patients (Zeally & Aitken, 1969) and in assessing pain (Revill, Robinson, Rosen, & Hogg, 1976). Good test-retest reliability has also been established. Revill et al. (1976) administered and re-administered VAS to participants twenty four hours later. The result was a significant reliability coefficient of .98. Luria (1975) established a significant mean test-retest reliability of .80. Luria (1975) established its concurrent validity at .63 while Davies et al. (1975) found it to range from .51 to .88. Discriminant validity of VAMS appears to be acceptable. Compared to patients with other psychiatric disorders, those with affective disorders rated themselves on VAMS as experiencing greater negative mood in general (Luria, 1975) or greater specific negative moods, such as sadness and tension (Monk, 1989). The literature demonstrates that VAS is a valid, reliable and sensitive measure of mood fluctuations (Little & McPhail, 1973; Luria, 1975; Monk, 1989; Zeally & Aitken, 1969).

Desire for Future Interaction Scale. The Desire For Future Interaction scale (DFI; Coyne, 1976b) was used in this study to assess participants' interpersonal rejection of the targets (Appendix M), which is defined as desire for future interaction in different situations of increasing intimacy. Internal consistency of the measure is high (.96 in Gotlib & Beatty, 1985; .89 in Tan & Stoppard, 1994).

The DFI consists of 12 questions that the participant must respond to on a 5-point scale ranging from "Definitely yes" to "Definitely no". However, for half of the questions, the scales are reversed in polarity to protect against participant response sets, such as responding yes to all questions or no to all questions. This was

considered when computing an overall summary rejection score. Possible scores range from 12 to 60. Higher scores reflect little or no desire for future interaction with the target, indicating greater rejection of the target. In contrast, lower scores reflect a desire for future interaction with the target, indicating less rejection of the target.

Femininity-masculinity scale. A scale assessing the degree to which the participant perceives the target as feminine or masculine was used (Appendix N). This scale consists of ten characteristics, five of which are stereotypically feminine and the remaining five are stereotypically masculine. This scale is based on Landrine's (1988) study in which she found that compared to nondepressed persons, depressed persons were rated lower on these five masculine and higher on these five feminine characteristics.

In the present study, participants indicated on a 7-point Likert scale the degree to which they believed each characteristic applied to the target they viewed on the videotape. The ends of the scale are anchored by "Agree Completely" and "Disagree Completely". Independent masculine and feminine scores were computed by totalling participants' responses on masculine and feminine items separately. Half of the items are reversed in polarity to protect against participant response sets and were considered when scoring. The range of possible scores for the feminine and masculine scales is 5 to 35. Low scores on the masculine scale indicate that the participant perceives the target as being high in masculinity, whereas high scores on the femininity scale indicate that the participant perceives the target as being high in

femininity.

Post-experimental questionnaire. A post-experimental questionnaire, which consists of 11 questions, was used in order to identify participants who were suspicious of the true nature and hypotheses of the study (Appendix O). Participants deemed suspicious by two independent judges were excluded from the data analyses.

### Procedure

When participants came into the lab, they were greeted by the experimenter. Participants were then given a page describing the nature and the procedure of the study that they could read along with the experimenter (Appendix D). They were told that their responses in the study would be anonymous and confidential. Informed consent was obtained from the participants by having them sign a consent form (Appendix E).

Participants were then asked to fill in the Visual Analogue Mood Scales (VAMS) to assess their mood before exposure to the target on the videotape (Appendix K). After that, they were given one of four mood manipulation information sheets to read, depending on what condition they had been assigned to (Appendices F, G, H and I). Then, they viewed a videotape of an interaction between either a depressed or nondepressed target and a nondepressed partner of their own sex. Therefore, male participants viewed a male or female target interacting with a male partner while female participants viewed a male or female target interacting with a female partner (see Table 1 for the eight possible combinations of targets and partners). After viewing the videotape, participants were given a booklet containing the remaining

dependent measures in this study. Participants filled in the Visual Analogue Mood Scales (VAMS) for a second time in order to assess any change to their moods (Appendix L), the Desire For Future Interaction Scale (Appendix M) and the femininity-masculinity scale (Appendix N). Finally, they were given a post-experimental questionnaire (Appendix O) to assess their suspiciousness regarding the nature and hypotheses of the study.

Participants were then debriefed about the true nature and the procedure of the study before they left the lab (Appendix P). They were asked not to talk about the study with anyone and were thanked for their participation. Participants who were interested in receiving a copy of the results of the study upon its completion provided their name and address on a mailing label.

## Results

### Sample Description

Out of the 642 undergraduate volunteers who participated in the screening, 263 participated in the main study. Out of 263, 22 were excluded from the data analyses for the following reasons: (i) three participants knew the target or the partner in the videotape (ii) seven participants were considered to be sufficiently suspicious of the nature and hypotheses of the study (iii) twelve participants were randomly deleted from the analyses to make the cell sizes relatively equal. Consequently, a total of 241 participants (120 males, 121 females) were retained for data analyses. The age of the sample ranged from 17 to 47 years ( $M=21.34$  years,  $SD=4.82$  years). Five participants did not provide their age. A breakdown of cell sizes is presented in

Table 3.

Assignment of Participants to the Traditional versus Egalitarian Condition

Sixty traditional males, 57 traditional females, 64 egalitarian females, and 60 egalitarian males participated in the study. Participants who scored 105 and below on the Sex Role Egalitarianism Scale (SRES) were categorized as traditional. Those who had an SRES score of greater than 105 were classified as egalitarian.

SRES scores in the egalitarian group ranged from 106 to 125 ( $M=116.52$ ,  $SD=5.64$ ). For those participants assigned to the traditional condition, SRES scores ranged from 66 to 105 ( $M=95.16$ ,  $SD=8.43$ ). Within-cell means and standard deviations for participant SRES scores are presented in Table 4. A full factorial analysis of variance (ANOVA) was performed on the SRES scores (Table 5). Results of the ANOVA revealed significant main effects for participant sex-role beliefs and for participant sex. As expected, the main effect of participant sex-role beliefs (traditional vs. egalitarian) indicates that egalitarian individuals scored significantly higher on the SRES ( $M=116.52$ ) than traditional individuals ( $M=95.16$ ), suggesting that participants who were assigned to the egalitarian category were more egalitarian than those assigned to the traditional category. The main effect of participant sex indicates that female participants ( $M=107.68$ ) were significantly more egalitarian than male participants ( $M=104.61$ ).

Overview of the Analyses

Three separate full factorial multivariate analysis of variances (MANOVAs) were performed on:

- i) the femininity and masculinity summary scores
- ii) the difference in participant mood scores on the four negative VAMS (anxiety, sadness, hostility, impatience) from pre- to post- exposure to the video, and
- iii) the difference in participant mood scores on the three positive VAMS (relaxed, happiness, friendliness) from pre- to post-exposure to the video, respectively.

MANOVAs were used because of the multivariate nature of the data (Tabachnick & Fidell, 1996, p. 375). Within each MANOVA, the variables were conceptually related and correlated with one another. Tables 6, 7, and 8 present the correlations among the femininity-masculinity scores, and the positive mood and negative mood pre-post difference scores, respectively. As well, the MANOVA serves to reduce Type I error in the analysis of multivariate data (Tabachnick & Fidell, 1996, p. 376). Pillai's criterion was used for the multivariate testing in order to increase the robustness of significance testing given the unequal cell sizes (Tabachnick & Fidell, 1996, p. 401).

As a follow up to significant multivariate effects, univariate  $F$  tests or discriminant function analysis can be used (Tabachnick & Fidell, 1996, p. 405) to determine the dependent variables that contribute to the group discrimination. Univariate tests are typically used in cases where the dependent variables are relatively uncorrelated (Tabachnick & Fidell, 1996, p. 404) and are useful for investigating the individual contribution of a variable to group discrimination (Borgen & Seling, 1978). Discriminant function analysis is used when variables are correlated to protect against inflated Type I error (Tabachnick & Fidell, 1989, p. 403).

Discriminant function analysis has been argued as the preferred method to clarify significant multivariate effects because it provides a more comprehensive method of data analysis (Borgen & Seling, 1996). As well, univariate test statistics, even those which have been adjusted to protect against experimentwise Type I error rate, are inferior for two reasons. First, the adjustment is based upon the assumption that correlations among the dependent variables are zero, which is usually not the case. Secondly, they ignore the intercorrelations among the dependent variables and may lead to erroneous conclusions (Hasse & Ellis, 1987). For these reasons, discriminant function analysis is utilized in this study to follow up on significant multivariate effects to investigate the relative contribution of dependent variables to group separation.

To determine the relative importance of dependent variables within the discriminant function analysis, structure loadings (i.e., the correlation between the original dependent variable and the derived discriminant function) that exceed  $\pm .30$  were interpreted. The higher the loading, the more important the variable to group discrimination. As well, the results for the discriminant function analysis yields information on group centroids that acts as an additional visual aid to determine group separation (Borgen & Seling, 1978). Finally, the Scheffe test was used to interpret pairwise group differences on the dependent variables identified as important to group discrimination while protecting the analysis against Type I error (Tabachnick & Fidell, 1996, p. 403).

A full factorial analysis of variance (ANOVA) was performed on the DFI



summary score. Significant main effects were interpreted by investigating relevant cell means. Significant interaction effects were followed up by the Tukey test, a post hoc measure which allows all pairwise comparisons of means (Tabachnick & Fidell, 1989, p. 53).

### Pre-analysis Issues

Pre-analysis issues that were attended to before the main analyses included conditioning the data and checking the assumptions of multivariate analyses.

#### Conditioning the Data

Missing values on the individual items for the various dependent measures were replaced with the within-cell mean for that item (Tabachnick & Fidell, 1996, p. 63). Univariate outliers, defined as cases with a standard score of  $z > \pm 3$  within each cell were replaced with the raw score that corresponded to  $z = \pm 3$  (Tabachnick & Fidell, 1996, p. 69). Within-cell multivariate outliers were looked for using the Mahalanobis' distance (Mahal D) and Cook's Distance (Cook's D). Any case with a score greater than a critical cut-off value on the Mahal D, which is dependent on the number of predictors and significance level (in this case,  $p < .001$ ) (Tabachnick & Fidell, 1996, p. 94), and a Cook's D greater than 1.00 (Stevens, 1986, p. 94) was considered an influential multivariate outlier. No multivariate outliers were found.

#### Checking Assumptions of MANOVA

The following assumptions for the MANOVAs were investigated: multivariate normality, multivariate linearity, homogeneity of variance-covariance, multicollinearity and singularity. Multivariate normality, the assumption that there

exists a normal distribution of the "sampling distributions of means of the various dependent variables in each cell and all linear combinations of them" (Tabachnick & Fidell, 1996, p. 381), was investigated by the examination of normal and detrended expected normal probability plots (Tabachnick & Fidell, 1996, p. 73). Homogeneity of variance-covariance, which assumes that the sample variance-covariance matrices within each cell are sampled from the same population variance-covariance matrices (Tabachnick & Fidell, 1996, p. 382), was tested by examining the significance of the Box's  $\underline{M}$  statistic. Box's  $\underline{M}$  is considered significant at the alpha level of .001 (Tabachnick & Fidell, 1996, p. 382). Multivariate linearity, which assumes a linear relationship between all dependent variables and their interaction possibilities (Tabachnick & Fidell, 1996, p. 382), was investigated through examining both within-cell bivariate scatterplots and plots of predicted versus residual values of each variable (Tabachnick & Fidell, 1996, p. 382). Multicollinearity and singularity were examined through the pooled within-cell correlation matrix (Tabachnick & Fidell, 1996, p. 383).

