

THE RELATIONSHIP OF MASCULINE GENDER ROLE
STRESS TO EMOTIONAL EXPRESSIVENESS,
PSYCHOPHYSIOLOGICAL REACTIVITY, AND SOCIAL SUPPORT

by

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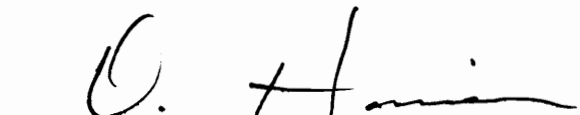
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(ABSTRACT)

There has been increasing concern that the cultural imposition of masculine gender role norms contributes to physical and mental health disorders among men. The construct of masculine gender role stress (MGRS) is a gender based perspective of stress which posits that masculine gender role cognitive schemata are employed by men to appraise potential threat in the environment and guide their coping responses. Heavy reliance on these schemata is believed to increase stress and restrict coping behavior. The current study examined the relationship of MGRS to the appraisal and psychophysiological and behavioral responses of males in situations demanding emotional expression. Sixty male college students scoring in the upper and lower third of the MGRS scale distribution responded to role play scenarios designed to elicit angry and tender emotional responses. Subjects rated how stressful they found the tasks to be. Ratings of the level of nonverbal and verbal expressiveness in subjects' responses were also obtained. Cardiovascular reactivity was measured during subjects' verbal and nonverbal responses. The relationship of MGRS to social

factors was examined by obtaining ratings of how likable subjects were while making their responses, and by having subjects respond to a social support questionnaire.

There was a nonsignificant trend for high MGRS subjects to appraise angry and tender emotional scenarios as more threatening, and to react to tender scenarios with greater increases in systolic blood pressure. There was a nonsignificant trend for low MGRS subjects to be more nonverbally expressive in both angry and tender scenarios. Low MGRS subjects were found to be significantly more satisfied with their social support. Contrary to prediction, there was a nonsignificant trend for high MGRS subjects to be more verbally expressive in tender scenarios, and high MGRS subjects were significantly better liked during their responses to tender scenarios; ratings of likability were highly correlated to verbal expressiveness ratings. Methodological problems which may have contributed to the overall lack of findings are discussed and suggestions are made for addressing these problems in future studies.

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The Relationship of Masculine Gender Role Stress
To Emotional Expressiveness,
Psychophysiological Reactivity, and Social Support

Gender role has been defined as those behaviors, expectations, and role sets which society has defined as either masculine or feminine (O'Neil, 1982).

Historically, men and women have been socialized to engage in the role associated with their biological sex, and not to engage in behaviors associated with the opposite sex. Although women's gender roles are becoming less traditional, men's gender roles are changing at a significantly slower rate (McBroom, 1984). In fact, it has been suggested that the values which characterize the masculine gender role have changed little over the past century and a half (Bernard, 1981; O'Neil, 1982). The masculine gender role has been described by several authors (David & Brannon, 1976; Goldberg, 1977; Levinson et al., 1978). Masculinity is associated with exercising power and control over others; avoidance and devaluation of feminine values; a need to exhibit toughness, self-reliance, and confidence at all times; daring, aggressive, and risk-taking behavior; obsession with achievement and success; a preference for logical and rational thought; homophobia; and restricted emotionality.

While there are many positive aspects of masculinity, there has been increasing concern regarding the negative impact that masculine gender role norms have on men. O'Neil (1982) has suggested that rigid gender role norms lead to gender-role conflict and strain because there is often a discrepancy between the ideal self-concept

culturally associated with gender, and the real self when it wishes to identify with opposite sex characteristics. O'Neil suggests that negative consequences which result from restrictive masculine gender role norms include an inability for men to disclose feelings, to be vulnerable, or to give up control in interpersonal relationships.

Solomon (1982) describes the negative effects of the masculine role as being an increased level of stress, lack of intimacy, social isolation, violence in the home, and divorce. Goldberg (1977) suggests that masculine norms are related to inadequate health care in men when they fail to pay attention to their physical and emotional needs because they fear that in doing so they will be perceived as feminine.

A crude measure of the negative effects of gender role is found in epidemiological data on sex differences in mortality, illness, and mental health problems. According to 1980 statistics on data collected in the U.S. (Verbrugge, 1985), females have a life expectancy seven years longer than males and the rate of death is higher for men than women at all ages and for all leading causes of death. Moreover, male mortality exceeded female mortality by 100% or more for the seven major causes of death. Compared to women, men suffer 50-60% more injuries at ages 17-44, and have higher rates of physical impairment at all ages. Men have higher prevalence rates for life-threatening chronic diseases such as coronary heart disease, atherosclerosis, and emphysema; and they are more likely than women to become permanently disabled due to chronic health problems (Verbrugge, 1985). Sex differences are also found in the prevalence of psychological disorders. In a large scale epidemiological study

(Robins et al., 1984), men were found to predominate in antisocial personality, and alcohol and drug abuse, while women were more prone to depression and phobias.

Both biological and psychosocial explanations of these sex differences have been proffered. Biological interpretations of the sex differential in physical disorders include the argument that males are less biologically durable than females, as evidenced by their greater vulnerability in utero, their greater mortality during childhood, and greater prevalence of x-linked congenital abnormalities (Stevenson & Kerr, 1967; Waldron & Johnston, 1976). There is also evidence to suggest that women are protected from cardiovascular morbidity by sex hormones (see Polefrone & Manuck, 1987; and Saab, 1989; for review of studies).

Recently researchers have focused on psychosocial explanations for sex differences in physical and mental disorder. Waldron and her colleagues (Waldron, 1976; Waldron & Johnston, 1976) point out that behavioral factors contribute to the etiology of all seven of the leading causes of death and that men engage in those lethal behaviors at a higher rate than women. For example, men's higher rate of smoking and alcohol consumption contribute to their excess mortality from heart disease, lung cancer, emphysema, cirrhosis of the liver, and accidents. Differences in unhealthful behaviors such as these may reflect the influence of masculine norms which encourage men to engage in behaviors such as smoking, drinking, working at hazardous jobs, driving fast, being adventurous, and acting unafraid. Waldron (1976) also argues that men's involvement in paid jobs, and their ambitious, competitive, and

hurried style of life contribute to their higher rate of death from coronary heart disease.

Likewise, it has been suggested that gender determined social roles are related to sex differences in the incidence of certain psychological disorders (Gove & Tudor, 1973). Higher prevalence of depression and anxiety disorders in women have been linked by some to subordinate, unassertive or "learned helplessness" gender role coping styles in women; and it has been suggested that men's greater involvement in violent crime including armed robbery, spouse and child abuse, and rape, suggest that, relative to women, men have lower thresholds for aggressive coping behavior (Widom, 1984). Higher prevalence of drinking among men has been related to masculine norms which encourage drinking and promote its use as a means to reduce stress without violating male norms.

Sex Differences in Stress

Stress is a concept which has been widely used to explain individual differences in vulnerability to physical and psychological disorder. Lazarus and Folkman (1984; Folkman & Lazarus, 1988) have developed a cognitive theory of stress which emphasizes the role of emotion, cognitive appraisal, and coping in determining the outcome of stressful encounters with the environment. According to Lazarus and Folkman (1984), stress is "a particular relationship between the person and environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). This relationship is

mediated by the processes of cognitive appraisal and coping. Cognitive appraisal involves evaluation of an event as being beneficial, threatening, or challenging. Folkman and Lazarus (1988) speak of two types of appraisal. Primary appraisal involves evaluation of what the person believes they have at stake in the encounter. In secondary appraisal, the person is concerned with what their options are for coping, and how the environment will respond to their actions. Appraisal of person-environment encounters are influenced by person variables which determine motivation. Examples of person variables include values, commitments, and goals; beliefs about oneself and the world, and knowledge regarding personal resources for coping, such as behavioral skills, financial means, and health. These individual differences explain why one individual may appraise a situation as threatening, while another will appraise the same situation as challenging. Coping consists of behavioral and cognitive efforts to manage the demands of the situation which has been appraised as stressful and the emotions which are generated by it. An individual's choice of coping strategy is influenced by secondary appraisal. The form of coping used, changes the person-environment relationship, which in turn impacts the individual's emotional response to the stressor.

Research on sex differences in variables related to the stress process suggest that men and women appraise and cope with environmental stressors differently. Sex differences in two such variables, psychophysiological reactivity and social support, are reviewed below.

Psychophysiological reactivity. Psychophysiological reactivity can be defined as changes in physiological parameters which occur when individuals are exposed to behavioral or psychological events which are appraised as challenging or threatening (Manuck & Krantz, 1984). Recently researchers have begun to focus their attention on neuroendocrine responses and cardiovascular responses to laboratory stressors, with the belief that excessive reactivity may have consequences which relate to processes underlying cardiovascular disorders. In general, research findings have supported the notion that excessive reactivity is harmful and may be related to the development of coronary heart disease (Krantz, Contrada, Hill, & Friedler, 1988). Consistent differences have been noted in males' and females' cardiovascular and neuroendocrine reactions to stressors. In their review of gender differences in neuroendocrine responsiveness, Polefrone and Manuck (1987) note that males show a more pronounced elevation in urinary excretion of epinephrine than do females, in response to laboratory stressors; this difference is especially apparent during achievement-related challenges. Males have also been found to exhibit greater systolic blood pressure than women, in response to laboratory and natural stressors, and higher resting systolic blood pressure (see Polefrone & Manuck, 1987; Saab, 1989; Stoney, Davis & Matthews, 1987 for review of studies).

It is interesting to note that the tasks which are typically used in reactivity studies involve either intellectual or physical performance of some type (e.g., reaction time tasks, cold pressor, concept formation tasks). Masculine gender role norms require

men to perform well in either type of situation. Men's greater reactivity in response to such tasks may be due to their appraisal of the tasks as more threatening because of their relevance to masculinity.

Social support. Social support refers to the presence of different types of support derived from one's social network. Social support can be instrumental or expressive, and can be conceptualized in terms of both quantity (i.e., number of people one interacts with, frequency of contact with others) and quality (i.e., perceptions and judgments about the goodness and adequacy of interpersonal contacts) (Wallston, Alagna, DeVellis, & Develli, 1983). Social support has been found to play an important role in the stress process. It has been prospectively linked with a lowered risk for mortality (Berkman & Syme, 1979; House, Robbins, & Metzner, 1982; Schoenbach, Kaplan, Fredman, & Kleinbaum, 1986) and there is evidence of a positive relationship between social support and prevalence of coronary heart disease (Blumenthal et al., 1987; Seeman & Syme, 1987;). Social support has also been found to mediate psychological responses to daily stress and subsequent mood disturbance (DeLongis, Folkman, & Lazarus, 1988; Kessler & McLeod, 1985).

Lazarus and Folkman (1984) suggest that social support be viewed as a form of coping competence, and that its availability in a time of crisis will depend on how well the individual has cultivated his or her social resources prior to that time of crisis. In a study examining the psychological correlates of social support receipt, Dunkel-Schetter, Folkman, and Lazarus (1987) found that the method with which

individuals coped with stressful events was a stronger correlate of social support receipt than all other factors considered, which included both person and appraisal variables. More specifically, coping through problem solving, support seeking, and positive reappraisal of the situation was associated with receipt of several types of support, while confronting the problem and distancing from the problem was not associated with receipt of social support. The authors suggest that some coping strategies are more successful than others at eliciting support because they communicate that support is needed, and they make it easy for others to provide support. On the other hand, strategies such as confrontation and distancing may drive others away or may signal that the person does not want support.

In keeping with Dunkel-Schetter and his colleague's findings on the relationship of coping to social support, one might speculate that gender role differentially influences social support in men and women through its effect on secondary appraisal of coping options and the environment's response to the coping strategy used. As several authors have pointed out (Burda, Vaux, & Schill, 1984; Vaux, 1985), femininity, with its emphasis on expressiveness, nurturance, supportiveness, and compassion, would be conducive to the formation of social networks which were highly supportive. In contrast, the masculine role, with its emphasis on independence, competence, rationality, and self-reliance, may tend to hinder the development and use of social support resources. More specifically, men may be less likely to engage in coping behaviors which signal a need and desire for support,

because they appraise this form of coping as unmasculine, while women would appraise such behavior as appropriate to their gender.

Studies of variations in social support across sex and gender role support this hypothesis by consistently showing that women, relative to men, receive more social support. Women report asking for and receiving significantly more social support than men, especially emotional support (Burda, et al., 1984; Butler, Giardano, & Neren, 1985; Stokes & Wilson, 1984); and women report having more sources of support than men (Dunkel-Schetter, et al., 1987). In addition, the frequency with which support is asked for and the amount of support which is perceived to be available or received has been found to be positively related to femininity (Butler et al., 1985); and, femininity and androgyny have been found to be positively related to amount of emotional support received (Burda et al., 1984); while masculinity has been found to be unrelated to social support in these studies. In addition, a relationship has been found, (Sarason, Sarason, Hacker, and Basham, 1985), between ratings of subjects' social skills and subjects' self-reported levels of social support. Moreover, women were consistently rated as being more socially competent than men in their interactions with other subjects during role-play scenarios in this study.

Masculine Gender Role Stress

It has been suggested that gender role plays an important role in the process of appraising and coping with stress, and that this notion is supported by sex and gender differences in psychophysiological reactivity and social support which favor women

and femininity. In recent years, Eisler (1990) and his colleagues have used Lazarus and Folkman's cognitive model of stress to develop a gender based perspective of stress, known as masculine gender role stress (MGRS), as a means by which to better understand the mechanisms which underlie stress related disorders in men. According to this concept, the social contingencies which reward masculine attitudes and behaviors, while punishing non-masculine attitudes and behavior, result in the development of masculine gender role values. These values correspond to Lazarus and Folkman's (1984) notion of person variables and are believed to determine appraisal processes. Depending upon the individual's socialization experience, there will be differences in the degree to which he is committed to masculine gender role values, and this level of commitment will influence his goals, what he values, what he believes about himself, and his recognition of the behavioral skills he possesses to cope with person-environment encounters. These masculine gender role related cognitions, which have been designated as masculine schemata, are believed to be critical in men's appraisal of person-environment relationships, and in their choice of coping responses. Certain situations are believed (Eisler & Blalock, 1991) to be appraised as more stressful by men, than women, because there is more at stake for men in those situations (primary appraisal). These situations include (a) situations in which feminine behavior is required, and/or (b) situations in which men judge themselves as being unable to fulfill the requirements of the male role.

It is also believed that men have learned to cope with these perceived stressors

differently than women, and that these differences are related to the effect of masculine gender role schemata on secondary appraisal. Recall that, Folkman and Lazarus' (1988), secondary appraisal involves the individual's evaluation of their options for coping, and how they believe the environment will respond to their actions. Masculine schemata are believed to influence secondary appraisal in that the individual who is highly committed to these schemata will consider fewer behaviors as acceptable coping options and will be concerned whether his environment will find his behavior within the bounds of approved masculine behavior. Thus, rigid adherence to masculine schemata is believed to bias, and distort the process of appraisal, resulting in the frequent appraisal of daily encounters as threatening. In addition, rigid adherence to masculine schemata biases the individual's appraisal of what is appropriate action to take to cope with the threatening stimulus, and in this way restricts coping. The end result is an increase in stress and dysfunctional coping patterns in these individuals, which is hypothesized to be related to higher rates of psychological and physical morbidity among men and their higher rate of mortality, relative to women.

MGRS scale. Eisler and Skidmore (1987) have developed a scale to measure MGRS (see Appendix G). The scale consists of 40 Likert scale items describing situations or events which have been rated to be significantly more stressful for men than women. In a study seeking preliminary validation and factor analysis of the MGRS scale (Eisler & Skidmore, 1987), the authors found that (a) the scale

significantly distinguished men from women; (b) MGRS scores were unrelated to global measures of sex-typed masculinity, and; (c) MGRS scores were significantly related to two other measures of self-reported stress, Siegel's (1986) Multidimensional Anger Inventory and the State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Factor analytic procedures resulted in five interpretable factors, with loadings that ranged from 0.33 to 0.70. These factors correspond to the following concerns among men:

1. Physical Inadequacy - "made up of items that reflect an inability to meet masculine standards of physical fitness, sexual prowess, and manly appearance".
2. Emotional Inexpressiveness - "reflects situations that require the expression of tender emotions (e.g., love, fear, hurt feelings, being seen crying)".
3. Subordination to Women - comprised of items which "place one in the position of being outperformed by women, having a female boss, letting a woman take control, or being with women who are more successful or who make more money".
4. Intellectual Inferiority - comprised of items on situations which "question one's rational abilities, or demonstrate uncertainty, lack of ambition, and indecisiveness".
5. Performance Failure - comprised of situations which "concern potential failures in two different spheres, work and sex", which, as the authors suggest, demonstrates that these activities are probably highly related in the male perception of achievement.

Construct validation studies. In addition to preliminary data indicating that men vary in their appraisal of situations which are relative to masculine values, there is

also evidence that men who vary in their appraisal, respond differently to such situations. As previously discussed, psychophysiological reactivity to behavioral or psychological challenges can be considered an indicant of stress, and has been found to differ among men and women. Eisler and his colleagues have produced evidence that individuals who are high in MGRS are more psychophysiological reactive when placed in situations which challenge masculinity. In an unpublished dissertation (Skidmore, 1987), undergraduate male students were exposed to two types of stressful tasks: the cold pressor task, and a masculine threat interview. The interview was composed of questions intended to tap the factors of the MGRS scale. Some examples of interview questions include, "Do women intimidate or frighten you?", and "Tell me about the last time you felt upset or hurt." The interview was conducted by a female confederate. Groups of individuals who scored in the high, medium, and low ranges of the MGRS scale were formed. Systolic (SBP) and diastolic blood pressure (DBP), and heart rate (HR) were taken as measures of psychophysiological reactivity to the stressors. Statistically significant differences in SBP were found between each group. A positive linear relationship between MGRS scores and SBP reactivity was found, with subjects in the high MGRS group showing the greatest reactivity. No differences in reactivity were found between the two types of stress situations.

In another study, Lash, Eisler, and Schulman (1989) tested the hypothesis that high MGRS males would be more physiologically reactive in a situation which called

for masculine behavior, than they would be in a gender-role neutral situation. Male undergraduate students were exposed to one of two sets of instructions prior to their exposure to the cold pressor task. In the low challenge condition, subjects were told that, in order to get physiological measures, the experimenter would need the subject to put his hand in the water until he was told to remove it. In the high challenge condition, subjects were instructed to keep their hands in the water as long as they could, and that this period would be timed. They were also told that individuals who were in good physical condition typically did well on the task. High MGRS males in the high challenge condition, exhibited greater SBP reactivity during the stressor and during the anticipatory period which preceded the task, than low MGRS males, while there was no difference between high and low MGRS males in the low challenge condition.

