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THE RELATIONSHIP BETWEEN COGNITIVE ATTRIBUTIONS OF  
LONELINESS AND COOPING RESPONSES TO LONELINESS  
IN UNIVERSITY STUDENTS

By

Shelley B. Smithson

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## ABSTRACT

### THE RELATIONSHIP BETWEEN COGNITIVE ATTRIBUTIONS OF LONELINESS AND COPING RESPONSES TO LONELINESS IN UNIVERSITY STUDENTS

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This dissertation looked at the relationships between attributions of loneliness and manners of coping with loneliness in university undergraduate students. Loneliness was entered into the research design as a third variable of interest, with attributions and coping behavior investigated in terms of degree of loneliness being experienced. The sample consisted of students who were both lonely and not lonely. Criteria were established to investigate hypotheses both among the total sample of students (83 males, 116 females) and among a Lonely subsample (19 males, 30 females). In general, the total student sample demonstrated a range of loneliness typical of student populations seen on other large university campuses in the United States. Attributions of causality and stability of loneliness were measured using the theoretical model of Weiner.<sup>1</sup> Coping behavior was investigated according to the paradigm of Lazarus and Folkman,<sup>2</sup> in which coping is seen as either emotion-focused or problem-focused in orientation.

Hypotheses predicting relationships between one form of coping or another depending on the attributions of stability and causality of loneliness were generally not supported. Coping behavior was not found to be predicted in the directions hypothesized, nor was coping behavior strongly related to attributions of loneliness. Correlational data and analysis of variance suggested that attributions that were unstable and external were found to have a moderate and significant relationship with emotion-focused coping, suggesting that individuals are more prone to self-comforting coping strategies when they are feeling that the problem of loneliness is changeable and temporary. This was seen to a further degree with cluster analyses. These analyses suggested that coping was high for moderately lonely students with external and unstable attributions for their loneliness, whereas students who were very lonely or slightly lonely and showed greater tendencies toward stable and internal attributions for their loneliness engaged in significantly less coping behavior. This study suggests that perhaps those students who are most lonely are more apt to see their situation in negativistic terms and feel less motivated to seek change.

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<sup>1</sup>B. Weiner, Achievement motivation and attribution theory (Morristown, NJ: General Learning Press, 1974).

<sup>2</sup>R. S. Lazarus & S. Folkman, Stress, appraisal, and coping (New York: Springer, 1984).

This dissertation is dedicated to my husband, Jim Heavenrich,  
whose unending support, encouragement, and humor were most sustaining  
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## CHAPTER I

### STATEMENT OF NEED AND INTENT OF STUDY

Loneliness is a widespread phenomenon in our society. Loneliness affects people of all ages and encompasses a range of emotions and situational components. Although there are different causes and courses to the experience of loneliness, the common denominator to all people who describe themselves as lonely is that they suffer from a longing for satisfying social contact that is missing. Although loneliness is frequently associated with social isolation, aloneness, and solitude, it differs from these states in that loneliness refers to the specific state of longing for either more social contact with others or social contact of a more rewarding nature. Whereas social isolation objectively describes an individual's social life, and aloneness and solitude both describe conditions of social isolation or separateness, loneliness pertains to a painful feeling of desiring what currently is not being experienced.

Most people experience some form of loneliness at one time or another in their lives. Loneliness is a culturally defined phenomenon, given that each culture establishes standards for the desired level of social contact and involvement. Certain cultures foster a greater degree of loneliness in their members than do others. The

American culture has been cited by numerous theorists as a lonelier culture due to the emphasis on autonomy, independence, materialism, individualism, and competition (Moustakas, 1961; Sadler, 1979; Weiss, 1978). Thus, forces in American culture contribute to difficulty achieving social ease and comfort. In all cultures, primary attachment needs and interaction needs deriving from mutual dependence and desire for companionship result in specific ways in which people form relationships and cohesive groups. Loneliness becomes a concern when an individual subjectively feels a persistent feeling of nonattachment or lack of inclusion where such involvement is desired. Thus, loneliness is not an objective state, but rather a subjective one that can only be accurately reported by the subject, versus accurately detected by an observer.