For the analysis on perceived femininity and masculinity, multivariate normality, linearity, and an absence of multicollinearity and singularity were established. An investigation of the Box's  $\underline{M}$  statistic ( $F(45, 73492)=56.90, p=.18$ ) also revealed that the assumption of homogeneity of variance-covariance was not violated.

Assumptions of MANOVA for positive and negative mood induction were also investigated. The assumptions of multivariate normality, multivariate linearity, and

the absence of multicollinearity and singularity were established for both the negative and positive VAMS difference scores. Homogeneity of variance-covariance was also established for the positive VAMS difference score, as indicated by the nonsignificant Box's  $M$  statistic ( $F(90, 39109)=145.66, p=.004$ ). Box'  $M$  for the negative VAMS difference score, however, was found to be significant ( $F(150, 33254)=422.17, p<.001$ ). However, because Box's  $M$  is an overly sensitive test, Tabachnick and Fidell (1996, p. 382) suggest disregarding its significance when relatively equal cell sizes exist. Homogeneity of variance-covariance, therefore, is assumed in this study for the negative VAMS difference scores.

#### Main Analyses

##### Perception of Femininity and Masculinity of Target: Femininity - Masculinity Scale

Two participants were deleted from the analysis on the femininity and masculinity summary scores because of extensive missing data on the Femininity-Masculinity Scale. A full factorial multivariate analysis of variance (MANOVA) was performed on the femininity and masculinity summary scores (Table 9). Within-cell means and standard deviations for the femininity and masculinity summary scores are presented in Table 10. Higher scores on the femininity scale indicate a greater degree of femininity, whereas lower scores on the masculinity scale indicate a greater degree of masculinity. Cronbach's alpha coefficients for the femininity and masculinity scales were, respectively, .53 and .74.

Results of the MANOVA revealed a significant main effect for participant sex. A discriminant function analysis yielded a canonical coefficient of .29 for the

discriminant function, yielding a small degree of association between the linear combination of femininity and masculinity and the participant sex effect. The loading matrices showed that the function is highly correlated with masculinity, but only correlated moderately with femininity (Table 11). Centroids for male and female participants are 8.77 and 11.04, respectively. Examination of univariate means revealed that male participants perceived targets as significantly higher on masculinity ( $M=18.59$ ) than did females ( $M=20.99$ ). It was also revealed that targets were seen by male participants ( $M=21.80$ ) as significantly more feminine than by female participants ( $M=21.03$ ).

The MANOVA also revealed significant main effects for target sex and for target mood. However, both of these effects were qualified by a significant target sex by target mood interaction. A discriminant function analysis yielded a canonical coefficient of .18 for the discriminant function, yielding a small degree of association between the linear combination of the femininity and masculinity variables and the target sex by target mood effect. The loading matrices showed that the function is highly correlated with femininity and moderately correlated with masculinity (Table 12).

An examination of the centroids on the discriminant function indicated that nondepressed males (centroid=27.86) and females (centroid=31.08) could be visually distinguished from depressed males (centroid=34.73) and females (centroid=34.17) in terms of perceived femininity and masculinity. Post hoc pairwise comparison using the Scheffe test on the femininity variable revealed that nondepressed males

( $M=18.64$ ) were seen as significantly less feminine than both nondepressed females ( $M=22.06$ ) and depressed males ( $M=22.08$ ). One other confounded comparison between nondepressed males ( $M=18.63$ ) and depressed females ( $M=22.89$ ) existed. The follow up Scheffe test on the masculinity variable revealed that depressed females ( $M=21.20$ ) were perceived as significantly less masculine than nondepressed females ( $M=17.55$ ). Depressed males ( $M=23.12$ ) were also seen as less masculine than nondepressed males ( $M=17.32$ ). Two other confounded comparisons were found between the following; 1) depressed females ( $M=21.20$ ) and nondepressed males ( $M=17.32$ ) and 2) depressed males ( $M=23.12$ ) and nondepressed females ( $M=17.55$ ).

Mood Induction: Change in Visual Analogue Mood Scales (VAMS) from Pre- to Post- Exposure to the Videotape

It was originally intended that the mood induction, defined as change in moods from pre to post exposure to the target, would be ascertained through a multivariate analysis of covariance (MANCOVA). The pre-exposure mood scores would be used as the covariate and the post exposure mood scores as the dependent variables.

However, it was not possible to investigate the MANCOVA assumption of homogeneity of regression because of technical difficulties relating to memory space in the mainframe. An alternative strategy was to investigate the difference scores from pre to post exposure to target. Two separate full factorial MANOVAs on the negative (anxiety, sadness, hostility and impatience; Table 11) and positive (relaxed, friendliness and happiness; Table 13) VAMS difference scores were then performed.

The difference in participant moods was obtained by subtracting the pre-exposure VAMS scores from their respective post-exposure VAMS scores. Negative scores indicate a decrease in mood, whereas positive scores indicate an increase in mood. The difference score means and standard deviations for negative and positive moods are presented in Tables 14 and 15, respectively.

Establishing assumptions of MANOVA, attending to missing data, and checking for univariate and multivariate outliers on the difference scores for the seven moods (anxiety, sadness, hostility, impatience, relaxed, happiness and friendliness) was conducted, as discussed previously, before the actual analyses on mood induction. One participant was left out of the analysis on mood induction because of extensive missing data on the pre-VAMS measure.

Negative moods (anxiety, sadness, hostility, impatience). The MANOVA showed a significant main effect for target mood. A discriminant function analysis yielded a canonical coefficient of .30 for the discriminant function, yielding a moderate degree of association between the linear combination of negative moods and the target mood effect. The loading matrices (Table 16) showed that sadness, hostility and impatience appear to be the primary discriminating variables.

Centroids for the depressed and nondepressed condition were -10.54 and -1.97, respectively, indicating that participants who were exposed to depressed targets experienced a greater change in their negative moods (sadness, hostility and impatience) than participants who were exposed to nondepressed targets. Specifically, examination of the univariate means revealed that participants who viewed depressed

targets experienced a significantly greater increase in sadness ( $\underline{M}$ =3.60), hostility ( $\underline{M}$ =3.58), and impatience ( $\underline{M}$ =9.98) than participants who viewed nondepressed targets ( $\underline{M}$ =0.07 for sadness,  $\underline{M}$ =0.83 for hostility,  $\underline{M}$ =1.59 for impatience).

The MANOVA performed on the four negative VAMS difference scores also revealed a significant interaction between target sex and participant sex-role beliefs. A discriminant function analysis yielded a canonical coefficient of .22 for the discriminant function, indicating a low degree of association between the linear combination of the four negative moods and the interaction effect. The loading matrices show that the function is correlated mostly with anxiety and hostility (Table 17).

An examination of the centroids on the discriminant function indicated that egalitarian participants who were exposed to a female target (centroid=5.86) could be visually distinguished from the two other groups, including traditional participants who were exposed to female targets (centroid=-0.60) and egalitarian participants exposed to male targets (centroid=0.022). Traditional participants who viewed a male target (centroid=5.73) could also be visually distinguished from traditional participants who viewed female targets (centroid=-0.42) and egalitarian participants who viewed male targets (centroid=0.022). However, post hoc pairwise comparisons using the Scheffe test revealed no significant differences between the groups on the negative mood difference scores. Therefore, the mean group differences may have occurred on a more complex level than pairwise comparisons.

Positive moods (relaxed, friendliness, happiness). The MANOVA performed

on the three positive mood difference scores revealed a significant main effect of target mood. A discriminant function analysis yielded a canonical coefficient of .24 for the discriminant function, yielding a small degree of association between the linear combination of positive moods and the target mood effect. The loading matrices showed that the function is highly correlated with friendliness and moderately correlated with happiness, but only correlated slightly with relaxed mood (Table 18). Thus, friendliness and happiness appear to be more discriminating variables than the relaxed mood.

Centroids for the depressed and nondepressed condition were -11.45 and -3.14 respectively, suggesting that participants who were exposed to depressed targets had a significantly greater change in mood than participants who saw nondepressed targets. Specifically, examination of the univariate means revealed that participants who viewed depressed targets experienced a significantly greater decrease in happiness ( $M = -5.94$ ) and friendliness ( $M = -8.11$ ) than participants who viewed nondepressed targets ( $M = -2.57$  for happiness,  $M = -2.57$  for friendliness).

#### Rejection of Target: Desire For Future Interaction (DFI) Scale

An analysis of variance (ANOVA) as a function of target sex, target mood, participant sex and participant sex-role beliefs was performed on the DFI summary score (Table 19). Higher scores on the DFI indicate greater degree of rejection than lower scores. Within cell means and standard deviations are presented in Table 20. A Cronbach's alpha of .90 indicated a high internal consistency for the questionnaire.

The ANOVA revealed a significant main effect for target mood. This effect



was qualified by the significant interaction effect between target mood and participant sex (Figure 1). A follow-up Tukey test on the target mood by participant sex interaction showed three significant pairwise comparisons. Female participants were more rejecting of depressed targets ( $M=40.31$ ) than of nondepressed targets ( $M=32.63$ ), whereas male participants did not significantly differ in their rejection of depressed ( $M=37.43$ ) and nondepressed targets ( $M=34.20$ ). Two confounded comparisons which did not bear meaningful interpretation were found between male participants exposed to depressed targets ( $M=37.43$ ) and female participants exposed to nondepressed targets ( $M=32.63$ ), and female participants exposed to depressed targets ( $M=40.31$ ) and male participants exposed to nondepressed targets ( $M=34.20$ ).

Results of the ANOVA also revealed a significant main effect for target sex. However, this was qualified by a significant 3-way interaction effect found between target sex, target mood and participant sex-role beliefs. A post hoc Tukey test on the significant interaction showed eight significant pairwise comparisons. Egalitarian participants were significantly less rejecting of nondepressed females ( $M=29.19$ ) than of nondepressed males ( $M=35.90$ ). Egalitarian participants were also significantly less rejecting of nondepressed females ( $M=29.19$ ) than depressed females ( $M=37.84$ ). Traditional participants were found to be more rejecting of depressed males ( $M=42.25$ ) than nondepressed males ( $M=35.10$ ). Five other confounded comparisons were found for the following:

- (i) egalitarian participants - nondepressed female ( $M=29.19$ ) versus traditional

- participants - depressed female ( $\underline{M}$ =36.94),
- (ii) egalitarian participants - nondepressed female ( $\underline{M}$ =29.19) versus egalitarian participants - depressed male ( $\underline{M}$ =38.84),
- (iii) egalitarian participants - nondepressed female ( $\underline{M}$ =29.19) versus traditional participants - depressed male ( $\underline{M}$ =42.25),
- (iv) traditional participants - nondepressed female ( $\underline{M}$ =33.59) versus traditional participants - depressed male ( $\underline{M}$ =42.25), and
- (v) egalitarian participants - nondepressed male ( $\underline{M}$ =35.90) versus traditional participants - depressed male ( $\underline{M}$ =42.25).