These studies suggest that level of psychophysiological reactivity to these tasks is directly related to the individual's tendency to appraise masculine tasks as stressful. There are also implications for the relevance of these findings to other psychophysiological reactivity research. Type A is a behavior pattern has been found to be a risk-factor for CHD which is independent of other risk factors. Characteristics of Type A behavior include task-oriented time urgency, aggressive approach to tasks, aggressive interpersonal style, hostility, anger, excessive desire to exert and main control over stressful aspects of the environment, and excessive job involvement. Type A individuals have consistently been found to react to laboratory

stressors with greater behavioral coping efforts and higher cardiovascular reactivity than Type B individuals. The similarities between Type A characteristics and masculine gender role have been noted by many (Matthews & Angulo, 1980; Murray, Bruhn, & Bunce, 1983; Waldron, 1978). It is possible that commitment to masculine values underlies these Type A/B differences suggesting that the construct of MGRS may be a more parsimonious approach to studying the influence of behavioral variables on CHD in men.

MGRS and Emotional Inexpressiveness

Gender differences in emotional expressiveness. One aspect of MGRS is that of emotional inexpressiveness. Recall that items which comprise this factor reflect situations which require the expression of "tender emotions", suggesting that men appraise situations which require self-disclosure of feelings such as hurt, fear, and love, as stressful.

Studies on sex differences in nonverbal expressiveness suggest that men have more difficulty than women being emotionally expressive. Research has shown that men's faces are less expressive than women's (Cherulnik, 1979), and men smile less than women (Duncan & Fiske, 1977). There is also some evidence that men exercise more control over their facial expressions in situations where strong affective responses would be expected (Cherulnik, 1979). Men have also been shown to be less accurate than women in judging the nonverbal expressions of others (Buck, Miller, & Caul, 1974; Buck, Miller, Savin, & Caul, 1972), and in expressing their

own emotions nonverbally (Hall, 1984).

Studies which have examined differences in verbally expressive behavior in men and women also support the notion that men are socialized to avoid expression of tender emotions, while women are not. By the time children reach high school, there is a significant difference between males and females in their expression of feelings. Females report that they reveal more intimate details about themselves (Allen & Haccoun, 1976; Rubin, Hill, Peplau, & Dunkel-Schetter, 1980; Grigsby & Weatherley, 1983), and that they are more expressive than males of emotions such as fondness, pleasure, and sadness (Balkwell, Balswick, & Balkwell, 1978), and love, happiness, and sadness (Balswick & Avertt, 1977). Males and females have been found to report no differences in the frequency with which they experience anger, fear, joy, and sadness, but males report less expression of fear, joy, and sadness (Allen & Haccoun, 1976), and expression of anger equal to that of women (Allen & Haccoun, 1976; Balswick, & Avertt, 1977; and Balkwell et al., 1978). Females have also been found to be more expressive of their feelings than males in the laboratory (Allen & Haccoun, 1976; Dosser, Balswick, & Halverson, 1983; Highlen & Gillis, 1978; Highlen & Johnston, 1979).

There is also evidence of a relationship between gender role orientation and intimate self-disclosure. Several studies have found that androgynous males (equal number of masculine and feminine characteristics) report they disclose more intimate details about themselves to others, than sex-typed (same sex characteristics) males

(Lavine & Lombardo, 1984); and androgynous males have reported greater ease of communication and greater confidence sharing than sex-typed and undifferentiated (neither masculine or feminine characteristics) males (Narus & Fischer, 1982).

Masculine men report more confidence sharing in other-sex relationships than in same-sex relationships, whereas androgynous men report equal confidence sharing in both types of relationships (Narus & Fischer, 1982). In studies examining self-disclosive behavior in the laboratory, masculinity has been found to be negatively related to intimacy and length of self-disclosure of male to male partners (Grigsby & Weatherley, 1983; Winstead Derlega, & Wong, 1984), while femininity has been found to be positively related to the same measures (Winstead et al., 1984).

Thus, it would appear that men and women differ in their willingness or ability to disclose tender feelings and that these differences are related to gender role. We have suggested (Eisler & Blalock, 1991) that these differences exist because of MGRS. That is men are more likely than women to appraise situations which require expression of tender emotion as stressful, and are likely to respond to such situations with less expressiveness than women. It is also believed that inexpressiveness among men due to MGRS affects other processes related to stress outcome, two of which are discussed below.

Emotional inexpressiveness and social support. It is proposed that lack of emotional expressiveness in men due to MGRS appraisal has a detrimental impact on men's social support networks by (a) inhibiting the formation of socially supportive

networks, due to lack of emotional communication and reciprocation with others, thus decreasing the availability of emotional support during times of stress, and; (b) decreasing the chance that individuals within social networks will recognize that the individual is in need of support, because the individual is unable to express emotional needs. As Lazarus and Folkman (1984) have noted, social support may be considered a form of coping competency in that its availability will depend, to a certain extent, upon the individual's ability to elicit support in times of stress. The ability to express fear and hurt feelings would certainly seem to be a prerequisite to getting help from others. If one were to apply this notion to the concept of MGRS, one might posit that men who are highly committed to masculine values appraise the choice of responding to emotional situations with self-disclosure of their feelings as being an unacceptable way of coping with the situation, because this behavior is incongruent with masculine dictates. Thus, MGRS may underlie men's difficulty with emotional expressiveness, and, consequently, their deficits in social support, relative to women.

Health implications of emotional inexpressiveness. Many share the belief that it is physically unhealthy to withhold expression of intense emotion. Clinical treatment of psychological and psychosomatic disorders is rooted in the notion that sharing one's feelings about emotionally upsetting events is healthy and useful in helping the individual recover from the experience. Recently, Pennebaker and his colleagues have gathered evidence supporting the notion that inhibition of emotional expression results in harmful physiological activity and an increase in psychosomatic health

problems. Evidence which supports these notions includes the finding of significantly lower skin conductance among male and female undergraduates who were highly disclosive when discussing a personally traumatic event, relative to individuals who were not disclosive (Pennebaker, Hughes & O'Heeron, 1987). In another study (Pennebaker, Kiecolt-Glaser, and Glaser, 1988), undergraduates were required to write about either traumatic experiences or superficial topics over a four day period. Dependent variables in this study were measures of immune functioning and health center visits. The results indicated that the students in the self-disclosive group had higher lymphocyte immune system response and fewer health center visits than those in the control group. Findings from these studies seem to indicate that lack of emotional expressiveness surrounding emotionally painful events may have adverse physiological effects. If MGRS appraisal in men causes them to limit self-disclosure of tender emotions, as has been previously suggested, then it is possible that men high in MGRS experience greater autonomic arousal overall as a result of their inexpressiveness.

Purpose of the Current Study

Several hypotheses regarding the effect of MGRS on emotional expressiveness and the subsequent effects on the stress process in men will be proposed. First, it is proposed that men are more likely than women to appraise situations which call for expression of tender emotion as stressful, because of powerful masculine gender role schemata which classify such behavior as feminine. Second, it is proposed that men

who rely heavily on masculine gender role schemata to guide their coping responses will have more concerns about appearing feminine and are thus more likely to discount expression of tender emotions as a coping option and limit their emotionally expressive behavior. Third it is proposed that emotional inexpressiveness among these men further increases the level of stress that they experience because (a) failure to express tender emotions hinders the formation of emotionally supportive social support networks, which ultimately has a negative impact on men's psychological and physical well being, and; (b) men's failure to disclose feelings such as hurt, guilt, and grief, results in an overall increase in autonomic arousal, which has a negative impact on physical health. The relationships between these variables are depicted in Figure 1.

The effect of MGRS on men's emotional expressiveness and social support has been addressed in one study. Sauer and Eisler (1990), compared the responses of high and low MGRS subjects to role play situations which had been devised to elicit tender (positive) and angry (negative) feelings. Subjects listened to tape recorded descriptions of the role play scenarios and were then required to respond to the scenarios for one minute, as if they were interacting with their best male friend. Low MGRS subjects were found to be significantly more nonverbally expressive of both positive and negative feelings. Low MGRS subjects were also more verbally expressive of positive emotions, while there were no differences between groups in verbal expressiveness during negative scenarios. High MGRS subjects were rated as

Situation Requiring Expression of Tender Emotions

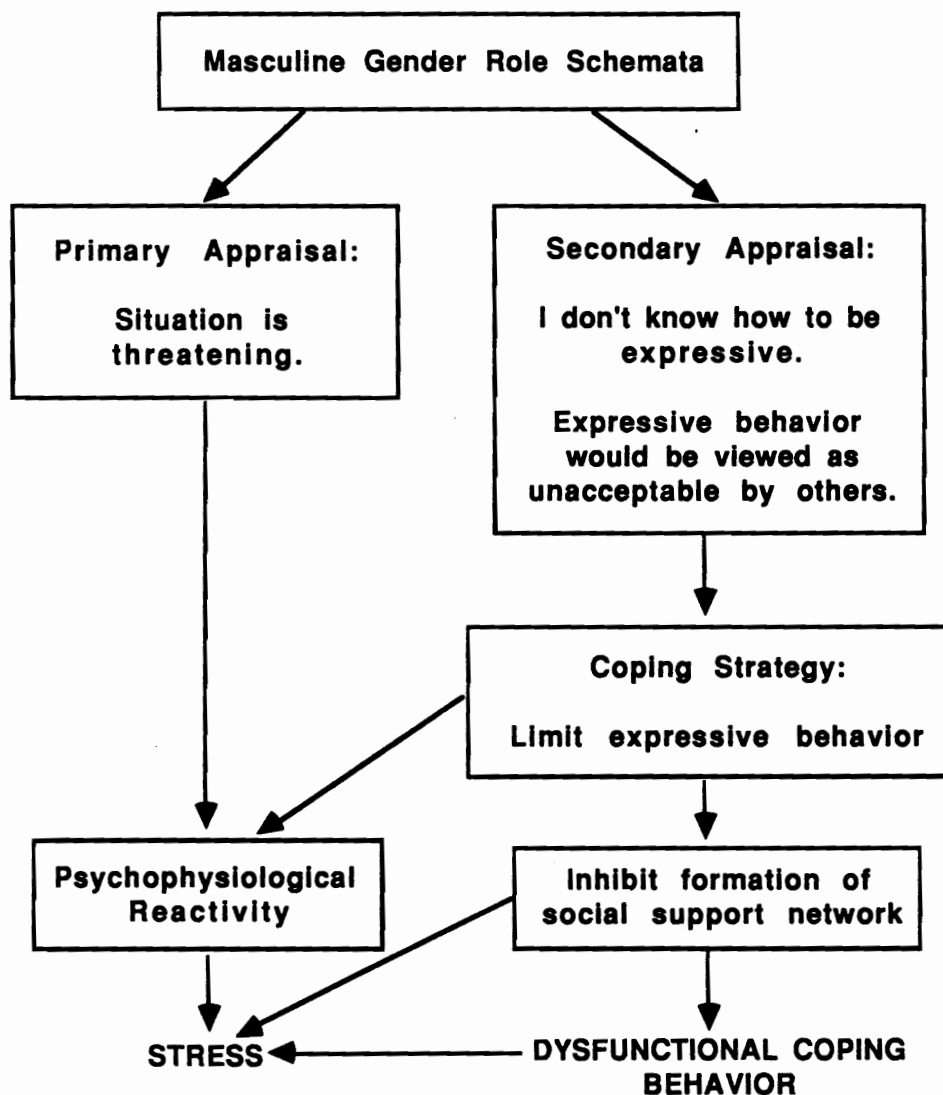


Figure 1. Effect of MGRS on appraisal, coping and stress processes in a situation requiring expression of tender emotions.

being more anxious than low MGRS subjects in positive scenarios, while subjects in the two groups were rated as similar in levels of anxiety during negative scenarios. There were no differences between high and low MGRS subjects in self-rated anxiety. Low MGRS subjects reported being more satisfied than high MGRS subjects, with their social support systems on the Social Support Questionnaire-Short Form (Sarason, Levine, Basham & Sarason, 1983). No differences were found in perceived social network size.

These findings provide preliminary support for the hypothesis that men's appraisal of gender related situations as stressful is related to emotional inexpressiveness and level of satisfaction with social support. However, the relationship of emotional inexpressiveness to social support is not addressed. A self-report measure of anxiety failed to reveal MGRS differences in the level of anxiety subjects experienced in the experimental situation. However, specific information regarding the appraisal process is not available. That is, it is not known whether subjects differed in their appraisal of what was at stake in the encounter (primary appraisal) or in their appraisal of their ability to cope with the demand for emotional expression (secondary appraisal). In addition, it is not known whether situations which demand expression of tender emotions will elicit greater psychophysiological reactivity in men who tend to appraise such situations as stressful.

The current study was intended to build upon Sauer and Eisler's (1990) findings regarding the relationship of MGRS to emotional expressiveness among men. In

addition, this study attempted to measure the relationship between emotional expressiveness and social support, as well as the effect of expressiveness on cardiovascular reactivity. According to the MGRS construct, individuals who are highly committed to masculine gender role schemata, relative to less committed individuals, should appraise a situation which calls for the expression of tender emotions, as threatening, since this behavior is considered "feminine" by our culture. In contrast, men who are highly committed to masculine ideals would not be expected to appraise a situation which called for the expression of anger as threatening, because expression of anger is considered masculine behavior in our culture. As a result of the appraisal of threat in tender emotional situations, one would expect highly committed men (high MGRS) to experience more stress, and greater increases in blood pressure and heart rate, relative to less committed men (low MGRS). One would not expect these differences in "angry" situations where no differences in appraisal are expected. Based on notions of MGRS, one would also expect differences in how high and low MGRS men coped with these situational demands. Men high in MGRS would be expected to respond with less verbal and nonverbal expression of emotion because of concerns that such behavior would be judged as feminine by others. Low MGRS men would be better liked because of their higher levels of emotionally expressive behavior. Carrying this one step further, one might predict that because low MGRS men are more skilled at expressing tender emotions, they are more likely to get a positive response from their social networks when they

are in need of emotional support, and as a result will score higher on measures of social support. Given this assumption, one would also expect a positive relationship between measures of expressiveness and social support.

The purpose of this study was to test these predictions. Male subjects were asked to role-play the way they would react to several emotionally expressive situations, using the role-play scenarios used in Sauer and Eisler's (1990) study. These role-play tasks included: (a) situations which called for expression of emotions which were positive in nature (e.g., caring, loving, need for sympathy or emotional support, admiration), and; (b) situations which called for expression of emotions which were negative in nature (e.g., hostility, anger, displeasure, irritation, hurt feelings). Dependent variables were intended to measure differences in high and low MGRS subjects' appraisal of what was at stake for them in the encounter (primary appraisal), and how confident they were that they could appropriately respond (secondary appraisal); emotional expressiveness; likability; and cardiovascular reactivity. Dependent variables were categorized as follows:

1. Measures of appraisal - a self-report measure was administered following responses to positive and negative role-play tasks, including:
 - a. Rating of how important it was to do well on the task (primary)
 - b. Rating of how threatening it was to do the task (primary)

- c. Rating of how well subjects thought they would perform before they made their responses (secondary)
2. Measures of cardiovascular reactivity
 - a. Systolic blood pressure (SBP)
 - b. Diastolic blood pressure (DBP)
 - c. Heart rate (HR)
3. Measures of expressiveness
 - a. Verbal expressiveness:
 - Length of response
 - Latency of response
 - Rating of intensity of verbal expressivity
 - b. Nonverbal expressiveness:
 - Frequency count of facial movements during responses
4. Measure of subject likability - rating of how likable the subject was during each response
5. Measure of social support - Social Support Questionnaire consisting of:
 - a. Perception of network size (SSQN)
 - b. Satisfaction with support received (SSQS)

Hypotheses

Based on the assumptions of the MGRS construct, the following hypotheses were generated:

1. High MGRS subjects were predicted to rate the positive scenarios as more threatening and to rate themselves as feeling they would respond more poorly to positive scenarios, relative to low MGRS subjects. No MGRS differences were expected in appraisal of negative scenarios.

2. High MGRS subjects were predicted to evidence greater increases in SBP, DBP, and HR during positive scenarios than low MGRS subjects. No differences were expected in high and low MGRS subjects' reactivity to negative scenarios.

3. High MGRS subjects were expected to be less expressive in response to positive scenarios. Therefore, relative to low MGRS subjects, it was predicted that high MGRS subjects would have shorter responses, and longer latency of response, and they were predicted to be rated as less verbally and nonverbally expressive. No differences were predicted in emotional expressiveness during negative scenarios.

4. Because high MGRS subjects were expected to be less revealing of their feelings during positive expressive scenarios, it was predicted that they would be rated as less likable, relative to low MGRS subjects, in the positive condition. No differences were expected in the negative expressive condition.

5. Because of high MGRS subjects' tendency to limit emotional expressiveness, it was predicted that high MGRS subjects would obtain lower scores on the Social

Support Questionnaire (Sarason et al., 1983), relative to low MGRS subjects.

6. Because of the proposed relationship between positive emotional expressiveness and social support, it was predicted that measures of positive verbal and nonverbal expressiveness would be positively related to social support.

Method

Subjects

Seventy-four male subjects were recruited from the Introductory Psychology experimental subject pool at Virginia Tech. Data from 44 subjects was collected during the fall semester of 1989; data from the remaining 30 subjects was collected during the spring semester of 1990. Data from two subjects were discarded because their role-plays were accidentally not video-recorded. Data from a third subject was discarded because the subject knew the confederate, and data from a fourth subject was lost. Of the remaining 70 subjects, 10 failed to return for their second baseline sessions. Therefore, data from 60 subjects was used in analyses of psychophysiological data; all other analyses included the remaining 70 subjects. Two subjects admitted to using tobacco and two subjects admitted to using caffeine within four hours of an experimental session.

Subjects were awarded extra credit points in their respective psychology courses for their participation. Subjects' ages ranged from 17 to 21 years.

Cutoff scores used to form high and low MGRS groups were based on a distribution of MGRS scores from a previous study (Skidmore, 1987). Subjects who

scored above a 94 on the MGRS scale fell within the 66 1/3 percentile of this distribution and were assigned to the high MGRS group ($N = 31$ total; $N = 25$ psychophysiological data). Subjects who scored below 80 fell within the 33 1/3 percentile and were assigned to the low MGRS group ($N = 39$; $N = 35$ psychophysiological data).

Apparatus

The Industrial and Biomedical Sensors Corporation's (IBS) Automatic Blood Pressure Monitor (model SD-700A) was used to measure systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR). Electrodermal activity (EDA) was measured using the J & J Psychophysiological Monitoring System.