There are many different causes for loneliness, as well as different courses of intensity and duration of loneliness. The word lonely typically carries a negative connotation, conjuring up images of unhappiness, dejection, sadness, and desperation. Most people can think of individuals they have known who always appear lonely. They are suffering from what appears to be a chronic condition. There are also individuals who report going through a particularly lonely period, or who identify certain circumstances that can result in a temporary bout of loneliness. Particular roles in life seem to carry higher risks for loneliness, such as the full-time mother whose children have all grown and left home, or the small-town minister whom all confide

in, and yet has no one s/he can turn to for solace and comfort, always feeling under the scrutinizing eyes of all.

Loneliness also changes in intensity and affect, depending on the duration of loneliness and the etiology of the loneliness. One person may feel acutely lonely for a short period of time, whereas another may experience some sensations of loneliness, only to become more chronically lonely and unhappy as no easy solutions are found to remediate the difficulty. One person may describe him/herself as always having been lonely, suggesting either a characterological predisposition to feeling apart from others or from life, or encounters with persistently difficult circumstances.

There are sudden life changes and gradual transitions that can foster loneliness, given the right set of ingredients. Widowhood, imprisonment, illness, and occupational demise can cause potent feelings of loneliness in those who are described as such.

The subjective experience of loneliness cannot be isolated from the cultural context in which it occurs. In a society such as ours, which is highly oriented toward individual achievement and autonomy, there are strong undercurrents encouraging people to forego comforts of social closeness or dependency for the cultural values of success and performance. In addition, there are prescribed conditions for normal social adjustment, thus establishing certain social norms that are identified as desirable to achieve. In a society that typically does not encourage people to be alone and even uses isolation as a

common form of punishment in the rearing of children, Americans have the tendency to be frightened of being alone.

Loneliness connotes a sense of deprivation and desperation. Thus, loneliness is an internal experience that signals to an individual that his/her object world is deficient in a manner that creates emotional distress (Gordon, 1976). Remedying the experiences of loneliness can involve making changes in whom one relates to, how one seeks friends, or in the internal expectations one has for social intimacy and involvement. Peplau and Perlman (1981, p. 31) further defined loneliness as the internal perception and effect of believing one's social contact is deficient. They believed that cognitions play an important role in the self-description of loneliness. Cognitions can affect how people make contact with others and how people appraise their relationships, thus affecting the level of satisfaction or dissatisfaction one may feel with his/her relationships.

There are a number of theoretical approaches to individual and social development that address loneliness. Developmental theory of the self (ego psychology) addresses the inevitable experience of loneliness in young children during the process of ego formation, when separation from symbiosis results in a "psychological birth" as a separate person (Mahler, 1975). This theory recognizes the possibility of current life events reawakening these archaic feelings of loneliness. Eriksonian theory (Erikson, 1950) recognizes ongoing developmental tasks within life-cycle stages that lead to the formation of a cohesive identity, implying that failure to successfully

accomplish stage-specific tasks can result in lonely feelings. Social psychologists look at the interaction between individual traits and social milieu as resulting in lonely periods for people, and cognitive theorists believe in the importance of understanding cultural norms of cognition and intraindividual differences in cognition as defining what constitutes loneliness for an individual.

The range of approaches to loneliness suggests that there is a continuum of normality to pathology in which one's loneliness can be viewed. Most individual/social developmental approaches recognize the inevitable experience of loneliness in the growth process, and some theorists have addressed the importance of loneliness as part of the process of maturation (Guntrip, 1968; Mijuskovic, 1980; Moustakas, 1961; Sullivan, 1953; Winnocott, 1958). Moustakas (1961) believed that loneliness accompanies life transitions, decision making, and loss, and saw loneliness as a normal experience, providing the opportunity for growth and creativity. He stated that loneliness only becomes pathological or harmful if one's resources are such that coping with loneliness or keeping it in perspective are seriously diminished.