#### Discussion

This study investigated interpersonal reactions to depressed individuals as a function of the sex and mood of the depressed person, and the sex and sex-role beliefs of the perceiver. The reactions that were assessed included ratings of femininity and masculinity, positive and negative mood induction, and interpersonal rejection.

#### Perception of Femininity and Masculinity

Hypothesis 1, which stated that participants would rate depressed targets as more feminine than nondepressed targets, was partially supported. Only depressed males, but not depressed females, were perceived to possess more stereotypical feminine traits than their nondepressed same-sex counterparts. However, both depressed males and depressed females were rated as having less stereotypical masculine traits when compared to their same-sex nondepressed counterparts. Hence, depression seems to have the effect of making a man appear more feminine and less

masculine, and a woman less masculine. This is in line with previous works that linked depression with increased femininity (e.g., Hammen & Peters, 1978; Landrine, 1988; Warren, 1983) and decreased masculinity (e.g., Feather, 1985; Hammen & Peters, 1978; Landrine, 1988). However, in the present study, the effect seems to be more marked for depressed men.

One implication of the above findings is that depression may be sex-typed as feminine. This has bearing on the question that was previously raised (e.g., Kaplan, 1983; Page, 1985) as to whether a sex bias is built into the formulation of the diagnostic criteria of depression, thereby accounting for the predominance of women in this disorder. An examination of the diagnostic criteria of depression reveals that this may not be the case as the diagnosis of this disorder covers many symptoms which are not reflective of the traditional female sex role. These include diminished interest in activities, change in weight, problems in sleeping, psychomotor changes, concentration difficulties, and suicidal thoughts (cf. DSM-IV, APA, 1994). The more affective symptoms such as depressed mood, feelings of worthlessness, and possibly indecisiveness as well, might be considered by some to be female characteristics. However, they constitute only a small proportion of the diagnostic criteria and are not sufficient in themselves to warrant a diagnosis of depression. Therefore, the claim that clinical depression is sex-typed is not one that is supported by evidence and is speculative at best.

The link between depression and increased femininity and decreased masculinity has been reported in several previous works, including the present study.

If the criteria for depression is not sex-typed, then perhaps others' perception of depressed individuals may account for that relationship. It could be that depression is associated with a set of beliefs or expectations of what depressed men and women would be like. If such a set of expectations exist, it could influence how others relate to depressed individuals of different sex.

If the feminization of depression is a matter of perception, then depressed men, particularly those who adhere to the traditional male sex role, may be reluctant to disclose their distress for fear of being perceived as being "unmanly". This could account for the greater ratio of women among the depressed as the denial of depressive symptoms by males would contribute to the under-representation of males among depressed individuals. If such were the case, it would be unfortunate as it means that some proportion of depressed men may not seek help for their distress.

On the other hand, if depressed individuals actually possess less masculine and more feminine traits than do nondepressed individuals, it may have some bearing on their coping style. Masculinity is associated with active and distractive coping and femininity with emotional coping such as rumination (Conway, Giannopoulos, & Stiefenhofer, 1990; Oliver & Toner, 1990). Rumination has been found to occur in depression (Nolen-Hoeksema, 1987) and to be a factor in the maintenance of depression (Morrow & Nolen-Hoeksema, 1990).

The present study also showed that nondepressed females were perceived as significantly more feminine than nondepressed males. This is logical as females typically display more feminine behaviours than do males. The additional finding of

females perceiving target individuals to be less masculine and less feminine than did males is perplexing. No easy explanation comes to mind to account for this observation. Whether this is a spurious finding or otherwise can be addressed in future studies to see if it can be replicated across samples.

In sum, depression seems to effect the perception of both males and females. Depressed males were perceived as less masculine and more feminine than nondepressed males. Depressed females were rated as less masculine than nondepressed females.

#### Mood Induction

Hypothesis 2, which stated that depressed targets would induce greater negative mood in participants than nondepressed targets, was supported in the present study. Specifically, compared to those exposed to nondepressed individuals, those who viewed depressed persons reported feeling more sad, hostile and impatient and less happy and friendly. These results clearly show the negative mood induction by depressed persons on others, which is in line with Coyne's (1976a) model and numerous previous works (e.g., Boswell & Murray, 1981; Coyne, 1976b; Elliot et al. 1990; Gotlib & Beatty, 1985; Hammen & Peters, 1978; Joiner et al., 1992; Strack & Coyne, 1983; Tan & Maxton, 1993). Coyne (1976b) and Joiner et al. (1993) suggested that the negative mood induction may be due to the depressed person's conflicting needs for reassurance from others and for self-confirming information regarding his/her negative self-concept, a phenomenon referred to as cognitive-affective crossfire (Joiner et al., 1993).

The present study shows that mood induction is expressed not only through an increase in negative moods but also a decrease in positive moods. The majority of previous work in this area (e.g., Coyne, 1976b; Elliot et al. 1990; Gotlib & Beatty, 1985; Hammen & Peters, 1978; Strack & Coyne, 1983) have examined only negative mood increase. Very few (e.g., Boswell & Murray, 1981; Siegal & Alloy, 1990; Tan & Maxton, 1993) have examined both negative mood induction and positive mood reduction following exposure to a depressed individual. To obtain a more comprehensive evaluation of mood induction, future works could include examinations of positive moods.

In sum, the present study found that depressed individuals clearly induced negative moods in others. This phenomenon was expressed in increased negative moods and decreased positive moods from pre- to post-exposure to depression.

#### Rejection of Target

Hypothesis 3, which stated that depressed individuals would elicit greater rejection than nondepressed individuals from males, was not supported. Contrary to previous works (Siegal & Alloy, 1990; Tan & Maxton, 1993; Tan & Stoppard, 1994), males did not respond with greater rejection to depressed individuals than nondepressed individuals. Instead, the females reported less desire for future interaction with depressed persons than with nondepressed persons. Perhaps this anomalous result is due to the videotapes being used in the study. It is possible that the participants might have been reacting to some unique characteristics of the targets in the video, and not to just the mood displayed by them. To eliminate this

possibility, a variety of videos featuring different depressed and nondepressed individuals would have to be used.

The present study also showed that reactions to depression varied as a function of the respondent's sex-role beliefs and the sex of the depressed person. Hypothesis 4, which stated that depressed males would be rejected more by traditional than by egalitarian respondents, was not supported. Traditional and egalitarian respondents reacted no differently from each other when it came to depressed males. However, when the reactions towards depressed males were compared with reactions towards nondepressed males, traditional respondents rejected the depressed males more. Egalitarian respondents reacted similarly to depressed males and nondepressed males. However, they (egalitarian respondents) rejected depressed females more than nondepressed females. It would appear that traditional persons are not tolerant of depression in males but they seem to react better to depression in females. This may be due to their ascription to the traditional male sex role which espouses strength and other attributes incompatible with depression. On the other hand, females are allowed to display depression as it does not violate their traditional female sex role.

Surprisingly, egalitarian individuals who presumably uphold equal roles for both sexes, were less tolerant of depression in females than in males. This is quite puzzling as one might expect that it would not make a difference to these individuals whether the depression was present in a male or female. Perhaps, their reactions to the depressed male are influenced by their belief that it is acceptable for males to move away from the male sex role and display feminine characteristics. However,

they may find it less acceptable for a female to be depressed because it makes her less masculine (see results above on perceptions of femininity-masculinity) and therefore, more sex-typed.

Egalitarian individuals in this study rejected nondepressed males more than nondepressed females. It is unclear why they preferred females over males. It is unlikely that this finding is due to problems in the measurement of rejection as the measure was found to be reliable. Possibly, this is an anomalous finding that need to be determined whether it is a stable and replicable observation.

In sum, the key findings are that traditional individuals are more tolerant of depression in females and less in males, while the opposite was found for egalitarian persons. It would seem that sex-role beliefs of the respondent and the sex of the depressed person has some impact on reactions to depression. However, the effect of sex of the respondent towards depression has not been widely investigated and based on the results of previous works and the present study, no firm conclusions can be drawn with respect to it at this point in time.

#### Summary of Findings

Depressed persons were found to decrease positive moods and increase negative moods in others. However, this mood induction was not found to be the only factor associated with interpersonal rejection. Interpersonal rejection of depression was found to be associated with two other characteristics: the sex-role beliefs of the respondent and the sex of the depressed person. Traditional people were more rejecting of depression in males while egalitarian people were more



rejecting of depression in females. It is possible that this rejection is linked to perceived increased femininity in depressed males and perceived decreased masculinity in depressed males and females. Traditional individuals might respond negatively to increased femininity and decreased masculinity in depressed males while egalitarian individuals are more sensitive to decreased masculinity in depressed females. Results on sex of the respondent is currently unclear. Due to the paucity of research, it is not possible to draw any firm conclusions on this variable. However, it appears to be a variable that warrants further exploration as it has been reported to be linked to reactions to depression in the current study as well as previous works (Hammen & Peters, 1978; Tan & Maxton, 1993; Tan & Stoppard, 1994).

#### Implications of the Results

Although it has not been established that the diagnostic criteria of depression is sex-biased, nevertheless there appears to be a perception that depression is sex-typed as feminine. This potentially has some implications on the differential rates in depression between the two sexes. Traditional males who become depressed may have a difficult time with their distress for fear of being perceived as feminine. It might be difficult for them to admit to the symptoms and seek assistance, and be excluded from the statistics as a result.

Given that traditional and egalitarian individuals reject depressed males and depressed females, respectively, the characteristics of the respondent might be one consideration when a depressed person chooses to seek assistance. A depressed female may find more sympathy with traditional others, and a depressed male with

egalitarian people.

### Strengths and Limitations of the Present Study

There are numerous strengths of the present study. First, clinically depressed people were used as depressed targets in the videos. Most previous studies have not looked at clinically depressed individuals, but at dysphoric individuals (e.g., Tan & Stoppard, 1994; Siegal & Alloy, 1990), confederates (e.g., Howes & Hokanson, 1979) or transcripts (Gotlib & Beatty, 1985; Hammen & Peters, 1977; Tan & Maxton, 1993) of depressed people for depressed targets. The use of clinically depressed people as depressed targets increases the ecological validity of the results of this study.

Second, videotaped interactions were used. Because participants viewed the same tapes, participants were exposed to identical conditions. If live interactions had been utilized, the interactions would have differed in each session. Hence, videotaped interactions provided a structured and standardized procedure for all participants.

Third, it was ensured that depressed targets were perceived as displaying significantly more depressive behaviour than nondepressed targets. Therefore, the videos displaying depressed and nondepressed individuals used in this study are suitable for examining differences in responses to depressed versus nondepressed individuals.

Fourth, all possible sex pairings were included in this study to allow a systematic examination of the effects of sex. Investigation of this variable is important for two reasons. Depression is sex-typed as feminine (Hammen & Peters,

1978; Landrine, 1988; Tan & Maxton, 1993; Warren, 1983). As well, the effects of sex have not been widely investigated despite evidence in previous works indicating its influence (e.g., Hammen & Peters, 1978; Tan & Maxton, 1993; Tan & Stoppard, 1994).