Experimental Design

Hypotheses 1, 3, and 4 were tested using a 2 (MGRS) X 2 (Scenario Type) X 8 (Scenario) mixed factorial design. The between subjects factor was MGRS, with the two levels being high and low MGRS groups. The two within subject factors included type of scenario, which had two levels (positive and negative), and the individual scenarios one through four (positive) and five through eight (negative), which were nested within the factor of scenario type.

Hypothesis 2 was tested using a 2 (MGRS) X 2 (Scenario Type) mixed factorial design. The between subjects factor was MGRS (high and low groups) and the within subjects factor was scenario type (positive and negative). Hypothesis 5 was tested using a one-way fixed effects design with the between subjects variable being MGRS,

with two levels of high and low. Hypothesis 6 was tested with Pearson correlation statistics.

Role Play Scenarios

Expressive behaviors were measured using simulated dyadic interactions between subjects and their best male friends. A male confederate was present in each of the imagined situations to role-play the imagined friend. Subjects were presented with four scenarios which were intended to elicit expression of tender, positive emotions such as appreciation, liking, need for caring and sympathy, approval, love, and praise; and four scenarios which were intended to elicit negative emotions such as hostility, anger, irritation, hurt, displeasure, and disappointment (see Appendix A for text of scenarios).

The eight scenarios were chosen from an original pool of five positive and five negative scenarios. Twenty-seven males and thirty-six females rated the 10 scenarios on the extent to which the scenarios would elicit, from the person being spoken to, a positive, neutral, or negative emotional response. The four scenarios with the most positive ratings and four scenarios with the most negative ratings were picked. Ratings were made on a scale of -5 to +5, with -5 being very negative, 0 being neutral, and +5 being very positive. Mean ratings for the four positive scenarios were:

	<u>Female</u>	<u>Male</u>	<u>Combined</u>
Scene 1	3.66	2.99	3.33
Scene 2	4.37	3.66	4.02
Scene 3	3.93	3.99	3.96
Scene 4	3.58	3.15	3.37

Mean ratings for the four negative scenarios were:

	<u>Female</u>	<u>Male</u>	<u>Combined</u>
Scene 1	-4.20	-2.90	-3.55
Scene 2	-3.64	-2.95	-3.30
Scene 3	-4.00	-3.68	-3.84
Scene 4	-4.35	-3.36	-3.86

Dependent Measures

Measures of Appraisal

Following their responses to positive and negative scenarios, subjects answered the following questions on a 9-point Likert scale (see Appendix D):

Question 1. Please rate how important you felt it was to do well on this task.

Question 2. Please rate how threatening it was to do this task.

Question 3. Please rate how well you thought you would perform just before you made your response.

Measures of Cardiovascular Reactivity

SBP, DBP, and HR were taken during each of the subjects responses to the eight

scenarios. Baseline measures of these physiological parameters were taken during a second session, approximately two to five days following the experimental session. Baseline measures were used to calculate reactivity in one of two ways: a) as a covariate of physiological responses during role-plays in analyses of covariance, or b) as a value which was subtracted from physiological responses during role-plays to obtain change scores.

Measures of Expressiveness

Measures of expressive behavior were obtained from videotaped recordings of role-played interactions. Two female undergraduate research assistants, who were blind to subjects' MGRS group status, gathered measures of verbal and nonverbal behavior, including the following:

Verbal expressiveness ratings. Verbal expressiveness was defined as the direct statement of an appropriate emotion by the subject. Raters rated each response on a five-point Likert scale. Ratings were based on number of direct and indirect statements made regarding how subjects felt in each scenario. Positive and negative scenarios were rated separately. (See Appendix C for Expressivity Scale and criteria used to make ratings.) Rater one rated the responses of all subjects; this data was used in the analyses of subject performance. Rater two provided a reliability check on every third subject. The reliability coefficient for positive scenarios was .73, and .50 for negative scenarios. Percent agreement between the two raters was 95% on positive scenario responses, and 97% on negative scenario responses.

Length of response. One of the two raters measured the length of response, which was defined as the amount of time, in one-hundredths of a second, which elapsed from the first to the last word spoken by the subject.

Latency of response. Latency of response was defined as the amount of time, in one-hundredths of a second, which elapsed from the last word of the audiotaped description of the scenario to the first word the subject spoke.

Nonverbal expressiveness ratings. Nonverbal expression was defined as movement of the facial muscles from a non-neutral position. Scores for nonverbal expression were based on the percentage of time the subject engaged in movement of the facial muscles during the time he made his response. Subjects' verbal responses were divided into 1 second blocks. Raters coded either an occurrence or nonoccurrence of facial movement from a non-neutral position for each 1 second interval. (See Appendix B for coding criteria.) Scores were calculated by dividing the number of intervals in which facial movement occurred, by the total number of 1 second intervals. Rater one coded the responses of all subjects; this data was used in the analysis of subjects' performance. Rater two independently coded the responses of every third subject. Interrater reliability was calculated by dividing number of agreements by number of agreements plus disagreements. Reliability for positive scenarios was .84, and .88 for negative scenarios. Overall reliability was .87.

Measure of Subject Likability

Raters rated each subject response on a 7-point Likert scale, for the degree to

which the response would cause a listener to like or dislike the subject (see Appendix E). This measure was intended to reflect the effect a subject would have on individuals if he were in an emotional situation similar to the one described in the scenarios. Rater one rated the responses of all subjects, providing data which was used in the analyses. Rater two provided a reliability check on every third subject. A reliability coefficient of .55 was obtained for positive scenarios, and .62 for negative scenarios. Percent agreement between raters was 97% on positive scenario responses, and 91% on negative scenario responses.

Measure of Social Support

The Social Support Questionnaire (SSQ) (Sarason, et al., 1983), which yields scores for perceived number of social supports (SSQN) and satisfaction with available social support (SSQS), provided a measure of subjects' perceptions regarding number of individuals in their social support networks and satisfaction with support derived from their networks.

Procedure

Questionnaire Session

Subjects were recruited for a questionnaire session which lasted approximately one hour. During this session, subjects filled out the informed consent form (see Appendix F), the MGRS Scale (Appendix G), the SSQ (Appendix H), and a health questionnaire (Appendix I) which was used to screen subjects for health conditions which would contraindicate their participation in the study. Subjects were told that

some individuals would be contacted by phone and invited to continue participating in the study. Subjects were given instructions regarding how they should come prepared for sessions (e.g. no alcohol, caffeine within one hour of session), and were provided with directions for how to get to the laboratory. Subjects whose MGRS scores fell within the desired ranges were contacted within two to three days, and scheduled for the two experimental sessions.

Experimental Sessions

The protocol for the experimental sessions can be found in Appendix J. During the fall semester, experimental sessions were conducted by four undergraduate research assistants. Two female assistants (experimenter) were responsible for giving the subject instructions regarding procedure, and for collecting behavioral and physiological measures. Two male assistants (confederate) played the role of the subject's imagined best friend during role-play scenarios. During the spring semester, experimental sessions were conducted by a female experimenter who had assisted during the previous semester, and a new male confederate. Second session baseline measures were taken by female and male assistants.

Briefly, the procedure for this session included the following. The experimenter brought the subject into the laboratory, seated him, and obtained information regarding the subject's use of alcohol, caffeine, nicotine, and cold medications during the 24 hours prior to the session. The blood pressure cuff and respiration equipment were placed on the subject. The confederate was brought into the room at this time.

The experimenter then explained the procedure for the role-play scenarios to the subject. The subject was instructed to imagine that the confederate was his best male friend, and to respond to each of the role-play scenarios as if he were interacting with that friend. The subject was then asked to respond to two practice scenarios, and was given corrective feedback when needed.

The experimenter turned on the video-recording equipment at this time and began taking physiological measures. Physiological data was recorded once every minute. The experimenter looked for the first three consecutive SBP readings which fell within 5 mm Hg of each other, at which time baseline was considered to have been established. The experimenter then began tape-recorded descriptions of the first set of scenarios.

Subjects responded to either four positive or four negative scenarios, after listening to each scenario description. The order of presentation of positive and negative scenarios was counterbalanced to avoid ordering effects. Subjects were asked to respond to the three questions which comprise the self-report stress measure directly following their responses to the four negative and to the our positive scenarios. Following presentation of the first four scenarios, subjects were told to sit quietly and relax. During this time, baseline was reestablished using the same procedure used to establish the first baseline. Subjects were then asked to respond to the second set of scenarios. After reestablishing a third baseline, subjects were asked to describe a traumatic and stressful event which had occurred in their lives. This

question was part of an unrelated study. A final baseline was established to ensure that subjects' arousal levels had returned to normal before leaving the laboratory. Physiological recording devices were then removed and the subject was debriefed.

Subjects returned to the laboratory two to five days later for the second baseline session. Subjects were again questioned regarding their use of alcohol, caffeine, nicotine, and cold medications during the previous 24 hours. Baseline physiological measures were then taken, using the same criteria previously described.

Results

Statistical Designs

Measures of response duration, verbal and nonverbal emotional expression, and subject likability were analyzed in a series of 2 (MGRS) X 2 (Scenario Type) X 8 (Scenario) analyses of variance (ANOVA), with MGRS being a between subjects variable, scenario type being a within subjects variable, and scenario being a within subjects variable nested within scenario type.

Measures of SBP, DBP, and HR were analyzed in a series of 2 (MGRS) X 2 (Scenario Type) X 8 (Scenario) analyses of covariance (ANCOVA), treating the baseline level of the dependent measure as a covariate, and with MGRS being a between subjects variable, scenario type being a within subjects variable, and scenario being a within subjects variable nested within scenario type. Covariate procedures were used in order to reduce error variance attributable to the covariate, thus increasing the power of the analyses. However, least squares means, which provided

tests of simple effects in this analysis, were nonestimable in an ANCOVA. Therefore the following procedure was devised in order to produce means. Reactivity to scenarios was calculated by subtracting baseline values from values obtained during responses to scenarios, to arrive at a change score for each of the eight scenarios. Change scores were analyzed with 2 (MGRS) X 2 (Scenario Type) X 8 (Scenario) ANOVAs. Covariate procedures produced the same results as ANOVA procedures which employed change scores as the unit of measurement. Results are presented on ANOVA procedures.

Responses to each of the three questions in the self-report ratings of stress were analyzed using 2 (MGRS) X 2 (Scenario Type) ANOVAs, with MGRS being a between subjects variable and scenario type a within subjects variable. Differences between MGRS groups' scores on the SSQ were examined using one-way ANOVAs.

Manipulation Check

Subject ratings of how threatening they found the role-play tasks to be were examined to determine the level at which subjects were challenged by the experimental task. Subjects rated how threatening it was to respond to positive and negative scenario tasks separately, immediately following their responses. Ratings were made on a Likert scale of 1 to 9, with 1 being not threatening, 5 being moderately threatening, and 9 being very threatening. The overall rating of threat for positive scenarios was 3.56, and 3.33 for negative scenarios. Thus, there is some question as to how challenged and/or engaged subjects were by the role-play tasks.

Raw Data

Means and standard deviations for all dependent measures can be found in Appendixes K through P.

Appraisal

According to Hypothesis 1, high MGRS subjects were expected to appraise positive scenarios as more threatening and to appraise themselves as less capable of responding to those situations than low MGRS subjects. ANOVA results for the appraisal measure are presented in Table 1. No effects were found on subject ratings of how important it was to do well on the task. There was a trend toward an MGRS main effect on the second question [$F(1,68)$, $p < .11$], indicating that high MGRS subjects ($M = 3.82$) rated the task of responding to positive and negative scenarios as more threatening than low MGRS subjects ($M = 3.07$). No other effects were found for the rating of threat.

There was no evidence to support the prediction that high MGRS subjects would appraise themselves as less capable of responding to positive scenarios, as no MGRS main effect or interaction was found on subjects' ratings of how well they thought they would perform prior to making their responses to the scenarios. A main effect for scenario type was found on the this question [$F(1,67)$, $p < .01$], indicating that all subjects thought, prior to making their responses, that they would perform better in the negative scenarios ($M = 5.41$) than the positive scenarios ($M = 4.95$).

Table 1

ANOVA Results for Measure of Appraisal

MGRS Main Effects

Dependent Variable	<u>MGRS Group</u>	
	Low	High
Rate how important it was to do well on task	6.29	6.63
**Rate how threatening it was to do task	3.07	3.82
Rate how well you thought you would perform	5.33	5.03

Scenario Type Main Effects

Dependent Variable	<u>Scenario Type</u>	
	Positive	Negative
Rate how important it was to do well on task	6.55	6.37
Rate how threatening it was to do task	3.56	3.33
* Rate how well you thought you would perform	4.95	5.41

* $p < .01$ ** $p < .11$

Note. Mean ratings on a Likert scale of 1 to 9

Cardiovascular Reactivity

Baseline. Means on baseline cardiovascular measures are presented in Table 2. A 2 (MGRS) X 3 (Condition) repeated measures ANOVA was run, with a repeated factor of Condition having the three levels of baseline, positive scenario type, and negative scenario type. No significant MGRS X Condition interactions were found, indicating there were no differences in the baseline measures of high versus low MGRS groups which may have confounded change score results.

Systolic blood pressure. As a result of their appraisal of positive scenarios as being more stressful, and their attempts to inhibit expression of tender emotion, high MGRS subjects were expected (Hypothesis 2) to evidence greater increases in SBP, DBP, and HR during their responses to positive scenarios, than low MGRS subjects. Results for measures of cardiovascular reactivity are presented in Table 3.

Some support for the prediction that high MGRS subjects would evidence greater SBP reactivity during positive scenarios than low MGRS males was found in a nonsignificant trend toward an MGRS X Scenario Type interaction [$F(1,58) = 2.14$, $p < .14$]. Results of planned simple effects tests (Table 4) indicated that high MGRS subjects reacted to positive scenarios with greater increases in SBP ($M = 18.72$) than low MGRS subjects ($M = 16.77$), $p < .10$, while reactivity to negative scenarios was approximately the same in both groups. This trend is presented in Figure 2. No main effects for MGRS or scenario type were found for SBP.

Diastolic blood pressure. No effects were found for DBP.

Table 2

Mean Baseline for Cardiovascular Measures As A Function of MGRS Group

Dependent Variable	MGRS Group	
	Low	High
SBP	124.80	124.48
DBP	68.91	69.89
HR	73.49	73.64

Table 3

ANOVA Results for Measures of Cardiovascular ReactivityMGRS Main Effects

Dependent Variable	<u>MGRS Group</u>	
	Low	High
SBP	16.83	17.57
DBP	11.16	9.94
HR	7.76	9.60

Scenario Type Main Effects

Dependent Variable	<u>Scenario Type</u>	
	Positive	Negative
SBP	17.74	16.65
DBP	9.58	9.58
*HR	7.18	10.18

*p < .01

Note. Values represent mean change from baseline

Table 4

Simple Effects Comparison Results for Trend Toward MGRS by Scenario Type
Interaction On Systolic Blood Pressure

Scenario Type	MGRS Group		p
	Low	High	
Positive	16.77	18.72	.10
Negative	16.89	16.41	.70
p	.91	.07	

Note. Values represent mean change in SBP from baseline

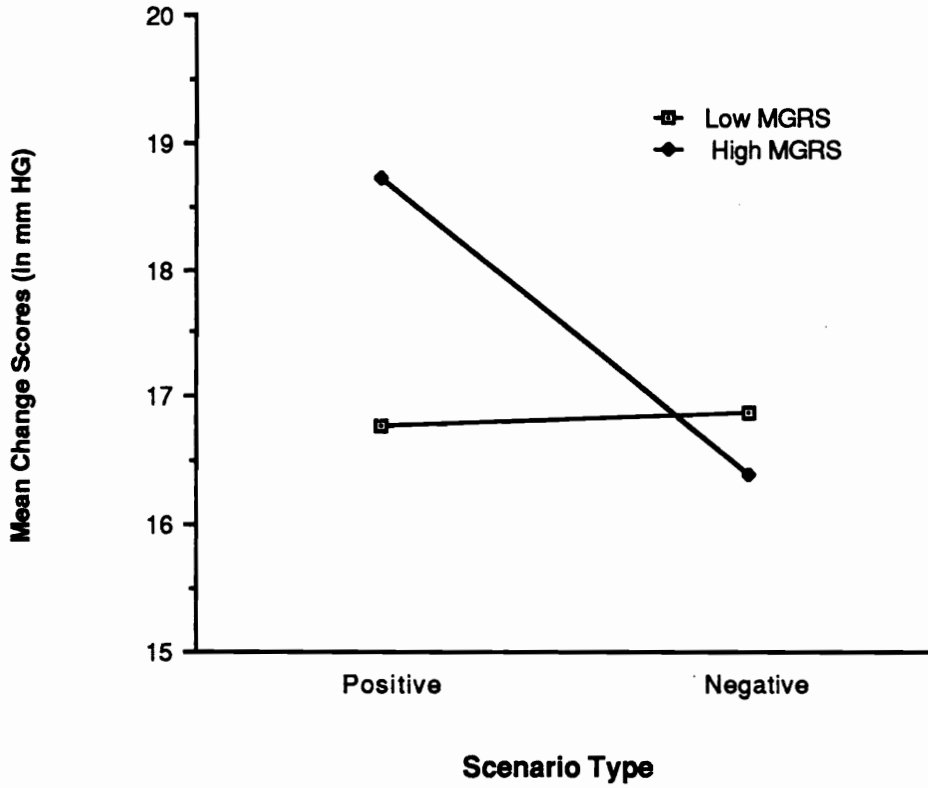


Figure 2. MGRS x scenario type trend for mean SBP change scores.

Heart rate. Results for HR did not support the hypothesis that high MGRS subjects would evidence greater HR reactivity during positive scenarios, as no MGRS X Scenario interaction was found. A main effect for scenario type was found [$F(1,56) = 8.60, p < .01$], indicating both high and low MGRS subjects responded to negative scenarios with higher HR reactivity ($M = 10.18$) than to positive scenarios ($M = 7.18$).

Peak values. In order to rule out the possibility that MGRS differences were masked by averaging across the four change scores taken during positive and negative scenarios, differences in high and low MGRS subjects' peak SBP, DBP, and HR were examined, in a series of 2 (Scenario Type) X 2 (MGRS) repeated measures ANOVAs. Means are presented in Table 5. No significant effects were found.