Considering the universality of the experience of loneliness, there has been surprisingly little attention to loneliness in psychological research. Most people are familiar with lonely figures in fictional literature, such as Robinson Crusoe (Robinson Crusoe, Defoe, 1720/1960), Holden Caulfield in Salinger's Catcher in the Rye (1961), or Harry Haller, the "Steppenwolf" in Hesse's Steppenwolf (1929).



Loneliness has been a major theme in literature and continues to have a place among the themes in contemporary works. However, the recognition of loneliness as a worthy area for psychological investigation has been relatively recent. Fromm-Reichmann (1959) attributed the dearth of research in this area as due to a "collusion" among researchers to avoid a subject that almost invariably is a reminder of unpleasantness to most people. Thus, there is a need to further the research efforts that have begun over the past 10 or 15 years.

This researcher looked at the problem of loneliness among the college-aged population. Studies have indicated the prevalence of loneliness to be higher among adolescents and young adults than any other age group (Brennan & Auslander, 1979; Ostrov & Offer, 1980).

This study looked at the relationship between the attributions college students make of loneliness and the coping behaviors they report using during periods of loneliness. Due to the fact that college students are entering a phase of their lives in which their cognitive capacities are encouraged and drawn upon to provide explanations for many new phenomena they face, it is worthwhile to learn more about the nature of their cognitive styles in relation to reactions to the experience of loneliness. Research on the coping behavior of college students who are lonely is very limited, but preliminary research has demonstrated that cognitions students have about their loneliness seem to influence their course of loneliness (Cutrona, 1982; Paloutzian & Ellison, 1980).

In learning more about the interrelationships among attributions regarding loneliness and responses to loneliness in undergraduates, more information can be gained as to whether cognitive attributions play an important role in experiences of loneliness and in determining coping behavior, as well as looking at the types of coping behaviors used. Further value from this type of study is learning about improved methods of intervention with lonely students, as well as gaining insight into preventive resources for students to help ameliorate negative aspects of loneliness. The goal of this type of research is to help researchers and clinicians understand what types of coping styles are effective for people, and whether the way one appraises a lonely experience influences the use of adaptive coping responses.

This study served as a first step in this inquiry by investigating the usefulness of understanding coping behavior as influenced by cognitive attribution. A previous study (Revenson, 1981) looking at the relationship between attributions about loneliness and coping responses to loneliness served as a foundation from which the present study was developed. The study itself is referred to later in this paper as it represents the effort on the part of its researcher to relate the constructs of causal attribution and coping according to recent directions in loneliness research.

Attribution theory has promoted research in looking at the relationship of attributions to emotions and behavioral responses.

In the following section, literature regarding some important studies relevant to this area of research is discussed.

Attribution studies of achievement motivation have provided meaningful data indicating that explanations of locus of causality and stability are associated with certain emotions and expectations of the future. With regard to negative events, internal/unstable attributions are associated with feelings of control and positive expectations for future outcomes. Internal/stable attributions are associated with depressed affect and low motivation. External/stable attributions are associated with lack of control and depressed affect. Finally, internal/stable attributions are believed to be related to depressed affect and low expectancy of positive future outcomes (Peplau, Russell, & Heim, 1979; Seligman, 1979; Weiner, Russell, & Lerman, 1979). In the application of attribution theory to loneliness, it can be hypothesized that, depending on the attributions made regarding the causes and permanence of the lonely situation, coping will either be more focused on palliative measures or on taking action to do something about the problem. A person may not go about consciously identifying causes and ascriptions of changeability to these causes, but at a more automatic level of thinking, these assumptions people make are all the more powerful.