Fifth, a possible methodological confound between sex-role beliefs and sex in which females are generally more egalitarian than males (Beere et al., 1984; Steinberg et al, 1987) was addressed in the present study. An approximately equal number of egalitarian and traditional participants of both sexes were used to ensure that neither sex nor sex-role beliefs had undue influence on the results. This also allowed the effects of both variables to be considered separately and in conjunction with each other.

Sixth, negative mood induction was investigated through both negative and positive moods. This permitted a more comprehensive assessment of mood induction because the phenomenon can be expressed through an increase in negative moods and/or a decrease in positive moods, as the present study demonstrated.

Despite the numerous strengths of the study, some limitations were present. First, the internal consistency of the femininity measure was low and that of the masculinity measure was just adequate. Both scales could be improved by increasing the number of items. Alternatively, other more established measures of psychological femininity and masculinity could have been used. The Bem Sex-Role Inventory scale is one example. A modification to the instructions would have to be made to allow the use of this self-rating measure to assess others' perception of a target person.

Second, there is a possibility that the measure of femininity and masculinity could have been confounded with depression. Item 6 (cries easily) on the feminine scale and item 9 (makes decision easily) on the masculine scale reflect the diagnostic criteria for depression. Both these items could have exerted undue influence on the results so that depressed males and depressed females were rated as more feminine than their same-sex nondepressed counterparts, and depressed males were viewed as less masculine than nondepressed males. To avoid this potential confound in future studies, alternate measures of feminine and masculine characteristics as previously mentioned are suggested.

Third, results regarding sex-role beliefs may have been clearer had a semi-interquartile method been used to classify the traditional versus egalitarian individuals. The traditional group would be drawn from the bottom quartile and the egalitarian group from the upper quartile of the Sex-Role Beliefs Scale (SRES, King & King, 1993). This increased separation between the two groups would strengthen confidence that they are different. In the present study, mean scores were used instead to distinguish both groups because it was very difficult to find within the participant pool traditional females with very low scores on the SRES and egalitarian males with very high scores on the SRES. A disadvantage to this strategy is that the distinction between the two groups becomes weaker and dilutes any potential effects that could have been found in the study.

Fourth, female and male participants in the present study were not equal on the sex-role beliefs measure. Females were more egalitarian than males, which is

consistent with past research in this area (Beere et al., 1984; Steinberg et al., 1987). This difference may have influenced the results of the study in that egalitarian females may have represented a greater level of egalitarianism that may be qualitatively distinct from the lower level of egalitarianism represented by the egalitarian males in this study.

Finally, only one target individual was presented per condition. The use of several targets per condition would ensure that the results obtained were not particular to the four target individuals used in this study. One or more of the target individuals used in this study could have had a certain personality or interactional style that influenced reactions to them.

#### Directions for Future Research

Clearly, it would be necessary to assess the replicability and cross-sample reliability of the results from the present study. The findings lead to some questions which could help to elucidate the factors related to help-seeking in depressed males and females. Given the oft-reported link between depression and femininity, it would be useful to determine whether it reflects a perception based on a belief system towards depression or whether it is an accurate assessment of depressed individuals' psychological characteristics and behaviour. If it is the case of the former, others' a priori expectations of how a depressed individual would act has a potential influence on the willingness of depressed individuals to disclose and seek help. If depressed individuals indeed do possess more feminine characteristics, the impact on their coping style would be useful to explore as femininity has been associated with

rumination (Nolen-Hoeksema, 1987, 1990), which may not be a useful strategy in alleviating the depression. The channels through which decreased masculinity and increased femininity in the depressed person is implied or demonstrated in depressed individuals also need to be traced to better understand how others arrive at such an impression. Another line of inquiry lies in how the depressed individuals themselves respond to depression and their attitudes and beliefs about the disorder as it has implications for their willingness to disclose and seek help.

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**Table 1**

**Possible Combinations of Targets and Partners on Videotape**

Table 1

Possible Combinations of Targets and Partners on Videotape

Target Sex	Target Mood	Target BDI*	Partner Sex	Partner BDI
Male	Depressed	24	Male	6
Male	Depressed	24	Female	2
Female	Depressed	27	Male	1
Female	Depressed	27	Female	2
Male	Nondepressed	5	Male	2
Male	Nondepressed	5	Female	0
Female	Nondepressed	1	Male	2
Female	Nondepressed	1	Female	0

Note. Depressed targets had a BDI score of at least 12 and met the DSM-III-R diagnostic criteria for Major Depressive Episode (APA, 1987) as assessed on the Q-DIS-III-R (Marcus, Robins, & Bucholz, 1989). Nondepressed targets and partners had a BDI score of 7 or less.

\*BDI=Beck Depression Inventory (Beck, 1978).

**Table 2**

**Summary ANOVA Table as a Function of Target Mood and  
Target Sex on Depression Check Questionnaire (DCQ)  
Summary Score**

Table 2

Summary ANOVA Table as a Function of Target Mood and Target Sex on  
Depression Check Questionnaire (DCQ) Summary Score

Source	df	F
Target Mood (A)	1	19.62*
Target Sex (B)	1	0.12
A X B	1	0.06
Within group error	55	(105.66)

Note. N=59. Values enclosed in parentheses represent mean square errors.

\* $p < .001$

**Table 3**

**Cell Size**

Table 3

Cell Size

Participant Groups	Depressed Target		Nondepressed Target		Total
	Male	Female	Male	Female	
<b>Male</b>					
Egalitarian	15	15	15	15	60
Traditional	14	16	15	15	60
<b>Female</b>					
Egalitarian	16	16	16	16	64
Traditional	14	15	14	14	57
<b>Total</b>	<b>59</b>	<b>62</b>	<b>60</b>	<b>60</b>	<b>241</b>

**Table 4**

**Within-cell Means (and Standard Deviations) for Participant Sex-Role Egalitarianism Scale (SRES) Score**

Table 4

Within-cell Means (and Standard Deviations) for Participant Sex-Role Egalitarianism Scale (SRES) Score

Participant Groups	Depressed Target		Nondepressed Target	
	Male	Female	Male	Female
<b>Male</b>				
Egalitarian	114.93 (6.63)	117.60 (4.93)	113.33 (6.11)	114.67 (5.62)
Traditional	93.27 (9.50)	96.81 (6.39)	94.20 (9.59)	91.80 (9.03)
<b>Female</b>				
Egalitarian	116.63 (5.30)	118.69 (4.94)	117.56 (5.79)	118.38 (4.41)
Traditional	94.93 (6.75)	96.53 (8.66)	98.00 (8.66)	95.71 (8.69)

Note. N=241.



**Table 5**

**Summary ANOVA Table as a Function of Participant Sex, Target Sex,  
Target Mood and Participant Sex-Role Beliefs on SRES Scores**

Table 5

Summary ANOVA Table as a Function of Participant Sex, Target Sex, Target Mood  
and Participant Sex-Role Beliefs on SRES Scores

Source	df	F
Subject Sex (A)	1	7.21*
Target Sex (B)	1	1.08
Target Mood (C)	1	0.67
Subject Sex-Role Beliefs (D)	1	542.51*
A X B	1	0.16
A X C	1	2.50
A X D	1	0.06
B X C	1	2.80
B X D	1	0.77
C X D	1	0.07
A X B X C	1	0.08
A X B X D	1	0.01
A X C X D	1	0.03
B X C X D	1	0.98
A X B X C X D	1	0.07
Within group error	225	(50.28)

Note. N=241. Values enclosed in parentheses represent mean square errors.

\*p<.01

**Table 6**

**Correlation Between the Femininity and Masculinity Summary Scores**

Table 6

Correlation Between the Femininity and Masculinity Summary Scores

	Femininity	Masculinity
Femininity	-	
Masculinity	.27*	-

Note. N=239. Higher scores on the femininity scale indicates greater femininity.

Higher scores on the masculinity scale indicates lesser masculinity.

\* $p < .01$

**Table 7**

**Correlations Among the Negative Visual Analogue Mood Scale (VAMS)  
Difference Scores**

Table 7

Correlations Among the Negative Visual Analogue Mood Scale (VAMS) DifferenceScores

	Anxiety	Sadness	Hostility	Impatience
Anxiety	-			
Sadness	-.07	-		
Hostility	.34*	-.04	-	
Impatience	.31*	.03	.33*	-

Note.  $N=240$ . Difference scores on the four moods were obtained by subtracting the pre-exposure from the corresponding post-exposure mood scores.

\* $p < .01$

**Table 8**

**Correlations Among the Positive Visual Analogue Mood Scale (VAMS)  
Difference Scores**

Table 8

Correlations Among the Positive Visual Analogue Mood Scale (VAMS) Difference Scores

	Relaxed	Happiness	Friendliness
Relaxed	-		
Happiness	.16*	-	
Friendliness	.24**	.48**	-

Note. N=240. Difference scores on the three moods were obtained by subtracting the pre-exposure from the corresponding post-exposure mood scores.

\*p < .05

\*\*p < .01



**Table 9**

**Summary Table for MANOVA as a Function of Target Sex, Participant Sex, Target Mood and Participant Sex-Role Beliefs on the Femininity and Masculinity Summary Scores**

Table 9

Summary Table for MANOVA as a Function of Target Sex, Participant Sex, Target Mood and Participant Sex-Role Beliefs on the Femininity and Masculinity Summary Scores

Source	df	F	Power
Subject Sex (A)	2	10.26**	0.99
Target Sex (B)	2	10.52**	0.99
Target Mood (C)	2	31.36**	>0.99
Subject Sex-Role Beliefs (D)	2	0.37	0.11
A X B	2	0.67	0.16
A X C	2	0.04	0.06
A X D	2	0.70	0.17
B X C	2	3.81*	0.69
B X D	2	0.08	0.06
C X D	2	0.26	0.10
A X B X C	2	0.25	0.09
A X B X D	2	1.42	0.30
A X C X D	2	0.17	0.08
B X C X D	2	1.06	0.23
A X B X C X D	2	0.33	0.11

Note. N=239. All F's were based on Pillai's criterion.

\*p < .05

\*\*p < .01

**Table 10**

**Within-cell Means (and Standard Deviations) for the Femininity and Masculinity  
Summary Scores**

Table 10

Within-cell Means (and Standard Deviations) for the Femininity and MasculinitySummary Scores

Participant Groups	Depressed Target		Nondepressed Target	
	Male	Female	Male	Female
	<b>Femininity</b>			
<b>Male</b>				
Egalitarian	21.53 (3.50)	23.33 (5.26)	19.20 (2.34)	21.67 (3.70)
Traditional	22.79 (3.45)	23.53 (3.52)	18.80 (3.57)	23.60 (4.88)
<b>Female</b>				
Egalitarian	21.73 (3.35)	22.81 (2.88)	18.00 (3.90)	21.63 (4.67)
Traditional	22.87 (5.72)	21.87 (5.00)	18.57 (3.65)	21.36 (5.02)
	<b>Masculinity</b>			
<b>Male</b>				
Egalitarian	20.80 (5.65)	20.73 (5.78)	14.47 (3.04)	16.20 (4.20)
Traditional	22.71 (5.66)	19.47 (4.87)	16.73 (4.03)	17.67 (6.21)
<b>Female</b>				
Egalitarian	24.47 (2.72)	22.69 (5.19)	19.81 (3.73)	17.50 (4.65)
Traditional	24.57 (5.77)	21.80 (5.05)	18.14 (4.00)	18.93 (4.80)

Note. N=239.