Emotional Expressiveness

According to Hypothesis 3, high MGRS subjects were predicted to be less verbally and nonverbally expressive of emotion during their responses to positive scenarios than low MGRS subjects because of their greater concerns about appearing feminine should they express tender emotions, and because of their appraisal of their ability to respond to positive scenarios. It was predicted that high MGRS subjects' inhibited emotionality during positive scenarios would be evidenced by longer response latencies, shorter responses, and lower verbal and nonverbal emotional expressiveness ratings. ANOVA results for measures of expressiveness are presented in Table 6.

Table 5**Means for Peak Cardiovascular Reactivity As a Function of MGRS Group and Scenario Type**

Dependent Variable	<u>MGRS Group</u>	
	Low	High
SBP		
Positive	152.93	149.79
Negative	156.78	152.52
DBP		
Positive	96.30	99.34
Negative	107.23	104.97
HR		
Positive	95.53	96.28
Negative	99.18	103.35

Table 6

ANOVA Results for Measures of Expressiveness

MGRS Main Effects

Dependent Variable	MGRS Group	
	Low	High
Verbal Expressiveness	2.44	2.58
Length of Response	9.67	9.06
Latency of Response	2.60	2.42
**Nonverbal Expressiveness	33.74	26.47

Scenario Type Main Effects

Dependent Variable	Scenario Type	
	Positive	Negative
*Verbal Expressiveness	2.75	2.28
*Length of Response	10.58	8.15
*Latency	2.94	2.08
Nonverbal Expressiveness	30.31	29.89

***p < .001 **p < .12**

Note. Mean verbal expressiveness scores from a Likert scale of 1 to 5 where 1 = not expressive, and 5 = very expressive

Note. Means on latency and length are in number of seconds

Note. Means on nonverbal expressiveness represent percent occurrence of facial movement

Length of response. The prediction that high MGRS subjects would have shorter responses to positive scenarios than low MGRS subjects, was not supported as no MGRS X Scenario interaction was present. A main effect for scenario type was found [$F(1,440) = 40.94, p < .001$], indicating that both high and low MGRS subjects responded for a longer period of time to positive scenarios ($M = 10.58$) than negative scenarios ($M = 8.15$).

Latency of response. No MGRS X Scenario interaction, or MGRS main effect was found. A main effect was found for scenario type [$F(1,443) = 37.50, p < .001$], indicating all subjects hesitated for a longer period of time before responding to positive scenarios ($M = 2.94$) than negative scenarios ($M = 2.08$).

Verbal expressiveness ratings. High MGRS subjects were predicted to be less verbally expressive in positive scenarios than low MGRS subjects. A trend, opposite of the predicted direction, was found for an MGRS X Scenario Type interaction [$F(1,66) = 2.33, p < .13$]. This trend is presented in Figure 3. Planned simple effects comparisons (Table 7) indicated that high MGRS subjects ($M = 2.86$) were more verbally expressive than low MGRS subjects ($M = 2.63$), in their responses to positive scenarios, $p < .02$, while both groups were equally expressive in their responses to negative scenarios. A scenario type main effect was found [$F(1,445) = 46.31, p < .001$], indicating that subjects were more verbally expressive of their emotions in the positive scenarios ($M = 2.75$) than in the negative scenarios ($M = 2.28$). No other effects were found.

Table 7

Simple Effects Comparison Results for Trend Toward MGRS by Scenario Type
Interaction on Verbal Expressiveness Ratings

Scenario Type	<u>MGRS Group</u>		p
	Low	High	
Positive	2.63	2.86	.02
Negative	2.27	2.29	.80
p	.001	.001	

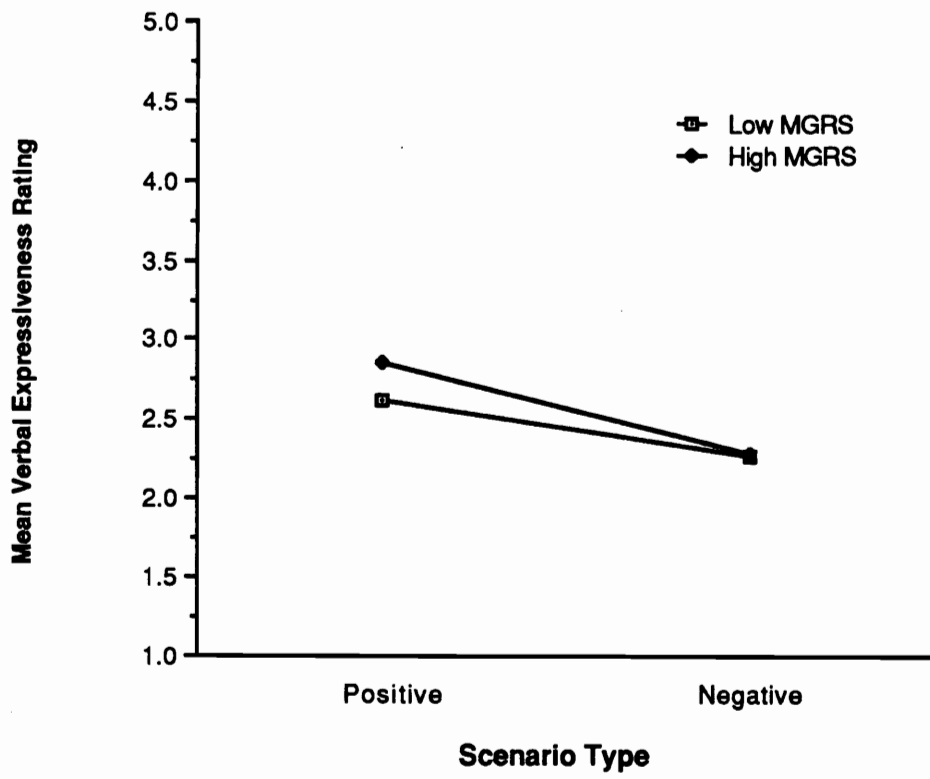


Figure 3. MGRS x scenario type trend for verbal expressiveness ratings.

Nonverbal expressiveness. A nonsignificant trend toward an MGRS main effect was found [$F(1,67) = 2.48, p < .12$], indicating that low MGRS subjects were more nonverbally expressive than high MGRS in their responses to both positive and negative scenarios. No other effects were found.

Subject Likability

ANOVA results for subject likability ratings are presented in Table 8. Based on the prediction that high MGRS subjects would be less expressive of their feelings during their responses to positive scenarios, it was predicted that high MGRS subjects would be rated as less likable during their positive scenario responses. This hypothesis was not supported as a significant MGRS X Scenario Type interaction, opposite of the direction which was predicted, was found [$F(1,66) = 5.46, p < .02$]. Planned simple effects comparisons (Table 9) indicated that high MGRS subjects ($M = 4.67$) were rated as significantly more likable than low MGRS subjects ($M = 4.41$) during their responses to positive scenarios, $p < .04$, while differences between the two groups were nonsignificant during their responses to negative scenarios, $p < .20$. This interaction is depicted in Figure 4. A main effect for scenario type was also found, [$F(1,66) = 149.82, p < .001$], indicating that subjects were rated as more likable when responding to positive scenarios ($M = 4.54$) than when responding to negative scenarios ($M = 3.46$).

Social Support

It was predicted, in Hypothesis 5, that high MGRS subjects would have smaller

Table 8

ANOVA Results for Measure of Subject Likability

MGRS Main Effect

	<u>Low</u>	<u>High</u>
Likability	3.98	4.02

Scenario Type Main Effect

	<u>Positive</u>	<u>Negative</u>
*Likability	4.54	3.46

*p < .01

Note. Mean scores on a Likert scale of 1 to 7, where
 1 = would dislike very much
 4 = would like
 7 = would like very much

Table 9

Simple Effects Comparison Results for MGRS by Scenario Type Interaction
for Likability Ratings

Scenario Type	<u>MGRS Group</u>		p
	Low	High	
Positive	4.41	4.67	.04
Negative	3.54	3.38	.20
p	.001	.001	

Note. Means on a Likert scale of 1 to 7, where
 1 = would dislike very much
 4 = would like
 7 = would like very much

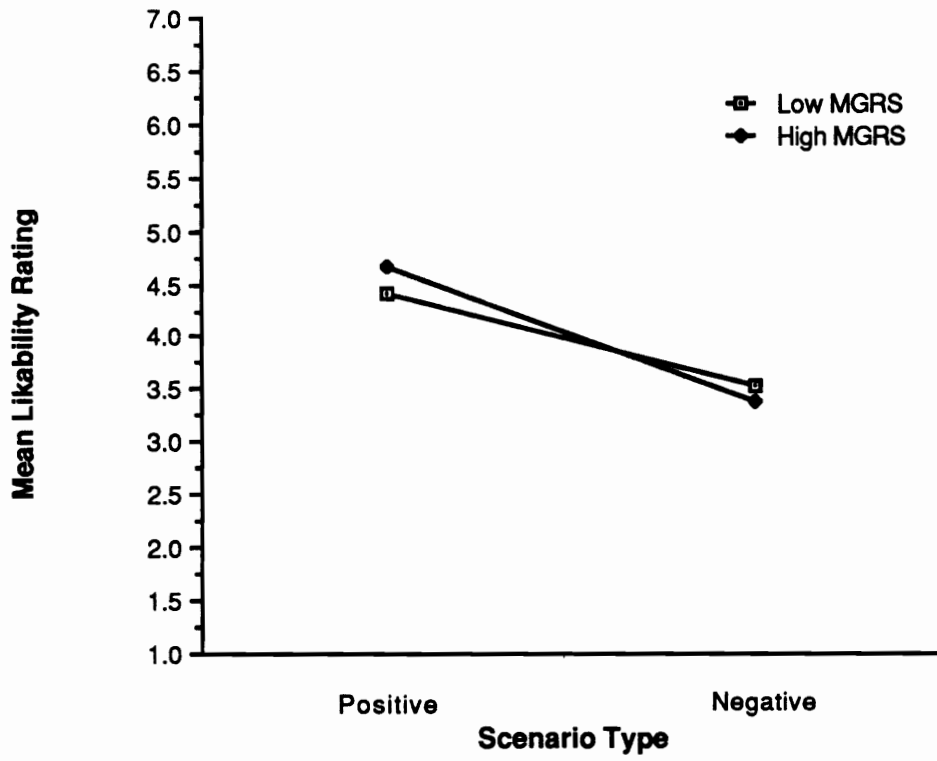


Figure 4. MGRS x scenario type interaction for likability ratings.

social networks and would be less satisfied with their social support than low MGRS subjects, because of the negative effect that limited emotionality would have on their relationships. ANOVA results for the social support questionnaire are presented in Table 10. No support was found for the prediction that high MGRS subjects would have smaller social networks, as no MGRS main effect was found for number of supportive individuals (SSQN). However, a significant main effect for satisfaction with social support (SSQS) [$F(1,138) = 4.73, p < .04$] indicated that low MGRS subjects ($M = 5.23$) were more satisfied with their available social support than high MGRS subjects ($M = 5.01$).

Relationship of Emotional Expressiveness to Social Support

Based on the assumption that emotional expression of tender feelings enhances social support factors, it was predicted, in Hypothesis 6, that measures of positive verbal and nonverbal expressiveness would be positively related to social support measures. Pearson correlations between these measures are presented in Table 11. There were two significant correlations between measures of positive emotional expressiveness and social support, providing some support for the hypothesis that positive emotional expressiveness and social support would be positively related. There was a significantly positive relationship between SSQN and positive verbal expressiveness among high MGRS subjects ($r = .36, p < .05$), and a significantly positive relationship between SSQN and length of response during positive scenarios among low MGRS subjects ($r = .38, p < .05$). No other significant relationships

Table 10

ANOVA Results for Measure of Social Support

Dependent Variable	<u>MGRS Group</u>	
	Low	High
SSQN	4.25	4.12
*SSQS	5.23	5.01

* $p < .04$

were found between measures of social support and positive emotional expressiveness.

Pearson Correlations

Although specific hypotheses, other than Hypothesis 6, were not made regarding relationships between dependent variables, several relationships were implied in the development of the rationale for this study (see Figure 1). For example, it was suggested that the more stressful the task of responding to the role-play scenarios was appraised, the higher the individual's cardiovascular reactivity would be. It was also suggested that the less capable the individual appraised himself to be of responding to the role-play scenarios, the less expressive he would be; and the less expressive the individual was, the greater cardiovascular reactivity he would evidence. In addition, a positive relationship between ratings of subject likability and social support was expected, since the measure of likability was intended to tap into the effect that subjects would have on individuals in their social support network when they were responding to similar situations. In order to examine these relationships, a 2 (MGRS) X 2 (Scenario Type) Pearson correlation matrix was run on all dependent variables. Significant correlations are presented in Table 11. Findings are grouped by type of dependent measure (e.g., appraisal, expressiveness, cardiovascular reactivity, likability, and social support) so that relationships between categories of dependent variables can more readily be seen.

Appraisal. There was no relationship between how threatening subjects appraised the role-play scenarios to be (primary appraisal) and level of cardiovascular reactivity.

Table 11

Correlations Between Some Dependent Measures as a Function of
MGRS Group and Scenario Type

Dependent Variable	<u>MGRS Group</u>	
	High	Low
Appraisal with Expressiveness		
Appr of Performance with Length		
Pos	.20	.13
Neg	.40**	.04
Appr of Performance with Latency		
Pos	.08	-.35**
Neg	-.15	-.20
Appraisal with Cardiovascular Reactivity		
Appr of Performance with SBP		
Pos	-.50*	-.13
Neg	-.05	.00
Appraisal with Social Support		
Appr of Importance with SSQN		
Pos	-.13	.46*
Neg	-.11	.31**
Appr of Performance with SSQN		
Pos	.43**	-.09
Neg	.28	-.13
Appr of Importance with SSQS		
Pos	-.35**	.00
Neg	-.32	.12

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

Table 11 (continued)

Correlations Between Some Dependent Measures as a Function of
MGRS Group and Scenario Type

Dependent Variable	MGRS Group	
	High	Low
Expressiveness with Social Support		
Verbal with SSQN		
Pos	.36**	.06
Neg	.13	.09
Nonverbal with SSQN		
Pos	-.09	.19
Neg	-.19	.33**
Length with SSQN		
Pos	.13	.38**
Neg	.17	.29
Expressiveness with Cardiovascular Reactivity		
Nonverbal with HR		
Pos	-.14	.22
Neg	.04	.45*
Length with DBP		
Pos	.43**	.30
Neg	.56*	.37**
Length with HR		
Pos	.59*	.29
Neg	.51*	.16

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

Table 11 (continued)

Correlations Between Some Dependent Measures as a Function of
MGRS Group and Scenario Type

Dependent Variable	MGRS Group	
	High	Low
Expressiveness with Likability		
Verbal with Likability		
Pos	.70*	.86*
Neg	.53*	.52*
Length with Likability		
Pos	.55*	.41*
Neg	-.11	.40*
Expressiveness with Expressiveness		
Verbal with Nonverbal		
Pos	.28	-.34**
Neg	.03	-.09
Verbal with Length		
Pos	.55*	.51*
Neg	.37**	.45*

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

Table 11 (continued)

Correlations Between Some Dependent Measures as a Function of
MGRS Group and Scenario Type

Dependent Variable	<u>MGRS Group</u>	
	High	Low
Cardiovascular Reactivity with Cardiovascular Reactivity		
SBP with DBP		
Pos	.41**	.35**
Neg	.44**	.54*
SBP with HR		
Pos	.68*	.25
Neg	.59*	.57*
DBP with HR		
Pos	.53*	.20
Neg	.65*	.66*

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

There was some relationship between subjects' appraisal of their ability to respond to the role-play tasks (secondary appraisal) and level of expressiveness. High MGRS subjects had longer responses to negative scenarios when they believed, prior to making their responses, that they would perform well ($r = .40, p < .05$). The better low MGRS subjects believed they would perform prior to making responses to positive scenarios, the less time they paused before making their responses ($r = -.35, p < .05$). High MGRS subjects' appraisal of their ability to cope with the scenarios was also related to one measure of cardiovascular reactivity. The more poorly high MGRS subjects felt they would perform in positive scenarios, the greater their level of SBP reactivity ($r = -.50, p < .01$).

Appraisal of the role-play tasks was also found to be significantly related to social support. Low MGRS subjects' ratings of how important they felt it was to do well on positive ($r = .46, p < .01$) and negative ($r = .31, p < .05$) role-play scenarios, was positively related to the number of individuals in their social support networks. In contrast, the more important high MGRS subjects felt it was to do well on positive scenario tasks, the less satisfied they were with their social support ($r = -.35, p < .05$). High MGRS subjects' ratings of how well they thought they would perform in positive scenarios was positively related to number of individuals in their social support network ($r = .43, p < .05$).

Expressiveness. Contrary to what was suggested, the more expressive individuals were the higher their levels of cardiovascular reactivity were. Among

high MGRS subjects, increases in HR and DBP were positively related to length of response in positive ($r = .59, p < .01$ HR; $r = .43, p < .05$ DBP) and negative ($r = .51, p < .01$ HR; $r = .56, p < .01$ DBP) scenarios. Increase in DBP was also related to low MGRS subjects' length of response to negative scenarios ($r = .37, p < .05$). Nonverbal expressiveness among low MGRS subjects in positive scenarios, was related to increases in HR ($r = .45, p < .01$).

As previously detailed under Hypothesis Six, there were some significant relationships between social support and expressiveness. The more verbally expressive high MGRS subjects were in positive scenarios ($r = .36, p < .05$), and the longer low MGRS subjects responded to positive scenarios ($r = .38, p < .05$), the greater the number of individuals in their social support network. The more nonverbally expressive low MGRS subjects were in negative scenarios, the greater the number of individuals in their social support networks ($r = .33, p < .05$).

While some relationship between expressiveness and social support was found, there was no relationship between ratings of subject likability and social support.

Verbal and nonverbal expressiveness were negatively related among low MGRS subjects when making their responses to positive scenarios ($r = -.34, p < .05$). This finding, coupled with low MGRS subjects' greater level of nonverbal expressiveness, relative to high MGRS subjects, suggests that low MGRS subjects depended more upon nonverbal expression than verbal expression to convey emotions in positive scenarios.

Verbal expressiveness was highly related to ratings of likability for both high and low MGRS subjects positive ($r = .70, p < .05$ high; $r = .86, p < .01$ low) and negative ($r = .53, p < .01$ high; $r = .52, p < .01$ low) scenarios. Likability was also related to length of response in all cells except for high MGRS subjects' responses to negative scenarios ($r = .55, p < .01$ high/pos; $r = .41, p < .01$ low/pos; $r = .40, p < .01$ low/neg), suggesting that what high MGRS subjects said in negative scenarios made them less likable, relative to low MGRS subjects in negative scenarios.