Cutrona (1982), Peplau and Perlman (1982), and Revenson (1981) all looked specifically at attributions of loneliness in college students and the relationship of causal attributions to coping responses. The initial works of Cutrona and of Peplau and Perlman led

Revenson to design a study to look at the relationship between Weiner's attributional styles and the reported coping responses with loneliness. The coping model that lends itself to this research is Lazarus and Folkman's (1984) emotion- versus problem-focused coping, which is based on the premise that coping is effortful behavior (versus reactive) in the sense that it is behavior called upon in the service of mobilizing against psychological stress or distress. Although people may not actually be consciously aware that they have engaged purposively in particular responses to contend with stress, it was Lazarus and Folkman's contention that a person can identify coping behaviors when asked to, and that people have a sense of how responses (whether thoughts or behavior, per se) are serving to protect them or help them ward off the stressor.

Revenson (1981) studied the relationship between attributions of causality and stability of loneliness and coping responses (emotion- versus problem-oriented). She hypothesized that people with internal/ unstable attributions would select more problem-oriented coping responses than emotion-oriented responses. She also hypothesized that people with external/stable attributions for loneliness would select more emotion-oriented coping responses than problem-oriented responses because of the lack of personal control or sense of change implied in that cognitive style. Revenson used the Ways of Coping Inventory (Lazarus & Cohen, 1980) to measure coping behavior, having adapted some of the items to read more appropriately for loneliness. Revenson found results that were in the predicted directions, but only found

one significant interaction effect of stability and causal attribution with type of coping responses endorsed. She also found that respondents with internal attributions, regardless of stability attributions, endorsed more of both types of coping responses.

Revenson stated in personal communication that her study served as a good starting point for further studies that can be conducted to look at the same relationships. Revenson did not use a sample of people who were all lonely. She recruited volunteers ( $N = 137$ ) between the ages of 18 and 49 and administered the New York University Loneliness Scale to them. She then asked the subjects to think of times when they had been lonely and to indicate their coping responses on the Coping Inventory. Thus, the data collected were from a sample ranging from nonlonely to very lonely people, and the data were retrospective in many cases.

#### The Dissertation Study

The present study looked specifically at the relationships among attributions of loneliness, coping responses to loneliness, and degree of loneliness within a sample of undergraduate students. Locus of causality and locus of stability were the attributions of interest with respect to attributional style, and coping response was regarded within the problem- and emotion-focused coping paradigm of Lazarus and Folkman (1984). The sample of subjects included students who were lonely as well as students who were not lonely at the time the research was conducted. Students provided self-report data with respect to their current state of loneliness, their attributions about

causality and stability of loneliness, and their manner of coping with loneliness.

The study furthered the questions examined by Revenson's (1981) work by expanding on her research in a number of ways. A more select sample was chosen (instead of studying a general adult population). Subsamples were studied of lonely and nonlonely students within the whole sample, and hypotheses were expanded or in some cases altered. A coping instrument designed specifically for coping with loneliness was used to measure coping responses, a departure from the previous research cited. The state of loneliness and attributions of loneliness were also measured with different instruments, which this researcher identified as having more sound psychometric integrity and greater applicability to the research. Depression and self-esteem were two additional variables included in the research design to allow for the possibility of further explanations or clarifications of results obtained and to have a fuller description of the sample of subjects. Methods of analyses were extended to include more correlational analyses and cluster analyses for descriptive purposes.

A critical contribution to this research was the performance of analyses on a subgroup of lonely students. This provided for a greater understanding of the experience of loneliness and the nature of attributions of loneliness and coping with loneliness among people currently experiencing loneliness. The formation of subsamples of lonely and nonlonely subjects allowed for comparisons along a number of interesting variables. In addition, it was seen as crucial to

identify a group of students who were providing current information about themselves, in order to add strength to a study that did have some students providing retrospective data in the whole sample. Thus, for purposes of linear regressions and correlations, there were more powerful analyses that could be run with the use of the large  $N$  of the total sample of subjects, whereas to further explore individuals, the subsample provided data that were reported from current experience rather than reported in part from memory.