**Table 11**

**Standardized Discriminant Function Coefficient and Structure Loadings for  
Significant Participant Sex Effect on the Femininity-Masculinity Scale**

Table 11

Standardized Discriminant Function Coefficient and Structure Loadings for  
Significant Participant Sex Effect on the Femininity-Masculinity Scale

Dependent variable tests	S.D.F.C.*	S.L.**
Femininity	-.54	-.32
Masculinity	.97	.85

Note. N=239.

\*Standardized discriminant function coefficient

\*\*Structure loading

**Table 12**

**Standardized Discriminant Function Coefficient and Structure Loadings for Significant Target Sex by Target Mood Interaction Effect on the Femininity-Masculinity Scale**

Table 12

Standardized Discriminant Function Coefficient and Structure Loadings for  
Significant Target Sex by Target Mood Interaction Effect on the Femininity-  
Masculinity Scale

Dependent variable tests	S.D.F.C.*	S.L.**
Femininity	.78	.89
Masculinity	.47	.65

Note. N=239.

\*Standardized discriminant function coefficient

\*\*Structure loading



**Table 13**

**Summary Table for MANOVA as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores**

Table 13

Summary Table for MANOVA as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores

Source	df	F	Power
Subject Sex (A)	4	1.05	0.33
Target Sex (B)	4	2.07	0.61
Target Mood (C)	4	5.55**	0.98
Subject Sex-Role Beliefs (D)	4	1.43	0.44
A X B	4	1.51	0.46
A X C	4	1.96	0.59
A X D	4	1.25	0.39
B X C	4	0.85	0.27
B X D	4	2.93*	0.78
C X D	4	0.56	0.19
A X B X C	4	2.27	0.66
A X B X D	4	0.84	0.26
A X C X D	4	0.17	0.09
B X C X D	4	1.80	0.54
A X B X C X D	4	1.70	0.52

Note. N=240. All F's were based on Pillai's criterion.

\*p < .05

\*\*p < .01

**Table 14**

**Summary Table for MANOVA as a Function of Participant Sex, Target Sex,  
Target Mood and Participant Sex-Role Beliefs on the Positive Visual Analogue Mood  
Scale (VAMS) Difference Scores**

Table 14

Summary Table for MANOVA as a Function of Participant Sex, Target Sex, Target Mood and Participant Sex-Role Beliefs on the Positive Visual Analogue Mood Scale (VAMS) Difference Scores

Source	df	F	Power
Subject Sex (A)	3	0.91	0.25
Target Sex (B)	3	0.14	0.08
Target Mood (C)	3	4.37**	0.87
Subject Sex-Role Beliefs (D)	3	1.04	0.28
A X B	3	1.03	0.28
A X C	3	2.08	0.53
A X D	3	1.09	0.29
B X C	3	1.14	0.30
B X D	3	0.22	0.09
C X D	3	2.13	0.54
A X B X C	3	1.47	0.39
A X B X D	3	2.59	0.63
A X C X D	3	1.94	0.50
B X C X D	3	0.62	0.18
A X B X C X D	3	0.59	0.17

Note. N=240. All F's were based on Pillai's criterion.

\*\*p < .01

**Table 15**

**Within-cell Means (and Standard Deviations) for the Negative Visual Analogue  
Mood Scale (VAMS) Difference Scores**

Table 15

Within-cell Means (and Standard Deviations) for the Negative Visual Analogue  
Mood Scale (VAMS) Difference Scores

Target Groups	Egalitarian Participant		Traditional Participant	
	Male	Female	Male	Female
<b>Anxiety</b>				
Male				
Depressed	-5.93 (12.99)	1.19 (19.76)	-2.43 (34.85)	-20.29 (28.20)
Nondepressed	4.27 (18.55)	-9.31 (12.40)	-3.20 (16.08)	-14.79 (20.62)
Female				
Depressed	-4.93 (24.30)	-5.13 (9.73)	-7.44 (18.25)	-2.00 (14.76)
Nondepressed	-8.13 (22.92)	-3.94 (27.49)	5.40 (21.65)	-0.86 (19.37)
<b>Sadness</b>				
Male				
Depressed	4.00 (11.31)	5.13 (11.62)	1.07 (14.32)	9.36 (24.39)
Nondepressed	2.40 (5.69)	-3.44 (12.00)	0.00 (3.74)	-1.93 (10.59)
Female				
Depressed	0.33 (7.63)	-0.38 (6.55)	6.56 (11.89)	2.71 (3.71)
Nondepressed	1.53 (8.04)	-0.25 (8.75)	0.67 (4.94)	1.07 (7.93)
<b>Hostility</b>				
Male				
Depressed	3.60 (8.89)	3.13 (9.71)	3.07 (6.44)	1.57 (3.30)
Nondepressed	0.46 (3.96)	0.50 (5.90)	1.53 (4.09)	-0.07 (4.39)
Female				
Depressed	1.93 (5.11)	1.56 (4.50)	4.56 (11.00)	9.29 (12.75)
Nondepressed	4.67 (13.32)	-5.56 (13.71)	4.87 (11.83)	0.28 (3.95)
<b>Impatience</b>				
Male				
Depressed	0.33 (27.41)	5.69 (28.86)	14.00 (26.64)	7.57 (25.62)
Nondepressed	3.13 (19.68)	-7.94 (20.50)	-1.13 (11.24)	-10.43 (19.20)
Female				
Depressed	18.67 (29.71)	17.38 (27.31)	3.81 (16.55)	12.36 (21.40)
Nondepressed	6.27 (14.75)	4.00 (24.28)	17.67 (25.38)	1.14 (30.85)

**Note.**  $N=240$ . Negative and positive difference scores indicate, respectively, reduction and increase in mood from pre- to post-exposure.

**Table 16**

**Within-cell Means (and Standard Deviations) for the Positive Visual Analogue  
Mood Scale (VAMS) Difference Scores**

Table 16

Within-cell Means (and Standard Deviations) for the Positive Visual AnalogueMood Scale (VAMS) Difference Scores

Target Groups	Egalitarian Participant		Traditional Participant	
	Male	Female	Male	Female
<b>Relaxed</b>				
Male				
Depressed	-12.53 (28.26)	0.56 (27.74)	4.79 (35.81)	3.86 (27.83)
Nondepressed	1.47 (22.16)	-7.25 (19.19)	-7.33 (19.84)	-1.86 (12.72)
Female				
Depressed	-10.13 (23.50)	-6.38 (21.71)	-0.19 (19.80)	-9.36 (21.16)
Nondepressed	0.13 (26.10)	4.19 (33.85)	-7.27 (30.68)	9.86 (25.15)
<b>Happiness</b>				
Male				
Depressed	-3.47 (16.48)	-6.31 (19.12)	1.29 (7.77)	-14.79 (14.95)
Nondepressed	0.67 (12.66)	-2.56 (20.04)	-2.93 (7.80)	-3.71 (19.44)
Female				
Depressed	-2.07 (22.73)	-7.31 (15.14)	-7.56 (20.77)	-7.29 (23.84)
Nondepressed	-2.40 (13.82)	-7.31 (16.32)	-7.20 (14.95)	4.86 (11.03)
<b>Friendliness</b>				
Male				
Depressed	-1.20 (10.37)	-7.88 (11.95)	-12.00 (13.37)	-10.21 (11.10)
Nondepressed	0.13 (11.87)	-3.31 (13.34)	-3.60 (8.88)	2.71 (11.49)
Female				
Depressed	-3.60 (15.27)	-9.00 (14.50)	-5.50 (16.24)	-15.50 (17.25)
Nondepressed	-3.07 (9.66)	-2.94 (19.45)	-7.67 (14.25)	3.14 (9.03)

**Note.**  $N=240$ . Negative and positive difference scores indicate, respectively, reduction and increase in mood from pre- to post-exposure.



**Table 17**

**Standardized Discriminant Function Coefficient and Structure Loadings for Significant Target Mood Effect on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores**

Table 17

Standardized Discriminant Function Coefficient and Structure Loadings for  
Significant Target Mood Effect on the Negative Visual Analogue Mood Scale  
(VAMS) Difference Scores

Dependent variable tests	S.D.F.C.*	S.L.**
Anxiety	.50	.16
Sadness	-.56	-.55
Hostility	-.58	-.52
Impatience	-.54	-.58

Note. N=240.

\*Standardized discriminant function coefficient

\*\*Structure loading

**Table 18**

**Standardized Discriminant Function Coefficient and Structure Loadings for the Significant Interaction Effect between Target Sex and Participant Sex-Role Beliefs on the Negative Visual Analogue (VAMS) Difference Scores**

Table 18

Standardized Discriminant Function Coefficient and Structure Loadings for  
the Significant Interaction Effect between Target Sex and Participant Sex-Role Beliefs  
on the Negative Visual Analogue Mood Scale (VAMS) Difference Scores

Dependent variable tests	S.D.F.C.*	S.L.**
Anxiety	-.65	-.64
Sadness	-.34	-.25
Hostility	-.59	-.59
Impatience	.63	.24

Note. N=240.

\*Standardized discriminant function coefficient

\*\*Structure loading

**Table 19**

**Standard Discriminant Function Coefficient and Structure Loadings for the Significant  
Target Mood Effect on the Positive Visual Analogue Mood Scale (VAMS)  
Difference Scores**

Table 19

Standardized Discriminant Function Coefficient and Structure Loadings for  
the Significant Target Mood Effect on the Positive Visual Analogue Mood Scale  
(VAMS) Difference Scores

Dependent variable tests	S.D.F.C.*	S.L.**
Relaxed	-.02	.22
Happiness	-.06	.43
Friendliness	1.03	> .99

Note. N=240.

\*Standardized discriminant function coefficient

\*\*Structure loading

**Table 20**

**Summary ANOVA Table as a Function of Participant Sex, Target Sex, Target Mood,  
and Participant Sex-Role Beliefs on the Desire For Future  
Interaction (DFI) Summary Score**

Table 20

Summary ANOVA Table as a Function of Participant Sex, Target Sex, Target Mood, and Participant Sex-Role Beliefs on the Desire For Future Interaction (DFI) Summary

Score

Source	df	F
Subject Sex (A)	1	0.46
Target Sex (B)	1	12.67**
Target Mood (C)	1	28.83**
Subject Sex-Role Beliefs (D)	1	139.47
A X B	1	0.02
A X C	1	4.61*
A X D	1	0.24
B X C	1	0.30
B X D	1	0.04
C X D	1	0.06
A X B X C	1	1.29
A X B X D	1	1.02
A X C X D	1	0.08
B X C X D	1	5.20*
A X B X C X D	1	<0.01
Within group error	225	(63.29)

Note. N=241. Values in parentheses represent mean square errors.