Discussion

The literature on self-disclosure and emotional expressiveness has consistently demonstrated that women are more willing to verbally disclose tender feelings and are more nonverbally expressive in their facial gestures than men. The issue of emotional inexpressiveness among men was felt to be important for several reasons. First, there is evidence that inhibition of emotional nonverbal expressiveness and verbal self-disclosure is associated with higher levels of psychophysiological reactivity (Buck, Miller, & Caul, 1974; Buck, Miller, Savin, & Caul, 1972; Pennebaker et al., 1987; Pennebaker et al., 1988). Thus, emotional inexpressiveness among men may contribute to their higher risk of cardiovascular disease as well as other stress-related illnesses. Second, it was felt that the tendency of men to limit the expression of tender emotions might contribute to their disadvantaged social support status, relative to women. Since social support has been found to protect individuals from the

deleterious effects of stress, emotional inexpressiveness may additionally increase men's vulnerability to the negative effects of stress via this route.

The construct of MGRS suggests that men have difficulty expressing tender emotions because of the influence of masculine gender role schemata on men's appraisal of emotional situations, and the subsequent effect of appraisal on their behavior. More specifically, men find the idea of expressing tender emotions to be stressful because of concerns they will appear feminine, so they attempt to limit such behavior. This study attempted to demonstrate the validity of these assumptions by demonstrating that men high and low in MGRS differed in their appraisal of situations requiring expression of love, fear, and sad feelings, and their willingness to be expressive of such emotions. In addition, because emotional inexpressiveness was hypothesized to affect men's well being through its effects on psychophysiological reactivity and social support, the relationship of these variables to MGRS and emotional inexpressiveness was also examined.

Although some trends were noted, this study failed to demonstrate significant differences between high and low MGRS subjects' appraisal of tender, emotional situations or in their emotionally expressive behavior when responding to those situations. Likewise, there were no significant MGRS differences in subjects' cardiovascular responses to the emotionally expressive tasks, although there was a trend for high MGRS subjects to be more systolically reactive when responding to positive scenarios.

Although high and low MGRS subjects did not vary significantly in their appraisal of emotional expressive situations, or in their behavioral and cardiovascular responses to those situations, differences were found in ratings of how likable subjects were and in subjects' perception of their social support. High MGRS subjects were rated as significantly more likable than low MGRS subjects when responding to positive scenarios. In contrast, low MGRS subjects reported being significantly more satisfied with their social support than high MGRS subjects. These two results are somewhat contradictory if one assumes that satisfaction with one's social support is positively related to how attractive one is to others in general.

Following is a more detailed discussion of these results and their implications in regards to the MGRS construct.

Appraisal

How stressful was the task? In response to the question "Please rate how threatening it was to do this task?," subjects gave the positive scenarios a rating of 3.56, and the negative scenarios a rating of 3.33, on a scale of 1 to 9. These ratings suggest that subjects did not appraise the task of responding to the role-play scenarios as stressful. The predictions of this study were based on the assumption that both high and low MGRS subjects would be challenged by the task, but that high MGRS subjects would feel they had more at stake in the situation because it challenged their masculine self-image. However, the fact that neither group of subjects appraised the task as being even moderately threatening, suggests that this task was not adequate for

eliciting the desired cognitive appraisal processes. These problems with the task make it difficult to determine whether the overall lack of findings in the study were due to a lack of MGRS effect or to the inability of the stressor to elicit MGRS differences.

It should be noted, that the average change in SBP during responses to positive and negative scenarios was 17.5 mm Hg and 16.5 mm Hg, respectively, indicating that subjects were physiologically reactive to the task, although they did not indicate that they subjectively experienced it as being stressful. The lack of association between cognitive appraisal and physiological response to this task was further highlighted by the lack of significant correlations between measures of appraisal and cardiovascular reactivity. Thus it would appear that cognitive and physiological responses to this particular task are not consistent with one another. However, because the MGRS construct is based upon the notion of cognitive appraisal of a situation as stressful, the fact that subjects did not appraise the tasks as being stressful is an important weakness in this study, which limits the conclusions that can be made regarding the meaning of the results.

MGRS differences in appraisal of the task. There was a trend for high MGRS subjects to rate the task of responding to both positive and negative role play scenarios as being more threatening, relative to the ratings of low MGRS subjects. This finding suggests that high MGRS subjects may have felt more threatened by the task of having to make responses to the scenarios; however, this finding does not

support the prediction that high MGRS subjects would appraise the "feminine task" as more threatening, as there was no significant MGRS by scenario type interaction to indicate that high MGRS subjects found the positive scenarios more threatening than the negative scenarios, relative to low MGRS subjects.

Analyses of subjects' ratings of how well they thought they would perform before making their responses failed to reveal MGRS differences. Thus, the prediction that MGRS would affect subjects' secondary appraisal of their ability to cope with the role play scenarios was not supported. Subjects did indicate they were more confident in their ability to respond to negative scenarios than positive scenarios, suggesting that all subjects felt better prepared to deal with angry emotional situations, than with tender emotional situations. These results are in accordance with the notion that men, in general, are more comfortable expressing anger than tender emotions.

Emotional Expressiveness

Verbal expressiveness. It was hypothesized that secondary appraisal processes among high MGRS subjects would lead them to reject the option of being emotionally expressive as a means of coping with the positive scenarios, because of concerns that this behavior would be viewed as feminine. This hypothesis was not supported by data on verbal expressiveness. There were no differences in the length of time high and low MGRS subjects responded, and no differences in the amount of time it took them to respond following scenario descriptions. The only MGRS difference found in verbal expressiveness was a weak trend showing high MGRS

subjects to be more verbally expressive in positive scenarios than low MGRS subjects. Thus, rather than limiting positive emotional expression, there was some nonsignificant evidence to suggest that high MGRS subjects responded with appropriate verbal disclosure of their feelings, to a greater extent than low MGRS subjects. This trend, however, is opposite to the findings of Sauer and Eisler (1990) who found low MGRS subjects to be rated as more verbally expressive of positive emotions in response to the same role play scenarios. There were some differences in the methodology of these two studies which may have contributed to the discrepant findings in verbal expressiveness. Subjects in Sauer and Eisler's study were required to continue their verbal responses for a minimum of one minute. This was accomplished by having the confederate respond to the subjects with head nodding cues until the one minute time limit was reached. In the present study, subjects could verbally respond for any length of time they wished. The average length of response to positive scenarios was 10.58 seconds and 8.15 seconds to negative scenarios. Thus, ratings of verbal expressiveness in the current study were based on a sample of behavior which was significantly shorter in duration. High MGRS subjects may have more successfully effected the behaviors demanded by the task for a limited period of time. However, the lengthened response time in Sauer and Eisler's study may have caused deficits in high MGRS subjects' skills to become apparent. Regardless of the cause of these discrepant findings, there is a need for replication of Sauer and Eisler's findings of MGRS differences in verbal expressiveness.

High MGRS subjects' lower levels of expressive behavior were expected to result from their appraisal of themselves as being less capable of responding expressively than low MGRS subjects. However, it should be noted that, contrary to what was predicted, high MGRS subjects did not rate themselves as feeling less confident in their ability to respond to positive scenarios. Other aspects of secondary appraisal were not assessed, however, making conclusions regarding secondary appraisal and its effect on coping premature at best. According to Folkman and Lazarus (1988), an important determinant in an individual's choice of coping strategies is his evaluation of how others will react to his coping efforts. This dimension of secondary appraisal was not measured in this study. It is possible, perhaps likely, that subjects would be less concerned with the experimental assistants' evaluation of their chosen coping strategy, than they would be with the evaluation of their friends, and according to Folkman and Lazarus' theory, this difference would be expected to have an effect on their coping behavior. This external validity issue is especially relevant in this study, because of the importance of secondary appraisal processes to the MGRS construct. One of the tenets of the MGRS construct is that a situation calling for feminine behavior will arouse concerns among high MGRS individuals that others will judge his behavior to be unmanly should he choose to respond to the situation with such behavior. However, if the individual believes that the environment will not respond negatively, or he does not feel the environment's response is relevant, his behavior is less likely to be influenced by MGRS in that particular situation. If the individual

feels that the environment will respond positively to a certain coping strategy, he may be more likely to utilize that behavior, assuming it is in his behavioral repertoire. In Sauer and Eisler's study, high MGRS individuals reported that it was significantly more important for them to react as they thought others would. It is not known how high MGRS subjects believed others would react to the experimental task in the current study. However, it is possible that high MGRS subjects were aware that the experimenters were looking for emotionally expressive behavior, and were more likely to give verbal responses which would meet those expectations. Future studies on MGRS should assess subjects' appraisal of how the environment would respond to their coping efforts and the relationship of this dimension of secondary appraisal to coping behavior.

Nonverbal expressiveness. There was a trend for low MGRS subjects to be more nonverbally expressive in both positive and negative scenarios. These results replicate a similar, but stronger finding in Sauer and Eisler (1990), where low MGRS subjects were found to display significantly more "movement of facial muscles" during their responses to positive and negative scenarios than high MGRS subjects. This finding is also in accordance with research showing that men show less emotion in their faces than women (Cherulink, 1979; Duncan & Fiske, 1977). It is interesting to note that among low MGRS individuals, nonverbal expressiveness was more frequently related to other dependent measures, whereas no such relationships existed among high MGRS subjects. Instead, high MGRS subjects' verbal expressiveness was frequently

related to other measures. For example, there was a positive relationship between the number of individuals low MGRS subjects listed in their social support network, and nonverbal expressiveness in negative scenarios, while number of supportive individuals was related to verbal expressiveness among high MGRS subjects. Likewise, increases in low MGRS subjects' HR were related to nonverbal expressiveness in negative scenarios, while increases in high MGRS subjects' DBP were related to the length of their verbal responses to both negative and positive scenarios. Finally, nonverbal expressiveness among low MGRS subjects in positive scenarios was negatively related to verbal expressiveness. Overall, data on MGRS differences in nonverbal and verbal expressive behavior suggests that low MGRS subjects rely on nonverbal more than verbal behaviors to respond to situations which call for expression of emotion, while the opposite appears to be true for high MGRS subjects.

It should be noted that one characteristic of the masculine gender role is the tendency to assert oneself verbally when interacting with others. This masculine trait has been demonstrated in studies showing sex differences in communication style. For example, adult males have been found to use more words and talk more often when engaging in conversations, than adult females (Kramer, 1974; Swacker, 1975; Wood, 1966). There is also evidence that males initiate more verbal interactions than females (Borgatta & Stimson, 1966). These sex differences in verbal behavior have been found in early developmental stages. In a study which focused on dyadic

interactions of preschool children (Cook, Fritz, McCornack, & Visperas, 1985), male children were found to talk significantly more and made significantly greater use of statements that asserted leadership. The tendency for high MGRS subjects to display more verbal behavior in this study, may be related to this masculine trait. Future studies should consider high versus low MGRS appraisal of the desirability of verbal and nonverbal coping options.

One possible confound to nonverbal expressiveness findings is the fact that the measure of nonverbal behavior was based on the occurrence of movement of the facial muscles, without consideration of the emotional valence of that behavior. It is possible, for example that the higher occurrence of facial gesturing among low MGRS subjects was an expression of greater anxiety rather than an expression of the emotions which were intended to be measured. Future assessment of MGRS differences in nonverbal expressiveness should consider qualitative as well as quantitative aspects of the behavior, in order to clarify the question of what emotions are being expressed.

Cardiovascular Reactivity

The only MGRS difference found in cardiovascular reactivity measures was in a trend toward an MGRS by scenario type interaction, indicating there was a tendency for high MGRS subjects to react to positive scenarios with greater increases in SBP, relative to low MGRS subjects. However, the difference in blood pressure reactivity was small (2 mm Hg), and clinically nonsignificant. Thus, findings from this study

fail to support the notion that MGRS contributes to stress-related disorders in men through its effect on cardiovascular reactivity in situations which call for emotional expression.

Both high and low MGRS subjects responded to negative scenarios with significantly greater increases in HR, relative to positive scenarios. This finding correlates with results on the appraisal item regarding how well subjects felt they would perform, where subjects rated themselves as believing they would perform significantly better in negative scenarios; this suggests that subjects' greater confidence in their ability to respond to negative scenarios affected their physiological response to the scenarios.

It has been noted (Schneiderman & McCabe, 1989) that tasks which most successfully elicit differences in the psychophysiological responses of Type A and B individuals are those in which some form of active coping or competitive behavior is required. Obrist and his colleagues (Obrist et al., 1978) suggest that tasks which elicit "active effortful coping" also elicit beta-adrenergic patterns of cardiovascular responding which result in increased HR and SBP. Thus, differences found in individuals' cardiovascular responses to various challenges are felt to reflect differences in the amount of active coping the individual engages in. A finding related to this notion of active versus passive coping is that cardiovascular reactivity is influenced by the level of task difficulty. Maximum change in psychophysiological parameters is produced by tasks which are seen by the subject as being sufficiently

difficult to put effort into, but not so difficult that the subject will give up on them (Krantz & Ratliff-Crain, 1989). It has been suggested (Obrist et al., 1978) that greater increases in HR and SBP are elicited by moderate tasks because subjects engage in more effortful coping, compared to easy and impossible tasks where coping behavior is either not needed or impossible.

These ideas regarding the effect of active versus passive coping on psychophysiological reactivity can be used to interpret psychophysiological, behavioral, and appraisal findings in the current study. Both high and low MGRS subjects rated themselves as believing they would perform better in negative scenarios, and responded to negative scenarios with greater increases in HR, suggesting that subjects were more physiologically reactive in situations where they felt most confident. Similarly, high MGRS subjects tended to find both positive and negative scenarios to be more threatening, and there was a tendency for them to respond to positive scenarios with greater increases in SBP. Higher levels of physiological reactivity in both of these cases, may have been due to higher levels of active coping efforts, resulting from subjects' appraisal of the scenarios as being moderately difficult to deal with (i.e., the situation is threatening), but something which they were equipped to deal with nonetheless (i.e., how well will I respond?).

If the active versus passive coping paradigm is used to explain reactivity differences, then it must be concluded that high MGRS subjects responded to their appraisal of positive scenarios as threatening with active coping efforts, rather than

limiting their behavior, as was predicted. Correlational data indicating a greater number of significant positive correlations between high MGRS subjects' cardiovascular reactivity in positive and negative scenarios, and the length of their responses would suggest that high MGRS subjects were making greater efforts in their verbal responses to both types of scenarios. The finding that high MGRS subjects tended to be more verbally expressive in positive scenarios also points to the conclusion that high MGRS subjects responded to their appraisal of these scenarios as threatening by actively attempting to make an appropriate verbal response.

This study failed to replicate the robustness of Skidmore (1987), and Lash et al.'s (1989) findings regarding differences in the psychophysiological reactivity of high and low MGRS subjects. In these studies, high MGRS subjects had significantly higher levels of SBP than low MGRS subjects when they were exposed to a task which called for masculine behavior (cold pressor task) or a task which challenged subjects' notions of themselves as being masculine (masculine threat interview). Lack of significant findings in the present study, may be related to the inability of the task to elicit an appraisal of threat, as previously discussed. However, it is also possible that lack of significant findings in this study is related to differences in coping processes elicited by the task. In the previous studies, it was assumed that the tasks would elicit greater reactivity in high MGRS subjects because they would be more concerned about their ability to respond to the masculine challenges with appropriate manly behavior. In the present study, the task was expected to arouse concerns among high

MGRS subjects that they would appear feminine if they responded with emotionally expressive behavior. Thus, the former studies call for activation of behavior, which, according to the active versus passive coping paradigm, increases cardiovascular reactivity, while the latter study calls for inhibition of behavior. There is evidence that inhibition of behavior is associated with lack of cardiovascular response (Gray, 1977; Pennebaker & Susman, 1988); thus, feminine tasks might be expected to elicit less cardiovascular response than masculine tasks. The notion that feminine challenges would be expected to elicit less cardiovascular reactivity among high MGRS subjects than masculine tasks is in accordance with a fairly consistent finding that men, relative to women, react with greater SBP and neuroendocrine responses when engaging in competitive (masculine) tasks (Dembroski, MacDougall, Cardozo, Ireland, & Krug-Fite, 1985; Gackenbach, 1982; Rauste-von Wright, von Wright, & Frankenhaeuser, 1981; Van Doornen, 1986); while researchers have failed to find sex differences using interpersonal (feminine) challenges (Lundberg, de Chateau, Winberg, & Frankenhaeuser, 1981). In addition, interpersonal challenges have been found to be more effective in eliciting Type A/B differences in women than competitive challenges (Lawler & Schmied, 1986; MacDougall, Dembroski, & Krantz, 1981). These studies suggest that individuals are most reactive to tasks which are consistent with the gender role they adhere to. This sex by task effect may be due to differences in secondary appraisal resulting from the influence of gender role schemata which have a subsequent effect on how active the individual is in coping

with the challenge. Specifically, challenges which are consistent with one's gender role would be expected to elicit active coping behavior because one would appraise oneself as possessing the necessary behavioral skills and one would expect the environment to respond positively to the coping behavior which was displayed. Thus, the differential effect of masculine and feminine gender role schemata on appraisal and coping processes may underlie the sex by task, and MGRS by task effects on psychophysiological reactivity. Further investigation of the effect of appraisal on coping processes in relation to MGRS differences in cardiovascular reactivity may increase our understanding of the sex differences in psychophysiological reactivity which have been consistently noted in the literature.

Likability

The strongest finding in this study was that high MGRS subjects were significantly better liked in positive scenarios than low MGRS subjects. It was predicted that the well documented relationship between intimate self-disclosure and likability (Jones & Archer, 1976; Taylor, Gould, & Brounstein, 1981; Taylor & Hinds, 1985) would be evidenced in lower likability ratings among high MGRS individuals, due to their predicted reticence to be self-disclosive in positive scenarios. A highly significant relationship was found between verbal expressiveness and likability ratings in both scenario types, supporting the assumption that self-disclosure of emotions is a behavior which causes others to be attracted to the individual who is self-disclosing. However, the relationship of MGRS to verbal expressiveness in the

positive scenarios was opposite to that which was predicted (trend for high MGRS subjects to be more verbally expressive in positive scenarios), and this may have in turn played a role in the finding that high MGRS subjects were rated as significantly more likable in the positive scenarios.

Likability ratings were intended to assess how members of subjects' social support networks might react to them in situations which called for emotionality. However, with the exception of verbal expressiveness ratings and length of response, likability ratings were unrelated to other dependent measures, including social support. Thus, there is some question whether the likability ratings of subjects in this study are representative of how well they are liked by people in their daily lives.