Thus, the underlying conceptualization of the study was that a particular attributional style about causality and stability of loneliness would lead to a more problem-oriented or more emotion-oriented approach to coping with loneliness. Attributional style was conceptualized within Weiner's framework of locus of causality and locus of stability, in which locus of causality is seen as either internal or external, and locus of stability is seen as either stable or unstable. This framework thus yields four attributional styles: internal/stable, internal/unstable, external/stable, and external/unstable. Thus, it was conceptualized that attributional styles would relate to a certain level of each type of coping response in comparison to the other attributional styles and that, within each attributional style, differences between amount of problem-focused and emotion-focused coping would be seen.

The hypotheses concerned the strength of relationships between the variables of interest and the comparison in coping behavior between subjects of differing attributional stances toward their

loneliness. Additional hypotheses concerned the relationship between the degree of loneliness and attributions of loneliness and coping with loneliness. The following sections discuss the rationale further for the hypotheses and then state the hypotheses for the study.

### Hypotheses

The value in looking at the relationship between attribution and coping with loneliness was in learning about the effect of attribution with regard to an emotionally upsetting and often ambiguous condition. More insights into the relationship between attributions and coping patterns can lead to further knowledge regarding ways of intervening with attributions to enhance coping or can lead to knowledge regarding the relative effectiveness of different coping behaviors. The hypotheses that follow are concerned with the relative use of emotion- or problem-focused coping, depending on the explanations and cognitive considerations students had regarding their degree of loneliness. The hypotheses thus address the degree to which students made use of problem-solving or palliative-oriented strategies during lonesome periods.

It is important to learn how to predict the ways that individuals are likely to cope with loneliness because a particular kind of coping behavior can lead to successful or unsuccessful resolutions of a problem. Both emotion- and problem-focused coping are seen as vital to adequate coping, and loneliness is viewed as a particularly



troublesome condition for coping by virtue of the painfulness, anxiety, and social stigma associated with it. Problem-solving strategies are necessary in order for an individual to feel a sense of mastery and self-efficacy in dealing with loneliness, leading to less anticipatory anxiety of future states of loneliness and allowing the individual to take on certain opportunities or risks that an individual might otherwise shy away from. Not making adequate use of emotion-focused strategies can also result in problematic adjustment, in that the individual who copes predominantly by "taking action" on the problem does not increase the sense of tolerating uncomfortable emotions without needing to "do something" about them right away. An individual might decide that coping with loneliness is best achieved by signing up for a social-skills class, reading a self-help book, and looking at all of the positive ways to view loneliness, but if s/he cannot sit down and have a good cry, the use of the problem-solving strategies may be at the expense of not integrating the discomfort s/he feels. This discussion is important to bear in mind as the "backdrop" for the research hypotheses that follow.

Hypothesis 1: Students having stable attributions of their loneliness (as measured by the Grant Attributions Scale) will show more use of emotion-focused coping than students who have unstable attributions about their loneliness (measured by the Coping Inventory).

This hypothesis was based on the assumption that stable attributions are associated with low expectations, lack of hopefulness, and lack of belief in change. The same measures apply to the following hypotheses.

Hypothesis 2: Students having stable attributions of their loneliness will use less problem-focused coping than students having unstable attributions about their loneliness.

Hypothesis 3: Students who have both stable and internal attributions of their loneliness will use more emotion-focused coping than students who engage in any of the other three combined attributional styles toward loneliness (stable/internal, stable/external, unstable/external).

This hypothesis was based on the assumption that students who have stable/internal attributions about their loneliness should feel the greatest degree of emotional distress, including feelings of self-blame, hopelessness, and low motivation to make change.

Hypothesis 4: Students who have unstable/internal attributions of their loneliness will engage in more problem-focused coping than students representing the other three attributional styles.

This hypothesis was based on the assumption that these students should feel a sense of control over a phenomenon they see as changeable.