\*p<.05 \*\*p<.001



**Table 21**

**Within-cell Means (and Standard Deviations) for the Desire For  
Future Interaction (DFI) Summary Score**

Table 21

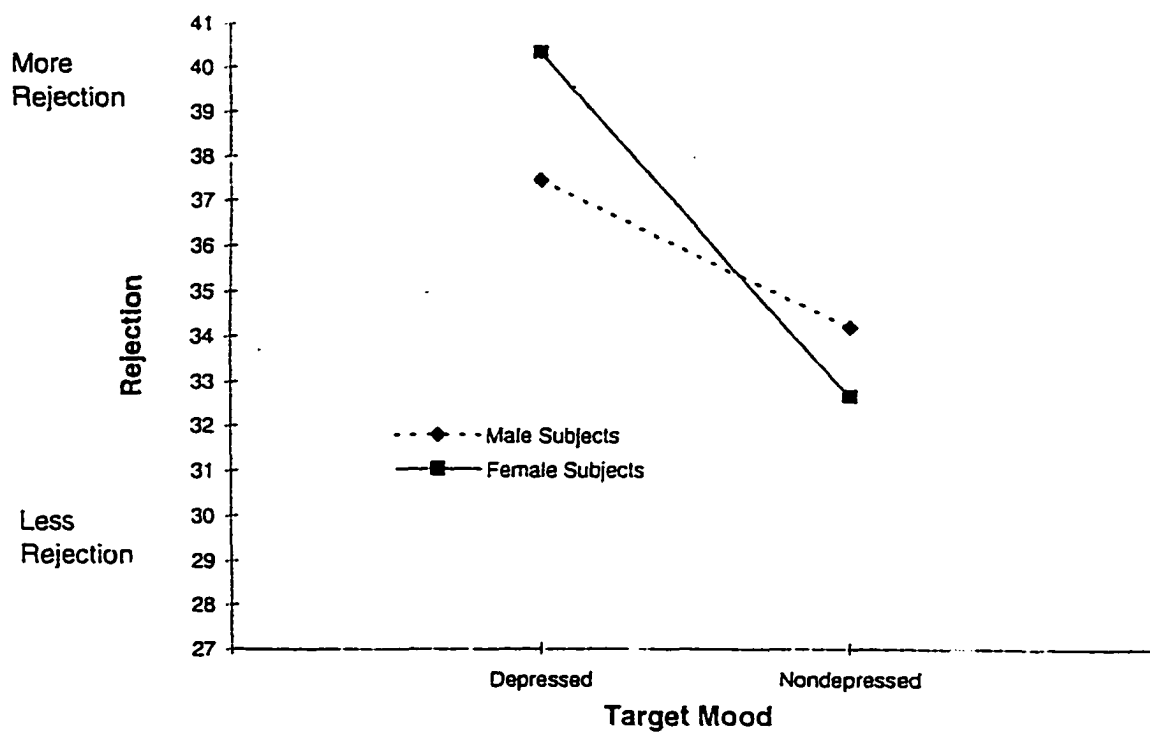
Within-cell Means (and Standard Deviations) for the Desire For Future Interaction(DFI) Summary Score

Participant Groups	Depressed Target		Nondepressed Target	
	Male	Female	Male	Female
<b>Male</b>				
Egalitarian	37.00 (6.68)	35.93 (6.45)	35.33 (7.44)	31.07 (8.69)
Traditional	42.29 (5.85)	35.00 (8.50)	35.87 (6.80)	34.53 (8.52)
<b>Female</b>				
Egalitarian	40.56 (7.65)	39.63 (8.48)	36.44 (8.73)	27.44 (7.47)
Traditional	42.21 (8.62)	39.00 (9.96)	34.29 (6.41)	32.57 (9.54)

Note. N=241.

Figure Caption

Figure 1. Interaction effect of participant sex by target mood on participant rejection of target on the Desire For Future Interaction (DFI) Scale.



**Figure 1.** Interaction effect of subject sex by target mood on subject rejection of target on the Desire for Future Interaction (DFI) Scale.

**Appendix A**

**Personal Belief Questionnaire (Sex-Role Egalitarianism Scale)**

**Personal Belief Questionnaire**

*Below are statements about men and women. Read each statement and decide how much you agree or disagree. We are not interested in what society says. We are interested in your personal opinions. For each statement, circle the letter(s) that describe(s) your opinion. Remember to circle ONLY ONE of the five choices for each statement.*

**SA=Strongly agree A=Agree N=Neutral or undecided or no opinion D=disagree**

**SD=Strongly disagree**

1. Home economics courses should be as acceptable for male students as female students.

**SA A N D SD**

2. Women have as much ability as men to make major business decisions.

**SA A N D SD**

3. High school counsellors should encourage qualified women to enter technical fields like engineering.

**SA A N D SD**

4. Cleaning up the dishes should be the shared responsibility of husbands and wives.

**SA A N D SD**

5. A husband should leave the care of young babies to his wife.

**SA A N D SD**

6. The family home will run better if the father, rather than the mother, sets the rules for the children.

**SA A N D SD**

7. It should be the mother's responsibility, not the father's, to plan the young child's birthday party.

**SA A N D SD**

8. When a child awakens at night, the mother should take care of the child's needs.

**SA A N D SD**

9. Men and women should be given an equal chance for professional training.

**SA A N D SD**

SA=Strongly agree A=Agree N=Neutral or undecided or no opinion D=disagree  
SD=Strongly disagree

10. It is worse for a woman to get drunk than a man.

SA A N D SD

11. When it comes to planning a party, women are better judges of which people to invite.

SA A N D SD

12. The entry of women into traditionally male jobs should be discouraged.

SA A N D SD

13. Expensive job training should be given mostly to men.

SA A N D SD

14. The husband should be the head of the family.

SA A N D SD

15. It is wrong for a man to enter a traditionally female career.

SA A N D SD

16. Important career-related decisions should be left to the husband.

SA A N D SD

17. A woman should be careful not to appear smarter than the man she is dating.

SA A N D SD

18. Women are more likely than men to gossip about people they know.

SA A N D SD

19. A husband should not meddle with the domestic affairs of the household.

SA A N D SD

20. It is more appropriate for a mother, rather than a father, to change their baby's diapers.

SA A N D SD

SA=Strongly agree A=Agree N=Neutral or undecided or no opinion D=disagree  
SD=Strongly disagree

21. When two people are dating, it is best if they base their social life around the man's friends.

SA A N D SD

22. Women are just as capable as men to run a business.

SA A N D SD

23. When a couple is invited to a party, the wife, not the husband, should accept or decline the invitation.

SA A N D SD

24. Men and women should be treated the same when applying for student loans.

SA A N D SD

25. Equal opportunity for all jobs regardless of sex is an ideal we should all support.

SA A N D SD



**Appendix B**

**Identification Sheet**

**Instructions:** To ensure that we can contact you in the event that you are invited to the research project, please answer the following questions below:

1. Name: \_\_\_\_\_

2. Tel.: \_\_\_\_\_

3. Room # (if in residence): \_\_\_\_\_

4. Sex (please circle one):      Male      Female

5. Age: \_\_\_\_\_

6. In which course did you receive this questionnaire?

Course #: \_\_\_\_\_

Title of course: \_\_\_\_\_

Instructor's name: \_\_\_\_\_

**Appendix C**

**Reasons for Screening**

### Screening Information

Hi. My name is Lorraine MacLean. I'm a Psychology graduate student of Dr. Josephine Tan's. I am conducting research on person perception. I want to see how people respond to and perceive people who they have never met before. Before I do this research, I need to do a pre-screening to identify people who would be appropriate to participate in the main study.

In this pre-screening, you will be given a questionnaire to complete. It is very simple and easy to complete. The questionnaire asks for your personal opinions on role differences and similarities between men and women. The reason I am doing the pre-screening is to identify people with different opinions to participate in the person perception study. I want a good representation of people with different opinion scores. Depending on your score in the pre-screening, you may then be called and invited to participate in the person perception study. Please fill out the identification sheet stapled to the questionnaire so that I can contact you to participate in the study.

The person perception study is very simple. All you have to do is watch a video of a person talking to another. Then you'll be asked to provide your impressions and reactions to that person that you saw. All your responses will be kept anonymous and confidential. We will give you clear instructions on what to do in the study. The video and providing your responses will take only one hour of your time. If you participate in the person perception study, you will be given one grade point towards your Introductory Psychology grade. Do you have any questions?

I hope that as many of you as possible will volunteer for this pre-screening. As I've said, we need lots and lots of people. Thanks very much for your time.

**Appendix D**

**Description of the Study on Person Perception**

### **Description of Study**

This is a study on person perception. It examines how people perceive and respond to others they have never met before.

In this study, you will view a videotape of an interaction between two people in which only one of them will be shown on the screen. Before and after viewing the videotape, you will be asked to fill out questionnaires about your thoughts, your feelings and your perceptions of the person you have just viewed on the videotape. All of your answers will be completely anonymous and confidential. No one except the researchers, consisting of Dr. Josephine Tan, who is a Psychology professor and the project supervisor, and myself will have access to any of your responses on the questionnaires.

For your participation, you will receive one point towards your Introductory Psychology course mark. If at any point during the study you wish to leave, you may do so without any penalty. Do you understand what this study is about? Do you understand what we will be doing in this study? Do you have any questions?

**Appendix E**

**Informed Consent Form**

**CONSENT FORM**

1. Title of research: Person Perception
2. I, \_\_\_\_\_, consent to participate in this study on person perception which investigates how people respond and react to someone they have never met before.
3. The procedure of this project has been explained to me. I will be requested to view a videotape of a conversation between 2 people, one of whom will be visible on the screen. Before and after viewing the tape, I will be asked to fill out several questionnaires on my feelings, reactions, and thoughts.
4. All my responses will be kept anonymous and confidential.
5. If for some reason I wish to discontinue my participation in the study once the session has begun, I am free to do so without explanation or penalty even after I have signed this form.
6. If I wish to have a summary of the results of this study, I can request a copy.
7. I understand that I will receive one bonus point towards my Introductory Psychology course grade for my participation.