Social Support

It was predicted that limited expression of feelings such as hurt, grief, and guilt, among high MGRS subjects would have a negative effect on the formation of socially supportive relationships and that this would be reflected in high MGRS subjects' report of a lower number of supportive individuals, and less satisfaction with support, relative to low MGRS subjects. No differences were found in the size of high and low MGRS subjects' social networks. However, high MGRS subjects were found to report significantly less satisfaction with their social support than low MGRS subjects. These results replicate those of Sauer and Eisler (1990), who also failed to find differences in network size, but did find that low MGRS subjects were significantly more satisfied with the support provided by their networks. Assuming that greater

satisfaction with social support reflects more receipt of social support, one might posit that low MGRS subjects interact with others in such a way that others are more desirous of supporting them when they are in need.

Regarding the hypothesized relationship between MGRS, positive emotional expression, and social support, there was some evidence that emotionally expressive behavior was related to social support as verbal expressiveness and SSQN were positively related among high MGRS subjects and nonverbal expressiveness and SSQN were positively related among low MGRS subjects. Since high MGRS subjects tended to be more verbally expressive in positive scenarios, while low MGRS subjects tended to be more nonverbally expressive in both positive and negative scenarios, one might speculate that MGRS moderates the relationship between the SSQN dimension of social support and emotionally expressive behavior via its effect on the individual's choice of whether to express their emotions verbally or nonverbally.

No significant relationships were found between satisfaction with social support (SSQS) and expressive behavior, suggesting that the behavioral differences accounting for low MGRS subjects' higher satisfaction with social support were not tapped in this study. Other researchers have failed to find significant relationships between SSQS and person/behavioral variables. For example, Sarason et al. (1985) found that individuals with high SSQN scores were rated as being more socially competent; more enjoyable, less tense and likable; and more attractive in role-play situations than individuals with low SSQN scores. However, there was a general lack of significant

relation between SSQS scores and experimenter ratings of subjects. These results suggest that SSQN is more related to measures of social competence than SSQS. Future studies should attempt to clarify the factors which underlie the relationship between MGRS and satisfaction with social support.

Conclusions and Future Research

It was hoped that this study would contribute to the construct validity of MGRS by demonstrating differences in the appraisal and coping behavior of high and low MGRS subjects when placed in situations which called for expression of tender emotions. Although some differences were found, they were small and statistically nonsignificant. Thus, the findings in this study are somewhat inconclusive in regards to the predicted effect of MGRS on emotionally expressive behavior among men.

There are several explanations for the general lack of findings in this study. First, it is possible that MGRS does not have a measurable effect on the appraisal or coping behavior of men when challenged by a situation which demands expression of tender emotions. However, differences in verbal and nonverbal emotionally expressive behavior have been demonstrated in one study (Sauer & Eisler, 1990), and some trends toward differences were noted in this study.

A second explanation for the lack of findings is that the role play tasks were not powerful enough to elicit MGRS differences. There were several problems with the role play tasks which may have weakened the task in terms of its ability to elicit stress. For example, because length of response was used as a dependent measure,

no minimum time was placed on subject responses to the role play scenarios, and role play scenarios were noninteractive, because of the potential difficulties with standardization which would have been introduced if confederates had interacted with the subjects. Unfortunately, these procedures may have allowed subjects to exert a minimal amount of effort in giving their responses, as was indicated by the average length of response (8 to 10 seconds) and their ratings of how threatening it was to respond to the role play situations (approximately 3.5 on a scale of 1 to 9). In addition, during debriefing many subjects were noted to remark that the role plays were dissimilar to actual interactions they had with friends.

It is also possible that the effect of MGRS on some dependent measures was attenuated by factors not taken into consideration when making hypotheses. For example, the effect of behavioral inhibition on cardiovascular reactivity was not taken into account when making predictions regarding MGRS differences in cardiovascular reactivity. A second factor not taken into consideration was that previous findings on self-rated differences in high and low MGRS subjects (Sauer & Eisler, 1990) suggest that high MGRS individuals are more subject to the demand characteristics of the experimental situation because of their greater concern with "reacting as others would" in any given situation. This aspect of MGRS may have biased high MGRS subjects to be more emotionally expressive in the experimental situation than they would normally have been.

A third problem in this study was with the measurement of secondary appraisal.

Although the second self-rating question gave us some idea of the subject's appraisal of their coping options (e.g., rate how well you thought you would perform), subjects' appraisal of how the environment would respond to their actions was not assessed. The question of subjects' appraisal of how others would respond to their behavior is especially important in light of high MGRS subjects' report of being more concerned with reacting as others would, relative to low MGRS subjects' self-report. It is possible that high MGRS subjects differ considerably from low MGRS subject on this dimension of secondary appraisal and that these differences result in different coping behavior. Thus, a more thorough assessment of secondary appraisal may help in our understanding of MGRS differences in coping behavior.

A fourth problem with this study was the method used to measure nonverbal behavior. Because the emotional quality of facial gestures was not rated, it is not known whether low MGRS subjects' tendency to display more facial gesturing means they were expressing more love, caring, and anger, or that they were expressing some other emotion such as anxiety.

Future studies of the relationship of MGRS to emotionally expressive behavior should address these problems. The most critical problem with this study was the questionable ability of the role play tasks to elicit stress. The role plays were perceived as artificial and allowed subjects to exert a minimal amount of effort in responding to the task. In addition, high MGRS subjects' possible tendency to respond to the demand characteristics of an experimental situation may have further

weakened the power of this task to elicit MGRS differences in emotionally expressive behavior. A more personal self-disclosure task might discourage any tendency subjects had to respond to the demands of the experimental setting, and elicit behavior which was more generalizable to settings outside the laboratory. One approach would be to utilize procedures similar to ones used by Pennebaker and his colleagues (Pennebaker & Beal, 1986; Pennebaker, et al., 1987) to study the effects of self-disclosure on psychosomatic disease. In these studies, subjects were asked to disclose verbally or in writing, details of an event which they considered to be stressful and/or traumatic. Such a task would be more highly related to subjects' emotional experience and might thus be more effective in eliciting MGRS differences in the communication of those emotions. In addition to the dependent measures used in the present study, MGRS differences in level of self-disclosure could be assessed.

A procedure developed by Davis (1976) to simulate the beginning of an acquaintanceship, has been noted to successfully avoid the artificiality problems of laboratory studies of self-disclosure. In this procedure, subjects are required to pick a conversational topic from of a list of topics which have been scaled for level of intimacy, and engage in a brief conversation with a partner whom they expect to interact with again. This procedure would allow for a certain level of standardization in the task, and would more closely resemble a real conversation than role plays. Ratings could be obtained from confederate partners regarding their impressions of the subject, as well as ratings of expressiveness.

Assessment of secondary appraisal should include the subjects' perception of how their partners would react to their self-disclosure and what options they felt they had in coping with the situational demands. Since MGRS differences in emotionally expressive behavior would be expected to be related to subjects' appraisal of the environment's response, the task needs to be presented in such a way that subjects would be concerned with the impression they made on others when they responded. One approach to this problem would be to lead the subject to believe that he would interact with the confederate again, as was done in the Davis (1976) procedure.

Another issue which needs to be addressed in future studies of the effect of MGRS on psychophysiological reactivity, is whether differences exist in how feminine versus masculine tasks affect reactivity. As previously noted, it is possible that demands for feminine behavior such as emotional self-disclosure, may result in behavioral inhibition among high MGRS subjects, and this might be expected to result in a different pattern of physiological response than would be elicited by a task calling for behavioral activation. Pennebaker and his colleagues (Pennebaker et al., 1988; Pennebaker & Susman, 1988) have found measures of skin conductance level to be a better indicant of self-disclosure than measures of cardiovascular reactivity. For example, subjects who were rated to be highly disclosive when asked to talk about a personally traumatic event, were found to have significantly lower skin conductance levels while describing the event, than subjects rated as being low in degree of self-disclosure (Pennebaker et al., 1988). Cardiovascular measures did not distinguish

high from low disclosers while they were talking, although high disclosers' SBP was significantly below baseline values following their self-disclosure, while there was no difference in post-disclosure SBP versus baseline values among low disclosers. These findings suggest that skin conductance level may be a more important indicator of psychophysiological reactivity during emotional self-disclosure; and that differences in cardiovascular response should be measured following expressive behavior as well as during the time subjects are making their responses.

Emotional inexpressiveness among men is an important problem which may result in higher levels of stress and lower levels of social support. The findings from this study provide some support for the notion that rigid adherence to masculine gender role values affects how men express tender emotions and is related to how satisfied they are with their social support. However, a better means for eliciting emotionally expressive behavior is needed before we reach an understanding of the potential effects of MGRS on emotionally expressive behavior among men.

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Appendix A

Role Play Scenarios

POSITIVE 1:

Your father has been very sick for a long time. You have just returned from visiting your dad in the hospital. Your dad looked really bad today and seemed to be getting worse. You drive to your best friend's house and when you're alone you tell him...

POSITIVE 2:

Your friend is taking a carpentry course and has really struggled with it. Secretly you think it's kind of a crazy thing for him to do, but for your birthday he brings you a really nice coffee table that he made. After he gives you the gift, you say...

POSITIVE 3:

You have just split up with your girlfriend. You are really upset and almost on the verge of tears. You really need someone to talk to. You approach your best friend and say...

POSITIVE 4:

Your best friend has finally convinced you to go to a movie with him. Much to your surprise, as the movie ends you find that you've enjoyed it and his company immensely. This evening has reminded you how much his friendship means to you. You tell him...

NEGATIVE 1:

You have gone to a great deal of effort to attend a concert which you had looked forward to seeing with your best friend. You had arranged for him to meet you at the door of the concert hall at 7:30 p.m. At 8:30 p.m. the concert is halfway over and you are still waiting for your friend to arrive with the tickets. At 8:45 p.m., he arrives and you say...

NEGATIVE 2:

You're in the middle of watching an exciting football game on TV. Your friend walks in and changes the channel as he does every time you are watching a good game. You say to him...

NEGATIVE 3:

You're giving a party, and the behavior of your best friend has become increasingly objectionable and obnoxious over the course of the evening. You're upset with his behavior, and his rude comments about you and your party, so you go over to

talk to him. You tell him...

NEGATIVE 4:

You and your friend have made a bet concerning who will make the higher grade in a physics course. Your friend has done well, but you are actually concerned that you may fail the class. Your friend has made it a point to remind you of your poor performance. Following a test in which you score a 60 and he scores an 85, he walks over about to make some rude comment, but you say instead...

Appendix B

Criteria for Coding Nonverbal Facial Expressions

For every 5 second interval, score either an occurrence or nonoccurrence of any movement of the facial muscles to a non-neutral position.

THIS INCLUDES:

frowning
laughing (insofar as it changes facial musculature)
smiling
smirking
raising eyebrows (one or both)
squinting
chewing on lips
pursing lips
flaring nostrils pressing lips together
sucking in or obviously chewing on sides of cheeks
changing the shape of the mouth
and any other obvious manipulation of the face

IT DOES NOT INCLUDE:

blinking eyes
movement of the head (i.e., nodding yes or no)
manipulation of face or lips with the hands
coughing or sniffing
any movement of the facial muscles that is due to talking only
chewing gum

Appendix C

Verbal Expressiveness Rating Scale and Criteria

FOR EACH RESPONSE, RATE HOW EXPRESSIVE THE SUBJECT WAS.

Scenario Number _____

1	2	3	4	5
not expressive		moderately expressive		very expressive

Scenario Number _____

1	2	3	4	5
not expressive		moderately expressive		very expressive

Scenario Number _____

1	2	3	4	5
not expressive		moderately expressive		very expressive

Scenario Number _____

1	2	3	4	5
not expressive		moderately expressive		very expressive

GUIDE TO VERBAL EXPRESSIVENESS SCALE

POSITIVE

Appropriate affect: sad, depressed, concerned, scared, upset

OR

caring, loving, liking, pleasure, pride, appreciation

5: Verbal

*Subject makes at least one direct statement regarding how he is feeling - e.g., he is sad, depressed, concerned, scared, upset etc.

Subject MAY directly ask for support or help from friend

OR

Subject makes at least one direct statement regarding his positive feelings toward friend or friendship (not objects or activities), e.g., caring, loving, liking, pride, appreciation

*Subject makes OTHER INDIRECT statements which allude to how he feels

Nonverbal

*Subject's facial expressions, body language, and voice tone convey sadness, concern, distress

OR

Subject's facial expressions, body language, and voice tone convey caring, loving, liking, pride, appreciation for friend

*Subject's facial expressions, body language, and voice tone suggest he is comfortable with what he says and does in situation

4: Verbal

*Subject makes one direct statement regarding how he is feeling, e.g., he is sad, depressed, concerned, scared, upset etc.

OR

Subject makes one direct statement regarding his positive feelings toward friend or friendship (not objects or activities), e.g., caring, loving, liking, pride, appreciation

*Subject talks about instrumentals rather than further elaborating on his feelings in situation

Nonverbal

*Subject's nonverbals are congruent with verbals

*Nonverbal expression (facial expression, body language, voice tone) of sadness, depression, concern, distress

OR

of caring, loving, liking, pride, appreciation for friend
MAY BE SOMEWHAT inhibited

3: Verbal

*Subject makes at least one INDIRECT statement which alludes to feelings of sadness, depression, concern, fright, distress

OR

Subject makes at least one INDIRECT statement which alludes to feelings of caring, love, liking, pride, appreciation for friend

(LOOK FOR REFERENCES TO SELF--"I" STATEMENTS)

*Subject spends the majority of time discussing instrumentals

Nonverbal

*Subject's facial expressions, body language, and voice tone are NOT INCONGRUENT with verbals

*Subject's facial expressions, body language, and voice tone convey SOME sadness, depression, concern, distress

OR

loving, caring, pride, liking, appreciation for friend

*Subject MAY appear uncomfortable with what he says and does in situation

NOTE: CONSIDER LOWER RATINGS WHEN COMMON RESPONSES ARE GIVEN WHICH DO NOT REQUIRE MUCH THOUGHT

2: Verbal

*Subject talks about INSTRUMENTALS ONLY, BUT DOES NOT TOTALLY AVOID THE PROBLEM/ISSUE

Nonverbal

*Subject's facial expressions, body language, and voice tone MAY convey SOME sadness, depression, concern, distress
OR
loving, caring, pride, liking, appreciation for friend

*Subject's nonverbals are NOT CONGRUENT with verbals

*Subject MAY appear uncomfortable with what he says and does in situation

1: Verbal

*Subject TOTALLY AVOIDS the problem/issue by talking only of instruments

OR

Direct or indirect statements of feelings are not appropriate to the situation

Nonverbal

*Subject's facial expression and voice tone are FLAT, void of emotional expression

OR

Subject's facial expression and voice tone are INCONGRUENT with verbals

*Subject MAY appear to be covering discomfort with nonchalance

OR

Subject appears to be uncomfortable in situation

NEGATIVE

Appropriate affect: Assertive - VERBALLY expresses feelings of anger, irritation, disappointment
 NONVERBALS indicate anger or may be somewhat neutral; they are NOT aggressive or threatening; they are NOT solicitous, nice, or sweet

Inappropriate affect: Passive - VERBALLY expresses feelings of forgiveness, kindness, or states that friend's inconsiderate behavior is OK
 NONVERBALS are nonchallenging, sweet, kind, forgiving

Passive-Aggressive - Verbal and nonverbal behavior are INCONGRUENT; VERBALLY expresses feelings of forgiveness, kindness, or states that friend's inconsiderate behavior is OK
 NONVERBALS indicate anger, irritation, hostility

Aggressive - VERBALLY subject insults or threatens friend
 NONVERBALS are threatening and hostile

5: Verbal

- *Subject makes at least one direct statement regarding how he is feeling - e.g., angry, irritated, hurt, upset
- *Subject makes OTHER INDIRECT statements which allude to how he is feeling
- *Subject MAY make statements which suggest true concern for friend's feelings, well-being
- *Subject does NOT make verbal statements which are insulting or intimidating

Nonverbal

- *Subject's facial expressions, body language, and voice tone convey anger, disappointment, or are neutral

*Nonverbals are NOT threatening, intimidating, or aggressive

4: Verbal

*Subject makes one direct statement regarding how he is feeling -
e.g., angry, irritated, hurt, upset

*Subject talks about INSTRUMENTALS rather than further elaborating on
his feelings in situation

*Subject does NOT make verbal statements which are insulting or
intimidating

Nonverbal

*Subject's facial expressions, body language, and voice tone convey
anger, disappointment, or are neutral

OR

Subject's facial expressions, body language, and voice tone may
be SOMEWHAT threatening, intimidating, or aggressive

3: Verbal

*Subject makes at least one INDIRECT statement which alludes to
feelings of anger, irritation, hurt, distress

INDIRECT STATEMENTS ARE SELF REVEALING IN SOME WAY,
EXPOSE SUBJECT'S VULNERABILITIES

(LOOK FOR SELF REFERENCES--"I" STATEMENTS)

*Subject spends the majority of time discussing instrumentals

*Subject MAY make some verbal statements which are insulting

Nonverbal

*Subject's facial expressions, body language, and voice tone convey
anger, disappointment, or are neutral

OR

Subject's facial expressions, body language, and voice tone are

threatening, intimidating, or aggressive

2: Verbal

*Subject talks about INSTRUMENTALS ONLY
 SUBJECT MAKES STATEMENTS ABOUT HIS FRIEND RATHER
 THAN HIMSELF, AND STATEMENTS COME ACROSS AS
 "ATTACKING"

*Subject ALLUDES to feelings of anger, irritation, or distress in
 his discussion of instrumentals

*Subject PROBABLY makes verbal statements which are insulting or
 intimidating

Nonverbal

*Subject's facial expressions, body language, and voice tone are
 threatening, intimidating, or aggressive

1: Verbal

*Subject totally AVOIDS CONFRONTING friend about problem/issue by
 talking about INSTRUMENTALS ONLY in either a passive or
 passive-aggressive manner

PASSIVE - Subject verbally expresses feelings of forgiveness,
 kindness, or states that friend's inconsiderate behavior is OK

PASSIVE-AGGRESSIVE - Subject verbally expresses feelings of
 forgiveness, kindness or states that friend's inconsiderate
 behavior is OK, but nonverbally expresses anger, irritation,
 hostility

Nonverbal

*PASSIVE - Subject's facial expressions, body language, and voice
 tone are nonchallenging, sweet, kind, forgiving

*PASSIVE-AGGRESSIVE - Subject's facial expressions, body language,
 and voice tone are threatening, intimidating, hostile, or aggressive

DEFINITIONS AND EXAMPLES

Definitions:

PRIORITIES: FIRST TWO VERBAL CRITERIA ARE MOST IMPORTANT

SUBJECT MAY OR MAY NOT FIT THE REST OF CRITERIA. USE THEM AS A GUIDE WHEN TRYING TO FIGURE OUT WHICH OF TWO RATINGS FIT THE BEST

INSTRUMENTAL - Statements about events or things (rather than feelings).