The following two hypotheses concern differences in coping within attributional groups.

Hypothesis 5: Students who have stable attributions of their loneliness will use more emotion- than problem-focused coping.

This hypothesis was based on the assumption that stability is associated with a lack of expectation that things can change, thus discouraging the use of problem coping and encouraging palliative, comforting measures of coping.

Hypothesis 6: Students who have unstable/internal attributions of their loneliness will show more use of problem-focused than emotion-focused coping.

This hypothesis was based on the assumption that people with unstable/internal attributions will feel a sense of motivation and personal control over problems.

The last group of hypotheses concerns the relationship of loneliness to attributions about loneliness and coping with loneliness.

Hypothesis 7: Students who have stable attributions of loneliness will experience greater degrees of loneliness than will students who engage in unstable attributions about their loneliness (loneliness as measured by the UCLA Loneliness Scale or the Likert scale on loneliness on the Loneliness Questionnaire).

Hypothesis 8: Students who have stable as well as internal attributions of their loneliness will experience the greatest degree of loneliness compared to students who engage in other attributional approaches to their loneliness.

Hypothesis 9: As the degree of loneliness increases, the use of emotion-focused coping will increase, based on the earlier prediction that students who have stable and stable/internal attributions about their loneliness will have a greater tendency to use emotion-focused coping compared to other students.

## CHAPTER II

### OVERVIEW OF LITERATURE

#### Definitions of Loneliness

Loneliness is a common experience to many people, and yet is found to be a neglected area in research for being such a pervasive problem. In addition to the already mentioned aspect of loneliness being a rather untouched field of inquiry due to the difficult feelings it can arouse in people, there are also conceptual issues that result in loneliness being a less adequately defined topic for investigation. Therefore, in approaching the study of lonely students, it is necessary to adhere to the preference of the more prominent researchers in the field, who have chosen to look at loneliness as an identifiable and measurable phenomenon, which is multidimensional in nature. Although there are different causes, courses, and etiological viewpoints on loneliness, the attention to the ever-present complaint of lonely individuals that a social sense of belonging or having intimacy is missing provides for the following as a workable definition of loneliness.

Peplau and Perlman (1982) defined loneliness as "an unpleasant experience that occurs when a person's network of social relations is deficient in some important way, either qualitatively or quantitatively" (p. 31). Although these researchers respected a diversity of

emotions that people label when feeling lonely, the aspect of special deprivation is always the key element. Weiss (1973) called this the relational deficit in lonely individuals, and he identified two subtypes of loneliness--emotional loneliness and social isolation.

He stated that emotional loneliness is the profound sense of abandonment one feels when lacking an intimate relationship. He described social isolation (social loneliness) as the feeling of isolation that exists for an individual who may have a few special ties with people, but does not fit into a social network for contact and affirmation.

Sullivan's (1953) definition of loneliness emphasized the need for intimacy. He stated that "loneliness . . . is the exceedingly unpleasant and driving experience connected with inadequate discharge of the need for human intimacy, for interpersonal intimacy" (p. 290). Sullivan's theoretical thinking was embedded in a biological/psychiatric foundation, and thus his definition emphasized the instinctual need that he saw human beings driven to satisfy. Fromm-Reichmann (1959) viewed loneliness in a similar light. She believed that there is a universal need for intimacy that stays with people from infancy onward.

Definitions of loneliness may vary in the degree to which they emphasize objective versus subjective aspects of being lonely, and the degree to which they identify developmental versus social/cognitive factors in explaining vulnerability to loneliness. What they all have in common is (a) the acknowledgment that people have an intrinsic need

to have close, satisfying contact with other human beings; (b) loneliness alerts to a longing for what currently is not being experienced; and (c) loneliness is accompanied by distressing feelings.

Loneliness is differentiated from depression, a state in which a person feels hopelessness instead of the longing associated with loneliness. It is also distinguished from bereavement, which is the sense of sadness over someone (or something) that has already been lost. Loneliness is rather a reaction to the absence of what is desired or cherished.