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (Print)  
(witness)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



**Appendix F**

**Information Sheet (Depressed Male Target)**

**INSTRUCTIONS:**

*In a little while, you will be watching a videotape of a person interacting with another individual. Before we videotaped the interaction, we asked this person some questions, including: "What are the thoughts and feelings you are experiencing right now before you meet your partner?". Below are the personal answers provided. Please read them CAREFULLY to know the person better before viewing the videotape.*

Name: *Donnie*

Sex: *Male*

Major: *Psychology*

Aspirations: *Im not really sure what I would like to do. I think Id like to go on in Psychology, but it's tough and Im not sure I can do it.*

**What are the thoughts and feelings you are experiencing right now before you meet your partner?**

	<u>Yes</u>	<u>No</u>
Bothered by things that don't usually bother me	/	
My appetite is poor	/	
Feeling the "blues"	/	
Low self-esteem	/	
Poor concentration	/	
Depressed	/	
Everything I do is an effort	/	
Hopeless about the future	/	
My life is a complete failure	/	
Fearful		/
My sleep is restless	/	
Unhappy	/	
Less talkative than usual	/	
Lonely	/	
People are unfriendly to me		/
I don't enjoy life	/	
Have had crying spells	/	
People don't like me	/	
I find that I cannot get "going"	/	

**WHEN YOU ARE FINISHED, PLEASE TURN THIS SHEET OVER.**

**Appendix G**

**Information Sheet (Depressed Female Target)**

**INSTRUCTIONS:**

*In a little while, you will be watching a videotape of a person interacting with another individual. Before we videotaped the interaction, we asked this person some questions, including: "What are the thoughts and feelings you are experiencing right now before you meet your partner?". Below are the personal answers provided. Please read them CAREFULLY to know the person better before viewing the videotape.*

Name: *Jennifer*

Sex: *Female*

Major: *Psychology*

Aspirations: *I'm not really sure what I would like to do. I think I'd like to go on in Psychology, but it's tough and I'm not sure I can do it.*

**What are the thoughts and feelings you are experiencing right now before you meet your partner?**

	<u>Yes</u>	<u>No</u>
Bothered by things that don't usually bother me	✓	—
My appetite is poor	✓	—
Feeling the "blues"	✓	—
Low self-esteem	✓	—
Poor concentration	✓	—
Depressed	✓	—
Everything I do is an effort	✓	—
Hopeless about the future	✓	—
My life is a complete failure	✓	—
Fearful	—	✓
My sleep is restless	✓	—
Unhappy	✓	—
Less talkative than usual	✓	—
Lonely	✓	—
People are unfriendly to me	—	✓
I don't enjoy life	✓	—
Have had crying spells	✓	—
People don't like me	✓	—
I find that I cannot get "going"	✓	—

**WHEN YOU ARE FINISHED, PLEASE TURN THIS SHEET OVER.**

**Appendix H**

**Information Sheet (Nondepressed Male Target)**

**INSTRUCTIONS:**

*In a little while, you will be watching a videotape of a person interacting with another individual. Before we videotaped the interaction, we asked this person some questions, including: "What are the thoughts and feelings you are experiencing right now before you meet your partner?". Below are the personal answers provided. Please read them CAREFULLY to know the person better before viewing the videotape.*

Name: Matthew

Sex: Male

Major: Psychology

Aspirations: I'm planning on applying to the Master's program in Psychology. I know it will be a lot of work, but I think I can do it.

**What are the thoughts and feelings you are experiencing right now before you meet your partner?**

	<u>Yes</u>	<u>No</u>
Bothered by things that don't usually bother me	—	✓
My appetite is poor	—	✓
Feeling the "blues"	—	✓
Low self-esteem	—	✓
Poor concentration	—	✓
Depressed	—	✓
Everything I do is an effort	—	✓
Hopeless about the future	—	✓
My life is a complete failure	—	✓
Fearful	—	✓
My sleep is restless	✓	—
Unhappy	—	✓
Less talkative than usual	—	✓
Lonely	—	✓
People are unfriendly to me	—	✓
I don't enjoy life	—	✓
Have had crying spells	—	✓
People don't like me	—	✓
I find that I cannot get "going"	✓	—

**WHEN YOU ARE FINISHED, PLEASE TURN THIS SHEET OVER.**

**Appendix I**

**Information Sheet (Nondepressed Female Target)**

**INSTRUCTIONS:**

*In a little while, you will be watching a videotape of a person interacting with another individual. Before we videotaped the interaction, we asked this person some questions, including: "What are the thoughts and feelings you are experiencing right now before you meet your partner?". Below are the personal answers provided. Please read them CAREFULLY to know the person better before viewing the videotape.*

Name: *Jackie*

Sex: *Female*

Major: *Psychology*

Aspirations: *In planning on applying to the masters program in Psychology. I know it will be a lot of work, but I think I can do it.*

**What are the thoughts and feelings you are experiencing right now before you meet your partner?**

	<u>Yes</u>	<u>No</u>
Bothered by things that don't usually bother me	—	/
My appetite is poor	—	/
Feeling the "blues"	—	/
Low self-esteem	—	/
Poor concentration	—	/
Depressed	—	/
Everything I do is an effort	—	/
Hopeless about the future	—	/
My life is a complete failure	—	/
Fearful	—	/
My sleep is restless	/	—
Unhappy	—	/
Less talkative than usual	—	/
Lonely	—	/
People are unfriendly to me	—	/
I don't enjoy life	—	/
Have had crying spells	—	/
People don't like me	—	/
I find that I cannot get "going"	/	—

**WHEN YOU ARE FINISHED, PLEASE TURN THIS SHEET OVER.**



**Appendix J**

**Depression Check Questionnaire**



- i. **Voice**  
1-----2-----3-----4-----5-----6-----7  
Very slow or monotonous Very lively
- j. **Facial expression**  
1-----2-----3-----4-----5-----6-----7  
Very pleasant Very unpleasant
- k. **Smiling**  
1-----2-----3-----4-----5-----6-----7  
Frowning or tearful Smiling fully or laughing
- l. **Head posture**  
1-----2-----3-----4-----5-----6-----7  
Head up Head hung
- m. **Shoulder posture**  
1-----2-----3-----4-----5-----6-----7  
Shoulder slumped Shoulder erect

***THANK YOU VERY MUCH FOR YOUR HELP! WE APPRECIATE IT THOROUGHLY.***

**Appendix K**

**Questionnaire A**  
**(Visual Analogue Mood Scales - before viewing videotape)**

**QUESTIONNAIRE A**

**INSTRUCTIONS:** Below you will find words which describe different kinds of moods and feelings. Each mood word is followed by a straight line which represents the range of mood between an absence of mood to extreme mood. Please indicate the degree of mood you are feeling right now- this moment in time by drawing a short line perpendicular to the horizontal line at the appropriate point.

**Example:** If the mood word is "frightened", and you are NOT frightened at all RIGHT NOW, you would mark a short line through the "not at all" end like this:

not  
at all | \_\_\_\_\_ extremely  
frightened

If you are TOTALLY frightened RIGHT NOW, you would mark a short line through the "extremely frightened" end like this:

not  
at all \_\_\_\_\_ | extremely  
frightened

If you are only 50% frightened RIGHT NOW, you would mark a short line HALFWAY along the horizontal line like this:

not  
at all \_\_\_\_\_ | \_\_\_\_\_ extremely  
frightened.

IF YOU HAVE ANY QUESTIONS, PLEASE RAISE YOUR HAND.

1. **Anxious**

not  
at all \_\_\_\_\_ extremely  
anxious

2. **Sad**

not  
at all \_\_\_\_\_ extremely  
sad

(please continue with the next page...)

3. **Hostile**

not  
at all \_\_\_\_\_ extremely  
hostile

4. **Impatient**

not  
at all \_\_\_\_\_ extremely  
impatient

5. **Relaxed**

not  
at all \_\_\_\_\_ extremely  
relaxed

6. **Happy**

not  
at all \_\_\_\_\_ extremely  
happy

7. **Friendly**

not  
at all \_\_\_\_\_ extremely  
friendly

PLEASE CONTINUE WITH THE NEXT QUESTIONNAIRE ONCE YOU HAVE  
FINISHED.

DO NOT RETURN TO THIS QUESTIONNAIRE ONCE YOU ARE DONE.

**Appendix L**

**Questionnaire B**  
**(Visual Analogue Mood Scales - after viewing videotape)**

**QUESTIONNAIRE B**

**INSTRUCTIONS:** Below you will find words which describe different kinds of moods and feelings. Each mood word is followed by a straight line which represents the range of mood between an absence of mood to extreme mood. Please indicate the degree of mood you are feeling right now- this moment in time by drawing a short line perpendicular to the horizontal line at the appropriate point.

**Example:** If the mood word is "**frightened**", and you are NOT frightened at all RIGHT NOW, you would mark a short line through the "not at all" end like this:

not  
at all | \_\_\_\_\_ extremely  
frightened

If you are TOTALLY frightened RIGHT NOW, you would mark a short line through the "extremely frightened" end like this:

not  
at all \_\_\_\_\_ | extremely  
frightened

If you are only 50% frightened RIGHT NOW, you would mark a short line HALFWAY along the horizontal line like this:

not  
at all \_\_\_\_\_ | \_\_\_\_\_ extremely  
frightened

**IF YOU HAVE ANY QUESTIONS, PLEASE RAISE YOUR HAND.**

1. **Anxious**

not  
at all \_\_\_\_\_ extremely  
anxious

2. **Sad**

not  
at all \_\_\_\_\_ extremely  
sad

(please continue with the next page...)



3. **Hostile**

not  
at all \_\_\_\_\_ extremely  
hostile

4. **Impatient**

not  
at all \_\_\_\_\_ extremely  
impatient

5. **Relaxed**

not  
at all \_\_\_\_\_ extremely  
relaxed

6. **Happy**

not  
at all \_\_\_\_\_ extremely  
happy

7. **Friendly**

not  
at all \_\_\_\_\_ extremely  
friendly

PLEASE CONTINUE WITH THE NEXT QUESTIONNAIRE ONCE YOU HAVE  
FINISHED.

DO NOT RETURN TO THIS QUESTIONNAIRE ONCE YOU ARE DONE.

**Appendix M**

**Questionnaire C**  
**(Desire For Future Interaction Questionnaire)**

**QUESTIONNAIRE C**

**INSTRUCTIONS:** The questions below refer to the person you have just viewed on the videotape. Please respond to the questions by circling the number on the scale following the question that best describes your answer.

**IF YOU HAVE ANY QUESTIONS, PLEASE RAISE YOUR HAND.**

1. **Would you like to meet this person again?**

1-----2-----3-----4-----5  
Definitely  
yes  
Definitely  
no

2. **Would you like to sit next to this person on a 3-hour bus trip?**

1-----2-----3-----4-----5  
Definitely  
yes  
Definitely  
no

3. **Would you be willing to work on a job with this person?**

1-----2-----3-----4-----5  
Definitely  
no  
Definitely  
yes

4. **Would you be willing to have this person eat lunch with you often?**

1-----2-----3-----4-----5  
Definitely  
yes  
Definitely  
no

5. **Would you invite this person to your home?**

1-----2-----3-----4-----5  
Definitely  
no  
Definitely  
yes

6. **Would you be willing to share an apartment with someone like this?**

1-----2-----3-----4-----5  
Definitely  
no  
Definitely  
yes

(please continue with the next page...)

7. **How likely would it be that this person could become a close friend of yours?**

1-----2-----3-----4-----5  
Very likely Very unlikely

8. **Would you be willing to have a person like this supervise your work?**

1-----2-----3-----4-----5  
Definitely yes Definitely no

9. **Would you ask this person for advice?**

1-----2-----3-----4-----5  
Definitely no Definitely yes

10. **How physically attractive do you think this person is?**

1-----2-----3-----4-----5  
Very unattractive Very attractive

11. **How socially poised do you think this person is?**

1-----2-----3-----4-----5  
Very poised Not poised at all

12. **How much would you approve of someone with a personality like this marrying a close relative of yours?**

1-----2-----3-----4-----5  
Not at all Very much

PLEASE CONTINUE WITH THE NEXT QUESTIONNAIRE ONCE YOU HAVE FINISHED.

DO NOT RETURN TO THIS QUESTIONNAIRE ONCE YOU ARE DONE.

**Appendix N**

**Questionnaire D  
(Femininity-Masculinity Scale)**

### QUESTIONNAIRE D

**INSTRUCTIONS:** Please rate the person you have just viewed on the video on the adjectives below by circling an appropriate number on the scale that accompanies each adjective.