EXAMPLES

- Positive 1:** **ISSUE:** Subject needs support and comfort from his friend.
BEST RESPONSE: The more he verbalizes the fact that he is sad, he is afraid, the more likely that the friend will respond with support. The more distressed he LOOKS (nonverbals) the more likely he will receive support.
- Positive 2:** **ISSUE:** Subject needs to convey appreciation for friend's thoughtful, caring gesture of friendship.
BEST RESPONSE: Verbally, subject should say something which conveys that he cares about friend and/or that he considers the gift to be a significant gesture of friendship.
- Positive 3:** **ISSUE:** Subject needs support and comfort from his friend.
BEST RESPONSE: Subject should verbalize that he is in some distressed emotional state, and subject should look (nonverbals) distressed or sad.
- Positive 4:** **ISSUE:** Subject needs to let his friend know that he cares about him and that he values their friendship.
BEST RESPONSE: Subject should state how he feels about friend or friendship, or what friendship means to him.
- Negative 1:** **ISSUE:** Subject needs to let his friend know how the friend's inconsiderate behavior has made him feel.
BEST RESPONSE: Subject should make some statement which indicates how he is feeling because his friend showed up

late, and he should look (nonverbal) like he is upset.

- Negative 2: **ISSUE:** Subject needs to let his friend know how the friend's inconsiderate behavior makes him feel, and needs to work out some arrangement on TV which does not compromise his rights. **BEST RESPONSE:** Subject should make some statement which indicates how friend's inconsiderate behavior makes him feel, subject should look upset, and subject should take assertive action regarding TV.
- Negative 3: **ISSUE:** Subject needs to let his friend know how he feels about his friend's rude behavior. **BEST RESPONSE:** Subject should make a statement which indicates how his friend's behavior is making him feel, and subject should look upset.
- Negative 4: **ISSUE:** Subject needs to let his friend know that his competitive behavior has made him feel bad. **BEST RESPONSE:** Subject should make a statement which indicates that his friend's behavior is making him feel bad or is making him angry, and subject should look like he is upset.

Appendix D

Self-Rating Scales

Scenario Type _____

Below, please rate how important you felt it was to do well on these tasks.

1	2	3	4	5	6	7	8	9
not important				moderately important				very important

Below, please rate how threatening it was to do these tasks.

1	2	3	4	5	6	7	8	9
not threatening				moderately threatening				very threatening

Below, please rate how well you thought you would perform just before you made your responses.

1	2	3	4	5	6	7	8	9
perform poorly				perform moderately well				perform very well

Appendix E

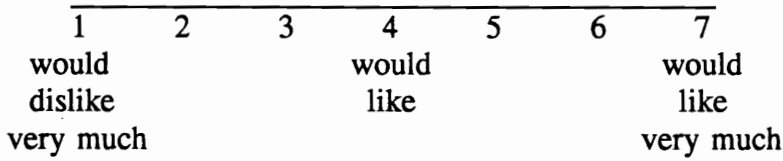
Likability Rating Scale

Subject Number _____

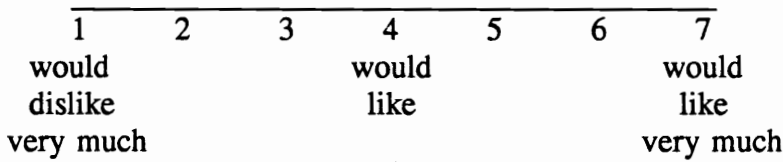
LIKING SCALE

RATE THE DEGREE TO WHICH THE SUBJECT'S RESPONSE WOULD CAUSE
A LISTENER TO "LIKE" OR "DISLIKE" THE SUBJECT

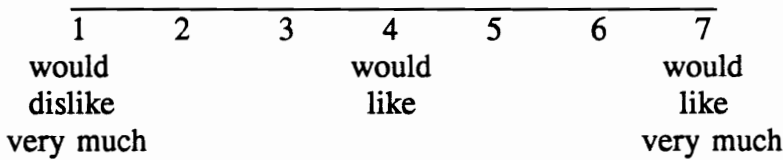
Scenario Number _____



Scenario Number _____



Scenario Number _____



Appendix F

Informed Consent Form

PHYSIOLOGICAL AND EMOTIONAL RESPONSIVITY TO INTERPERSONAL SITUATIONS

INFORMED CONSENT

Title of the Study: Physiological and Emotional Responsivity to Interpersonal Situations.

The purpose of this study is to compare differences in the way people react emotionally, behaviorally, and physiologically to a series of interpersonal situations.

It is my understanding that my participation will include:

1. one-hour session for completion of questionnaires regarding health status and personality characteristics, worth one credit toward my grade in Introductory Psychology.

Based on the scores which are obtained on the questionnaires, some subjects will be given the opportunity to participate in the experimental sessions. Participation in these sessions will include:

2. one and one-half hour laboratory session which would involve (a) positioning of blood pressure (BP), heart rate (HR), and electrodermal activity (EDA) instruments for measurement of physiologic functions, (b) listening to a tape recording of eight different scenarios, (c) responding to each scenario, (d) describing a stressful and traumatic event which has occurred in my life, (e) being videotaped during the scenarios to permit subsequent assessment of my behavioral responses, and (f) completing a short rating of my reactions;

3. return to the laboratory approximately two days later for a 20-minute baseline measurement of BP, HR, and EDA. Participation in both of these sessions is worth two credits toward my grade in Introductory Psychology.

I understand that participation in this experiment may produce certain discomforts and risks. These discomforts and risks include:

BP, HR, and EDA will be monitored. Since I will have been screened for medical problems prior to my participation in this part of the study, and will have indicated the existence of none, I understand that risks will be minimal.

I will be asked to react to hypothetical situations that I might encounter on an average day. It is possible, however, that some subjects may find some situations to be socially uncomfortable. I will also be asked to describe an event which was personally stressful, and it is possible that some subjects will find this situation to be uncomfortable.

I understand that I will be videotaped during the first experimental session, and that these tapes will be kept for an indefinite period of time by the investigators. I also understand that no one will be allowed to view these tapes except the investigators and their assistants.

I understand that any data of a personal nature will be held confidential and will be used for research purposes only. I also understand that these data may only be used when not identifiable with me.

I understand that I may abstain from participation in any part of the experiment or withdraw from the experiment if I become uncomfortable with the experimental activities. The experimenter may also terminate my participation if he/she feels that the experimental activities are causing me distress.

To the best of my knowledge, I have informed the experimenter of any medical problems that might interfere with the experiment.

I understand that this research project has been approved by the Human Subjects Research Committee and the Institutional Review Board and that any questions that I may have may be directed to Jan Blalock (231-6581), investigator; Dr. Richard Eisler, faculty sponsor (231-6914); Dr. Helen Crawford, chairperson, Human Subjects Committee, Psychology Department (231-6581); or Dr. E. Stout, Chairman, Institutional Review Board for Research Involving Human Subjects (231-9359).

I have read the above statements and have had the opportunity to ask questions. I understand that the researchers will, at any time, answer my inquiries concerning the procedures used in this experiment.

I hereby agree to voluntarily participate in the research project described above and under the conditions described above. I understand that I can withdraw my participation and consent at anytime during the experiment without losing credit for participation during that hour.

Participant Signature _____ (1st session)

Date _____

Participant Signature _____ (2nd session)

Date _____

Participant Signature _____ (3rd session)

Date _____

Appendix G
MGRS RATING SCALE

Name: _____ Date: _____

Directions: Please read the descriptions of the following situations. Then rate how stressful the situation would be for you. Give each item a rating on the scale from 0 to 5, ranging from not stressful to extremely stressful. For example:

- A. Driving a car ___0___
- B. Discovering you have a serious illness ___5___
- C. Losing your keys ___2___

 Not Stressful Extremely Stressful
 0-----1-----2-----3-----4-----5

Begin Here:

- 1. Feeling that you are not in good physical condition _____
- 2. Telling your spouse that you love her/him _____
- 3. Being outperformed at work by a woman _____
- 4. Having to ask for directions when you are lost _____
- 5. Being unemployed _____
- 6. Not being able to find a sexual partner _____
- 7. Having a female boss _____
- 8. Having your lover say that he/she is not satisfied _____
- 9. Letting a woman take control of the situation _____
- 10. Not making enough money _____
- 11. Being perceived by someone as "gay" _____
- 12. Telling someone that you feel hurt by what they said _____
- 13. Being married to someone who makes more money than you _____
- 14. Working with people who seem more ambitious than you _____
- 15. Finding you lack the occupational skills to succeed _____
- 16. Losing in a sports competition _____
- 17. Admitting that you are afraid of something _____
- 18. Being with a woman who is more successful than you _____

(turn over and complete back)

 Not Stressful Extremely Stressful
 0-----1-----2-----3-----4-----5

- 19. Talking with a "feminist" _____
- 20. Being unable to perform sexually _____
- 21. Being perceived as having feminine traits _____
- 22. Having your children see you cry _____
- 23. Being outperformed in a game by a woman _____
- 24. Having people say that you are indecisive _____
- 25. Being too tired for sex when your lover initiates it _____
- 26. Appearing less athletic than a friend _____
- 27. Talking with a woman who is crying _____
- 28. Needing your spouse to work to help support the family _____
- 29. Having others say that you are too emotional _____
- 30. Being unable to become sexually aroused when you want _____
- 31. Being compared unfavorably to men _____
- 32. Comforting a male friend who is upset _____
- 33. Admitting to your friends that you do house work _____
- 34. Working with people who are brighter than yourself _____
- 35. Getting passed over for a promotion _____
- 36. Knowing that you cannot hold your liquor as well as others _____
- 37. Having a man put his arm around your shoulder _____
- 38. Being with a woman who is much taller than you _____
- 39. Staying home during the day with a sick child _____
- 40. Getting fired from your job _____

Appendix H

SSQ

Name: _____

Student Number: _____

Age: _____ Sex: _____ Date: _____

Class in school: Freshmen Sophomore Junior Senior Graduate

INSTRUCTIONS:

The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the first part, list all the people you know, excluding yourself, whom you can count on for help or support in the manner described. Give the person's initials and their relationship to you (see example). Do not list more than one person next to each of the letters beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have no support for a question, check the words "No one," but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all questions as best you can. All your responses will be kept confidential.

EXAMPLE

Ex) Who do you know whom you can trust with information that could get you in trouble?

No one	1) T.N. (brother)	4) T.N. (father)	7)
	2) L.M. (friend)	5) L.M. (employer)	8)
	3) R.S. (friend)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

1. Whom can you really count on to listen to you when you need to talk?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

2. Whom could you really count on to help you if a person whom you thought was a good friend insulted you and told you that he/she didn't want to see you again?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

3. Whose lives do you feel that you are an important part of?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

4. Whom do you feel would help you if you were married and had just separated from your spouse?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

5. Whom could you really count on to help you out in a crisis situation, even though they would have to go out of their way to do so?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

6. Whom can you talk with frankly, without having to watch what you say?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

7. Who helps you feel that you truly have something positive to contribute to others?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

8. Whom can you really count on to distract you from your worries when you feel under stress?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

9. Whom can you really count on to be dependable when you need help?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

10. Whom could you really count on to help you out if you had just been fired from your job or expelled from school?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

11. With whom can you totally be yourself?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

12. Whom do you feel really appreciates you as a person?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

13. Whom can you really count on to give you useful suggestions that help you to avoid making mistakes?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

14. Whom can you count on to listen openly and uncritically to your innermost feelings?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

15. Who will comfort you when you need it by holding you in their arms?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

16. Whom do you feel would help if a good friend of yours had been in a car accident and was hospitalized in serious condition?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

17. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

18. Whom do you feel would help if a family member very close to you died?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

19. Who accepts you totally, including both your worst and your best points?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

20. Whom can you really count on to care about you, regardless of what is happening to you?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

21. Whom can you really count on to listen to you when you are very angry at someone else?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

22. Whom can you really count on to tell you, in a thoughtful manner, when you need to improve in some way?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

23. Whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

24. Whom do you feel truly loves you deeply?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

25. Whom can you count on to console you when you are very upset?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

26. Whom can you really count on to support you in major decisions you make?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

27. Whom can you really count on to help you feel better when you are very irritable, ready to get angry at almost anything?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied	3-a little dissatisfied	2-fairly dissatisfied	1-very dissatisfied
---------------------	-----------------------	-------------------------	----------------------------	--------------------------	------------------------

Appendix I
Health Questionnaire

ID# _____ Age _____ Sex: M F Date: _____
 Marital Status: S M D W Education _____

Please place a check next to any of the following health problems you have:

_____ Allergies
 _____ Diabetes
 _____ Heart condition or problems
 _____ Hypertension (high blood pressure)

Have you ever been hospitalized? YES _____ NO _____

Please briefly describe circumstances.

Do you have any current medical problems? YES _____ NO _____

Please briefly describe problem.

Do you take any of the following medications? YES _____ NO _____

_____ Heart medications
 _____ Blood pressure medications
 _____ Asthma medications
 _____ Cold medications

Please list any of these medications below:

Appendix J

Experimental Protocol

FIRST SESSION

EQUIPMENT SET-UP

1. -Load audio tape (M1 or M2)
2. -Write subject ID # on video-tape
-Load video cassette and turn on camera
3. -Check to see whether M1 or M2 tape should be run
-Load tape in tape player

COMPUTER SET-UP

1. -Plug in black box
-Flip orange switch
2. -Turn on IBS Blood Pressure monitor
-Check settings
Deflation rate = 3.5
Inflation pressure = 150 for baseline
Volume should be turned down
Cycle time = 1
Toggle switch on HOLD
3. -Log on computer - type:
Shasta (return)
D: (return)
CD\Useb (return)
Useprint (return)
Us (return)
-Check to see that disc is in disc drive

4. -Get into physiological monitoring system - type:

B - for physiological monitoring

Space bar

2 - for J & J BP standard volumes

Return

D - for blood pressure research

Return

5. -Get subject

-Introduce self to subject - act professional and neutral as possible

6. -Complete the top of data sheet

7. -Explain procedure:

"We will measure blood pressure, heart rate, and electrodermal activity while you are relaxed and while responding to several situations involving another person.

The entire session will last approximately 45 minutes

You are being videotaped, but the tapes will be erased after we have watched them. Only the experimenters involved will ever see these tapes.

Do you have any questions?"

8. -Hook subject up to blood pressure cuff

Blood pressure cuff on right arm

Check placement of microphone - 1 inch from inner elbow

Check looseness of cuff - loose enough to slide finger inside

-Hook subject up to EDA monitor

Hook up on left hand

Clean surface of middle pads of index and middle fingers

Place electrode gel on silver electrode

Place sensors on middle and index fingers

9. Bring in confederate

10. Explain procedure for role-play scenes:

"We will have a relaxation period first.

Then we will go through four scenes, then another relaxation period, then four more scenes, and another relaxation period.

Then we will ask you a question about a stressful event which you have experienced in your life. This will be followed by a final relaxation period.

Each relaxation period will last approximately 5 to 10 minutes. Please do not speak during these relaxation periods, and please try to remain as still as possible when blood pressure measurements are being taken."

11. Role play instructions

"In this study, you will be asked to respond to typical situations which arise in people's lives.

You will make your responses to my assistant.

It is important that you try to imagine that you are actually in the situations, and are interacting with your best male friend.

It is also important that you try to express your true feelings that you would experience if you were in that particular situation with you best friend.

Take a few seconds to think of the name of your best male friend to help you keep in mind the person you are imagining you are with in these situations. (Ask for name.)

Try throughout this experience to imagine my assistant as your best male friend.

In order to better imagine the situations, as they are being described you could think about what it would feel like to be in the situations, where it would occur, and what you would see, hear, and smell.

Try to respond just as you would to your best friend. Remember to express your feelings as well as you can and to SAY EVERYTHING THAT YOU WOULD SAY TO YOUR BEST FRIEND IN EACH SITUATION.

Each of the situations will be explained to you first on the tape. After you listen to the tape, you should respond as you would if you were in that situation with your friend."

12. Role play - Practice

"To make sure you understand what to do, we're going to start with a couple of practice scenarios."

Practice Scenario 1

"You are at your best friend's house and see that he is having a difficult time getting a paper done on time. You would really like to help him. You go over to him and say...."

After subject's response, say:

Remember to imagine my assistant as your best friend. Express the feelings you would actually experience if you were in that situation.

Practice Scenario 2

It's Friday night and you're having your girlfriend over for dinner. You are in the kitchen trying to decide what to make. Your best friend comes into the kitchen, and you say...

13. Explain how to complete the Rating Scales.

"Following each set of responses, I'd like you to answer three questions regarding how you felt about making the previous four responses."

(Have subject look at rating scales.)

"Do you understand how to fill out the ratings scales?"

"Do you have any questions before we get started?"

14. START VIDEOTAPE. STATE:

"This is subject #....."

(last 5 digits of ID number)

15. -Start computer monitoring

Type N

Enter subject ID under last name

Hit Return

Skip first and middle name and social security number

16. -Prebaseline

Take 1 prebaseline measure

Check readings to make sure measuring devices are functioning properly

17. -Hit INSERT key to move from prebase to baseline 1

18. Baseline 1 - Procedure

Record each measure on form

Take recordings off of computer graphs

Computer runs one cycle behind blood pressure monitor, so you must record 2/20 reading as the first baseline reading, 3/20 as the second reading, etc.

Criteria for baseline:

3 CONSECUTIVE SYSTOLIC measures which are WITHIN 5 mm Hg of each other

****If it takes more than 7 readings to obtain baseline:**

Hit F4 key following 7th measure

Hit 1 key - to save data to disk

Hit Y key

Hit 8 key - to erase data at end of session

Hit space bar

Continue baseline readings until baseline obtained

Hit INSERT key following final baseline reading

19. Stress 1

-Change Inflation Pressure to 180

-Hit Y key in response to question on screen

-Start tape recorder

-Record Stress 1 readings (total of 4)

Record 2/4 as first reading, 3/4 as second reading, etc.