1. **Ambitious**

1-----2-----3-----4-----5-----6-----7  
Agree completely Disagree completely

2. **Dependent**

1-----2-----3-----4-----5-----6-----7  
Agree completely Disagree completely

3. **Self-confident**

1-----2-----3-----4-----5-----6-----7  
Disagree completely Agree completely

4. **Sensitive**

1-----2-----3-----4-----5-----6-----7  
Agree completely Disagree completely

5. **Competitive**

1-----2-----3-----4-----5-----6-----7  
Disagree completely Agree completely

6. **Cries Easily**

1-----2-----3-----4-----5-----6-----7  
Disagree completely Agree completely

(please continue with the next page...)

7. **Assertive**

1-----2-----3-----4-----5-----6-----7  
Agree completely Disagree completely

8. **Submissive**

1-----2-----3-----4-----5-----6-----7  
Disagree completely Agree completely

9. **Makes decision easily**

1-----2-----3-----4-----5-----6-----7  
Disagree completely Agree completely

10. **Eager to soothe hurt feelings**

1-----2-----3-----4-----5-----6-----7  
Agree completely Disagree completely

PLEASE CONTINUE WITH THE NEXT QUESTIONNAIRE ONCE YOU HAVE  
FINISHED.  
DO NOT RETURN TO THIS QUESTIONNAIRE ONCE YOU ARE DONE.

**Appendix O**

**Questionnaire E**  
**(Post-experimental Questionnaire)**



**QUESTIONNAIRE E**

**Instructions:**

On the pages that follow are a series of questions about this study. Many of the questions are designed to make sure that you have properly understood the instructions. Several other questions are designed to help us understand your thoughts and feelings during the experiment. This type of information is of great value in interpreting the results of psychological research. Please turn the pages one at a time and DO NOT LOOK AHEAD TO QUESTIONS OTHER THAN THE ONE TO WHICH YOU ARE RESPONDING. DO NOT GO BACK TO A QUESTION ONCE YOU HAVE GONE ON TO THE NEXT ONE. You may begin.

**IF YOU HAVE ANY QUESTIONS, PLEASE RAISE YOUR HAND.**

1. What do you think is the purpose of this study?

- 2a. Why do you think you were asked to fill out the screening questionnaire before you participated in this study ? (It included items such as:  
*It is worse for a woman to get drunk than for a man.*

SA A N D SD)

- b. At what point in the study did this occur to you?

- 3a. Why do you think you were asked to view the videotape?

- b. At what point in the study did this occur to you?

4a. Do you think there was a reason that you were asked to view this particular person as opposed to another?  
Please circle one:                    YES                    NO

b. If yes, what do you think the reason was?

c. If yes, at what point in the study did this occur to you?

5a. Why do you think you were asked to complete the questionnaire which asked you to mark off the degree of mood you were feeling?

(Example of items:

1. **Anxious**

not  
at all \_\_\_\_\_ extremely  
anxious)

b. Were you aware that it is identical to an earlier questionnaire which you completed before you had the viewed the videotape? Please circle one:

YES

NO

c. If yes to (b) above, when did you become aware that they were the same?

d. Why do you think we had you fill out the same questionnaire twice?

e. When did you come to this conclusion?

- 6a. Why do you think you were asked to complete the Questionnaire which asked questions such as,

Would you like to meet this person again?

1-----2-----3-----4-----5  
Definitely  
yes  
Definitely  
no

- b. When did you come to this conclusion?

- 7a. Why do you think you were asked to fill out the Questionnaire which asked you to rate the person on the videotape on particular characteristics?

Item Example:

Ambitious

1-----2-----3-----4-----5-----6-----7  
Agree  
completely  
Disagree  
completely

- b. At what point in the study did this occur to you?



9a. Have you ever heard or read of a study of this sort?

b. If yes, what exactly have you heard or read?



10. If you have any comments or concerns regarding this study, please write them below.

**TURN OVER YOUR QUESTIONNAIRE WHEN YOU ARE DONE.  
PLEASE WAIT FOR FURTHER INSTRUCTIONS.**

**Appendix P**

**Debriefing**

**DEBRIEFING**

Before you leave, I would like to say something about this study to you. Psychologists have long been interested in the effects of people's moods on those around them. For example, how do people react to someone who is feeling sad? Generally, research finds that when a person experiences negative mood, the people around them also feel negatively and may not wish to have much interaction with them.

This study examines several things. Firstly, it looks at whether or not sad and normal moods affect how a person is perceived and reacted to. Hence you were asked for your social reaction and to rate the person on the video on different characteristics.

Secondly, the study also investigates whether the reactions depend on the sex of the person who is showing the mood and on the sex of the person who is reacting. Some researchers suggest that people are less tolerant of sad moods in men because of it is less appropriate for a man to show feelings, particularly sad moods which do not fit in with the stereotyped male role. However, whether this is true has yet to be determined because different research gives us conflicting findings.

Thirdly, the study determines whether people with different sex-role beliefs react differently to sad moods in men and women. Sex-role beliefs can be either traditional or egalitarian. A person with traditional sex-role beliefs thinks that men and women should engage in traditional roles. For example, men should look after the finances and women after the home. A person with egalitarian sex-role beliefs thinks that there should be no distinction between men's and women's roles. The reason that we are interested in sex-role beliefs is to find out whether a person with egalitarian sex-role beliefs is more tolerant of sad moods in men than another person with traditional sex-role beliefs. Perhaps, an egalitarian person who does not believe in sex role distinction between men and women may not react negatively to sad feelings in a man. Whether this hypothesis is true remains to be seen. The study has to be completed and the results analyzed before we know for sure.

Overall, it is important for us to know whether or not men are allowed to show feelings of sadness in society. It has implications for men coming out and getting help if they are psychologically distressed.

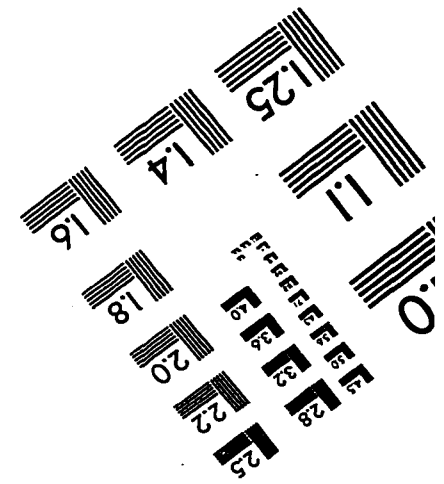
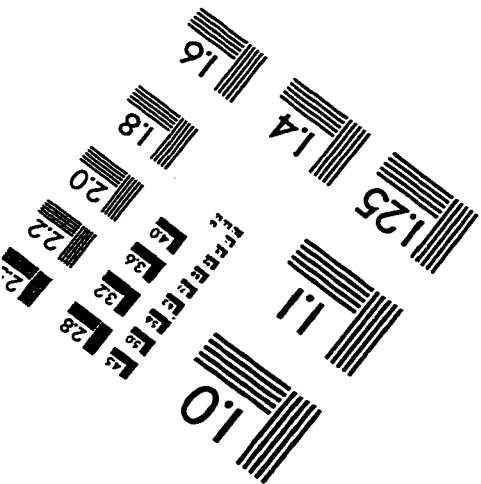
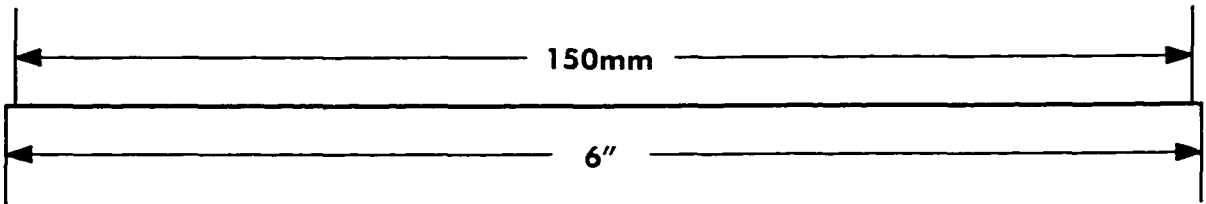
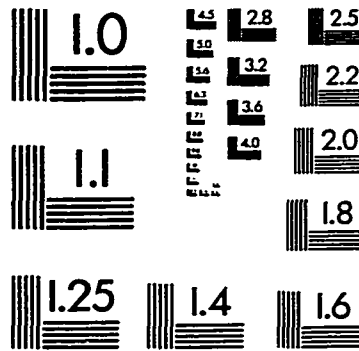
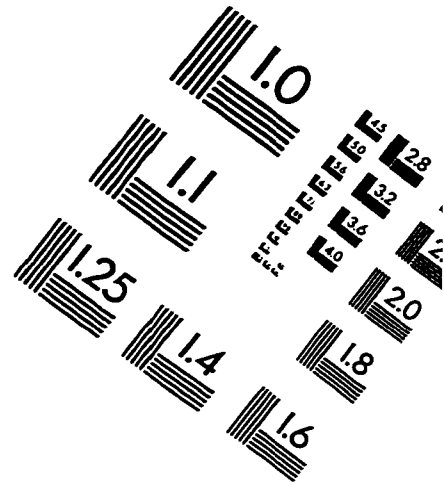
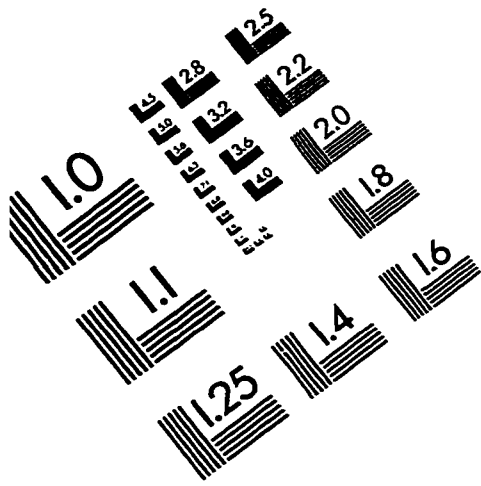
I want you to know that the person that you saw in the videotape was someone working with us specifically for this project. This person displayed a certain type of mood for you to see so that we can examine your reactions and perceptions. Do you have any questions at this point? Do any of you recognize or know the person in the video? *(If yes, detain these subjects at the end of the study and do further debriefing with them separately to protect the confidentiality of the person in the video.)*

I can provide a fuller description of this study after all the data has been completed and analyzed. If you are interested in receiving a copy of this study with its results, please write your name and address on this label and I will send it to you. *(Give mailing labels to interested participants and allow them to write).*

One last thing before you leave, I would like to ask you to please not say anything at all about this study to anyone. This is to protect the study. If people who will be participating in this study hear about it, they may start forming some expectations about it and this may influence their answers to the questionnaires. Then we won't be getting their honest answer. Should that occur, the entire study may be ruined and we will have to start all over again. So, no matter the temptation, could you please promise not to discuss this study with anyone to ensure its success? *(Pause for response).* Do you have any questions?

Thank you for your participation. It has been invaluable.

# IMAGE EVALUATION TEST TARGET (QA-3)



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