-Stop tape recorder between each scenario so subject can make their response

-Hit INSERT key to go into Baseline 2

20. Baseline 2

-Hit Y key in response to question on screen

-Record readings

-Criteria for baseline - same as above

****If more than seven readings required - follow procedure above**

-Hit INSERT key when baseline established

-Start tape recorder

21. Stress 2

-Hit Y key in response to question on screen

-Record readings (total of 4)

-Stop tape recorder after 4th scenario

-Hit INSERT key to go into Baseline 3

22. Baseline 3

- Hit Y key in response to question on screen
- Record readings
- Criteria for baseline - same as above
- **If more than seven readings required - follow procedure above
- Hit INSERT key when baseline established

23. Stress 3

- Hit Y key in response to question on screen
- Record readings
- Hit INSERT key following last reading after subject stops talking

24. Baseline 4

- Hit Y key in response to question on screen
- Record a total of 5 readings
- Criteria for baseline
 - 3 consecutive readings within 5 mm Hg of Baseline 1
- Turn off BP cuff

25. Save data

- Hit F4 key
- Hit 1 key - save data to disk
- Hit space bar
- Hit ALT X keys
- Turn off blood pressure monitor

26. Print data

- Hit Y key to exit
- Hit C - data history review
- Press space bar
- Hit 2 - J & J blood pressure standard volumes
- Press space bar
- Hit A - research report
- Hit C - I want to choose...
- Place cursor on subject ID number and hit RETURN
- Press space bar
- Check printer or paper alignment
- Hit P - report will print out

BEFORE YOU LEAVE LAB:

Clean finger electrodes

Turn off camera

Put disc away

Put tape away

Turn off computer

Take black box out of electric plug

File data sheets

Lock door

IF KEY BOARD LOCKS UP, DO A WARM BOOT:

Remove disc from disc drive

Hit the following keys at the same time:

CONTROL

ALT

DELETE

SECOND SESSION (BASELINE ONLY) PROTOCOL

COMPUTER SET-UP

1. -Plug in black box
-Flip orange switch
2. -Turn on IBS Blood Pressure monitor
-Check settings
 Deflation rate = 3.5
 Inflation pressure = 150 for baseline
 Volume should be turned down
 Cycle time = 1
 Toggle switch on HOLD
3. -Log on computer - type:
 Shasta (return)
 D: (return)
 CD\Useb (return)
 Useprint (return)
 Us (return)
-Check to see that disc is in disc drive
4. -Get into physiological monitoring system - type:
 B - for physiological monitoring
 Space bar
 2 - for J & J BP standard volumes
 Return
 D - for blood pressure research
 Return
5. -Get subject
6. -Complete the top of data sheet
7. Ask subject for their height and record
8. Measure weight and record.

9. -Hook subject up to blood pressure cuff
 - Blood pressure cuff on right arm
 - Check placement of microphone - 1 inch from inner elbow
 - Check looseness of cuff - loose enough to slide finger inside
 - Hook subject up to EDA monitor
 - Hook up on left hand
 - Clean surface of middle pads of index and middle fingers
 - Place electrode gel on silver electrode
 - Place sensors on middle and index fingers

 10. -Start computer monitoring
 - Type N
 - Enter subject ID under last name
 - Hit Return
 - Skip first and middle name and social security number

 11. -Prebaseline
 - Take 1 prebaseline measure
 - Check readings to make sure measuring devices are functioning properly

 12. -Hit INSERT key to move from prebase to baseline 1

 13. Baseline 1 - Procedure
 - Record each measure on form
 - Take recordings off of computer graphs
 - Computer runs one cycle behind blood pressure monitor, so you must record 2/20 reading as the first baseline reading, 3/20 as the second reading, etc.
- Criteria for baseline:
3 CONSECUTIVE SYSTOLIC measures which are WITHIN 5 mm Hg of each other
- **If it takes more than 7 readings to obtain baseline:**
Hit F4 key following 7th measure
Hit 1 key - to save data to disk
Hit Y key

Hit 8 key - to erase data at end of session
Hit space bar
Continue baseline readings until baseline obtained

14. Save data

- Hit F4 key
- Hit 1 key - save data to disk
- Hit space bar
- Hit ALT X keys
- Turn off blood pressure monitor

15. Remove blood pressure cuff and EDA sensor

16. Print data

- Hit Y key to exit
- Hit C - data history review
- Press space bar
- Hit 2 - J & J blood pressure standard volumes
- Press space bar
- Hit A - research report
- Hit C - I want to choose...
- Place cursor on subject ID number and hit RETURN
- Press space bar
- Check printer or paper alignment
- Hit P - report will print out

Appendix K

Means and Standard Deviations for Appraisal MeasureAs a Function of MGRS Group and Scenario Type

Rating	High		Low	
	Pos	Neg	Pos	Neg
Rate how important it was to do well on tasks.				
<u>M</u>	6.80	6.47	6.29	6.28
<u>SD</u>	1.32	1.31	1.31	1.48
Rate how threatening it was to do tasks.				
<u>M</u>	4.00	3.63	3.13	3.02
<u>SD</u>	2.11	2.20	2.23	1.67
Rate how well you thought you would perform.				
<u>M</u>	5.19	5.30	5.18	5.53
<u>SD</u>	0.67	1.37	1.76	1.83

Note. Mean ratings on a Likert scale of 1 to 9

Appendix L

Means and Standard Deviations of Psychophysiological BaselineMeasures as a Function of MGRS Group and Scenario Type

Dependent Measure	Group	
	High	Low
SBP		
<u>M</u>	124.48	124.80
<u>SD</u>	7.92	10.03
DBP		
<u>M</u>	69.89	68.91
<u>SD</u>	7.65	8.34
HR		
<u>M</u>	73.64	73.49
<u>SD</u>	8.74	9.58

Appendix M

Means and Standard Deviations of Cardiovascular ReactivityMeasures as a Function of MGRS Group and Scenario Type

Dependent Measure	High		Low	
	Pos	Neg	Pos	Neg
Average				
SBP				
<u>M</u>	141.35	140.02	142.10	143.23
<u>SD</u>	13.00	12.43	11.89	13.53
DBP				
<u>M</u>	77.67	78.43	78.50	81.09
<u>SD</u>	10.47	13.47	13.31	16.87
HR				
<u>M</u>	81.93	86.12	81.72	83.86
<u>SD</u>	13.04	14.38	12.82	15.45

Means and Standard Deviations of Cardiovascular Reactivity

Measures as a Function of MGRS Group and Scenario Type

Dependent Measure	High		Low	
	Pos	Neg	Pos	Neg
<u>Average Change Scores</u>				
SBP				
<u>M</u>	18.28	16.22	16.80	16.72
<u>SD</u>	15.85	13.84	16.09	16.00
DBP				
<u>M</u>	8.70	9.07	9.32	12.50
<u>SD</u>	22.43	21.52	20.19	24.70
HR				
<u>M</u>	7.99	11.86	6.64	8.46
<u>SD</u>	15.53	17.41	14.38	17.88
<u>Peak</u>				
SBP				
<u>M</u>	149.79	152.52	152.93	156.78
<u>SD</u>	14.62	13.82	15.50	16.48
DBP				
<u>M</u>	99.34	104.97	96.30	107.63
<u>SD</u>	27.18	26.33	25.33	28.16
HR				
<u>M</u>	96.28	103.34	95.53	99.18
<u>SD</u>	15.61	13.14	16.65	16.95

Appendix N

Means and Standard Deviations of Expressiveness MeasuresAs a Function of MGRS Group and Scenario Type

Dependent Measure	High		Low	
	Pos	Neg	Pos	Neg
Verbal				
Verbal Exp Ratings				
<u>M</u>	2.86	2.29	2.64	2.27
<u>SD</u>	1.04	0.63	1.02	0.58
Length of Response				
<u>M</u>	10.10	7.98	11.20	8.43
<u>SD</u>	8.50	6.00	8.40	6.27
Latency of Response				
<u>M</u>	2.84	2.01	2.77	2.16
<u>SD</u>	2.23	1.17	2.37	1.78
Nonverbal				
Percent Occurrence of Facial Movement				
<u>M</u>	27.28	25.03	32.66	34.28
<u>SD</u>	25.57	23.93	24.84	25.05

Appendix O

Means and Standard Deviations of Likability RatingsAs a Function of MGRS Group and Scenario Type

Dependent Measure	High		Low	
	Pos	Neg	Pos	Neg
Likability ratings				
<u>M</u>	4.67	3.38	4.47	3.55
<u>SD</u>	1.06	1.12	1.05	1.28

Appendix P

Means and Standard Deviations of Social Support MeasureAs a Function of MGRS Group

Dependent Measure	Group	
	High	Low
SSQN		
<u>M</u>	4.11	4.25
<u>SD</u>	1.29	1.98
SSQS		
<u>M</u>	5.01	5.27
<u>SD</u>	0.62	0.54

CURRICULUM VITAE

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EDUCATION

- September 1990 - August 1991 Medical University of South Carolina;
Charleston, SC
Clinical Internship
- September 1986 - present Virginia Polytechnic Institute and State University;
Blacksburg, VA
Clinical Psychology Ph.D. Program,
speciality in Health Psychology
GPA 3.8
- September 1984 - July 1986 University of the Pacific; Stockton, CA
M.A. in Psychology,
speciality in Behavioral Medicine (July 1986)
- September 1982 - May 1983 University of Texas at Dallas; Dallas, TX
- September 1976 - December 1980 Southwest Texas State University; San Marcos, TX
B.S. in Psychology, minor in Biology
Graduated with Highest Honors (December, 1980)

TEACHING EXPERIENCE

- September 1989 - Instructor, Abnormal Psychology
May 1990 Department of Psychology, Virginia Tech
- February 1988 - Instructor, Behavior Modification
May 1989 Department of Psychology, Virginia Tech
- September 1986 - Teaching Assistant, Environmental Psychology and Behavior
January 1988 Modification
Department of Psychology, Virginia Tech
Supervisors: Richard Winett, Ph.D., Russell Jones, Ph.D., and
Jack Finney, Ph.D.
Responsibilities: administered exams, graded exams and papers,
lectured
- January 1985 - Teaching Assistant, Psychoactive Drugs, Experimental Psychology,
May 1986 and Physiological Psychology
Department of Psychology, University of the Pacific
Supervisors: Roseann Hannon, Ph.D. and
Kenneth Beauchamp, Ph.D.
Responsibilities: Advised students in coursework, instructor of
physiological psychology lab, wrote and corrected exams, corrected
term papers
- September 1980 - Laboratory Instructor, Experimental Psychology
May 1981 Department of Psychology, Southwest Texas State University
Supervisor: Dr. Harvey Ginsburg
Responsibilities: Lectured, assisted students with lab assignments,
graded lab assignments

CLINICAL EXPERIENCE

September 1990 -
August 1991

Psychology Intern, Medical University of South Carolina,
Charleston, SC

Worked on the post traumatic stress disorder clinical team, and in the mental hygiene clinic at the Charleston VA Hospital. Clinical activities include assessment of PTSD, and provision of individual and group therapy to individuals with PTSD; assessment of psychiatric disorder in adults who present to the mental hygiene clinic, individual and couples therapy, and supervision of third year medical students who perform psychiatric screenings in the mental hygiene clinic.

Supervisors: Russell Reynolds, Ph.D. and Julian Libett, Ph.D.

Other rotations: inpatient drug and alcohol abuse program;
inpatient psychiatric ward

June 1990 -
August 1990

Graduate Clinician, Southwestern State Hospital, Marion, VA

Worked on a multidisciplinary treatment team at a state psychiatric hospital. Performed assessments and provided individual and group therapy to higher functioning patients.

Supervisors: Denise Mantz, Psy.D. and Richard Mears, Ph.D.

February 1990 -
June 1990

Research Project Clinician, Department of Psychology,
Virginia Tech, Blacksburg, VA.

Provided individual therapy to individuals participating in a study comparing bibliotherapy versus individual treatment of panic disorder. Treatment techniques used included exposure, coping skills training, and cognitive restructuring.

Supervisor: George A. Clum, Ph.D.

September 1989 -
May 1990

Graduate Clinician, Psychological Services Center,
Department of Psychology, Virginia Tech, Blacksburg, VA.

Supervised first and second year clinical psychology students at an outpatient mental health training facility. Students provided assessment and treatment for a variety of clinical problems in both adult and child populations. Supervision from cognitive-behavioral, psychodynamic, and family systems orientations.

Supervisors: George A. Clum, Ph.D. and
Robert S. Stephens, Ph.D.

- June 1989 -
August 1989
- Graduate Clinician, Southwestern State Hospital, Marion, VA.
Worked on a multidisciplinary treatment team at a state psychiatric hospital. Performed assessments and provided individual and group therapy to higher functioning patients.
Supervisors: Denise Mantz, Psy.D. and Richard Mears, Ph.D.
- June 1988 -
April 1989
- Graduate Clinician, Center for Behavioral Medicine, Radford, VA.
Worked on a multidisciplinary treatment team at a chronic pain clinic. Provided psychological assessment and treatment of chronic pain inpatients and outpatients. Provided a variety of treatments in a structured day treatment program, including group therapy, assertiveness training, relaxation training, biofeedback, and cognitive/behavioral therapy for depression, substance dependence, pain management, marital dysfunction, and stress management. Conducted comprehensive pain assessments using psychophysiological and psychological assessment tools.
Supervisors: Bruce Walker, Ph.D. and Richard Bindewald, Ph.D.
- September 1986 -
May 1988
- Graduate Clinician, Psychological Services Center, Virginia Tech, Blacksburg, VA.
Provided assessment and treatment for a variety of clinical problems including depression, anxiety disorders, personality disorders, marital dysfunction, anger control, parent-child problems, adjustment disorders, and stress-related disorders. Supervision from cognitive-behavioral and family systems orientations.
Supervisors: Richard Eisler, Ph.D., David Harrison, Ph.D., and Debra Neff, Ph.D.
- February 1986 -
July 1986
- Graduate Therapist, Smoking Cessation Treatment - Thesis, Department of Psychology, University of the Pacific, Stockton, CA
Administered aversive smoking cessation treatment to 50 individuals. Provided cognitive-behavioral maintenance therapy, in a group format, for a three-month period following subjects' quit date.
Supervisor: Roger Katz, Ph.D.

- October 1985 - Graduate Therapist, Cognitive Rehabilitation Clinical
 April 1986 Research Project, Department of Psychology, University of the
 Pacific, Stockton, CA.
 Implemented computer-based cognitive rehabilitation with
 brain-injured individuals.
 Supervisor: Roseann Hannon, Ph.D.
- September 1984 - Graduate Clinician, Behavioral Medicine Clinic, Department
 May 1986 of Psychology, University of the Pacific, Stockton, CA.
 Provided assessment and treatment of a variety of health and
 stress-related disorders, including tension and migraine headaches,
 facial tics, and lower back pain. Also worked with families,
 providing treatment of parent-child problems.
 Supervisor: Douglas Matheson, Ph.D.

COMMUNITY EXPERIENCE

April 1985 Stress Management Workshop, Dameron Hospital, Stockton, CA.

RESEARCH PUBLICATIONS

- Eisler, R. H. & Blalock, J. A. (1991). Masculine gender role stress: Implications for
 assessment and treatment of men. Clinical Psychology Review, *11*, 45-60.
- Miller, S. M., Blalock, J. A., & Ginsburg, H.J. (1984). Children and the aged:
 Attitudes, contact, and discriminative ability. International Journal of
 Aging and Human Development, *19*, 47-53.

RESEARCH PRESENTATIONS

- Blalock, J. A. & Sauer, K. (1990). The relationship between masculine gender role stress
 and emotional inexpressiveness. In R. M. Eisler (Chair), Masculine gender role stress:
 Implications for men's health. Symposium conducted at the Association for Advancement
 of Behavior Therapy meeting, San Francisco, November.
- Blalock, J. A. (1990). Masculine gender role stress appraisal: Emotional expressiveness
 and psychophysiological reactivity. Poster presented at the American Psychological
 Association meeting, Boston, August.

- Skidmore, J. R., Eisler, R. M., Blalock, J. A., & Sikkema, K. J. (1988). Cardiovascular reactivity in men as a function of masculine gender role stress. Poster presented at the Biofeedback Society of America meeting, Colorado Springs, March.
- Bene, C., Hannon, R., Blalock, J., Risi, S., Robisch, C., & Day, C. L. (1986). Computer-based cognitive rehabilitation with brain-injured young adults. Poster presented at the Western Psychological Association meeting, Seattle, May.
- Blalock, J. A. (1986). The effects of health-related feedback on a smoking cessation maintenance program. In R. C. Katz (Chair), Smoking prevention. Symposium conducted at the Northern California Association for Advancement of Behavior Therapy meeting, San Mateo, CA, March.
- Blalock, J. A. (1985). A comparison of two approaches to software tutorial presentation. In D. W. Matheson (Chair), A training task for psychology: Improving microcomputer hardware and software documentation. Symposium conducted at the American Psychological Association meeting, Los Angeles, August.
- Blalock, J. A. (1985). A comparison of two approaches to software tutorial presentation. In D. W. Matheson (Chair), A training task for psychology: Improving microcomputer hardware and software documentation. Symposium conducted at the Western Psychological Association meeting, San Jose, CA, April.
- McMenamy, C. J., Robisch, C. M., & Blalock, J. A. (1985). Electromyography scanning: Implications for its use in the diagnosis of tension and migraine headaches. Paper presented at the Western Psychological Association meeting, San Jose, CA, April.
- Blalock, J. (1981). The lag effect in prose. Paper presented at the Southwestern Psychological Association meeting, Houston, April.
- Miller, S. M., Ginsburg, H. J., & Blalock, J. A. (1981). Children's understanding of and attitudes toward aging. Paper presented at the Southwestern Psychological Association meeting, Houston, April.

GRADUATE COURSE WORK

Clinical Psychophysiology	Proseminar Learning: Behavioral
Research Design	Proseminar Learning: Cognitive
Personality Processes	Research in Psychotherapy
Behavior Change Practicum	Advanced Topics in Clinical Psychology:
Behavior Analysis: Health Care	Men's Issues
Advanced Statistics	Proseminar Biological Bases of Behavior
Clinical Neuropsychology	Behavior Intervention Techniques:
Behavioral Assessment (Prosem Clin Psych)	Cognitive/Behavioral
Intelligence Assessment (Prosem Clin Psych)	Behavior Intervention Techniques:
Personality Assessment (Prosem Clin Psych)	Family Systems
Seminar Developmental Psychology	Seminar Community Health
Epidemiology	Statistics for Psychology
Health Psychology	
Experimental Psychopathology	
Seminar Social Psychology	

AWARDS AND HONORS

Achievement Rewards for College Scientists Scholarship, Northern California Chapter, March, 1985

Cited for Excellence in English, English Department, Southwest Texas State University, May, 1981

Cited for Research, School of Education, Southwest Texas State University, May, 1981

Cited for Academic Excellence, School of Education, Southwest Texas State University, May, 1981

REFERENCES

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