#### Incidence and Prevalence of Loneliness

Survey research studies have indicated that loneliness truly is a major problem for many people in our society. Sermat (1980) reported that among a number of studies he conducted with college student and adult populations, he found that no more than 1 or 2% of respondents never experienced loneliness, while between 10 and 30% stated that they had pervasive feelings of loneliness, with up and down fluctuations, during significant portions of their lives. The most prevalent reason given for being lonely was a serious breakdown in intimate, personal communication with other people.

Weiss (1973) reported that in a survey study he did on the general American adult population, 26% of the respondents in his sample answered in the affirmative to the question of whether they had felt lonely during the previous 2 weeks. In a telephone survey conducted by Weiss, he found that 14% of all women and 9% of all men asked if they were lonely in the past week responded in the affirmative.

Marital status was shown to be an important variable in the studies conducted by Weiss. Of the subjects he interviewed, 27% of unmarried females reported feelings of loneliness, and 23% of unmarried men reported loneliness as well.

Lynch (1975) explored the psychosomatic aspects of loneliness and concluded that loneliness that becomes chronic actually influences an individual's risk status. The most compelling research cited in this book is that of the incidence of divorce or bereavement in the history of cardiac patients. Lynch demonstrated that individuals who suffer from chronic loneliness, defined by Lynch as a gnawing desire for companionship and/or grieving for the absence of a particular person, had five times the probability of developing disabling cardiac disease as other people, hence the title of his book, The Broken Heart. Lynch believed that the autonomic responses of the sympathetic nervous system are overly worked throughout the psychological state of loneliness, resulting in a vulnerability to vascular dysfunction.

More typical studies on loneliness have focused on the loneliness of particular subpopulations. Lopata (1969, 1973) did some extensive field-research studies of widows and found that 48% of one sample of widows reported loneliness as the leading problem following the death of the spouse, and another 22% of the respondents reported that loneliness was an important issue for them.

Peplau, Bikson, Rook, and Goodchilds (in Peplau & Perlman, 1982) have studied loneliness in old age. Many older adults, especially those who are widowed, live alone. Interestingly enough, only 15% of

older men and women living alone report being lonely. Although 15% is still a sizable proportion of an age group, nevertheless, this is contrary to the impression most people have that the vast majority of people living alone are lonely. These researchers emphasized the fact that aloneness cannot be equated with loneliness, that older people often have accrued social relationships over time that have special and enduring meanings for them, and that people in later life have a reservoir of memories and life experiences that provide for a particular satisfaction or fulfillment that can make aloneness a quieting, tranquil solitude versus gnawing isolation.

A large-scale study by Rubenstein and Shaver (1979) of adults between the ages of 18 and 87 found that there was a significant inverse relationship between loneliness and age, with young respondents therefore most at risk for being lonely. Other researchers have found similar results (Blau, 1973; Dyer, 1974; Lowenthal, Thrune, & Chiriboga, 1976).

### Theoretical Orientation to Loneliness

Loneliness is not a one-dimensional experience. Rather, a variety of sentiments and emotions accompanies the experience of loneliness. Rubenstein and Shaver (1982) surveyed American adults who were lonely, trying to ascertain the range of feelings and strategies for dealing with loneliness. Their study was based on information from 3,500 respondents. The most common feelings to be mentioned by lonely individuals were sadness, depression, boredom, self-pity, and



longing to be with one special person. A factor analysis of these feelings resulted in four predominant feeling categories: desperation, depression, impatient boredom, and self-deprecation. These authors also factor analyzed the reasons for being lonely that respondents provided, and found five factors: being unattached, alienation, being alone, forced isolation, and dislocation.

Weiss (1973) described the symptoms of loneliness, as based on whether an individual is suffering from emotional or social isolation. The individual plagued by social isolation is apt to feel out of place and may feel lonely for friends to share common interests with. This kind of lonely individual is inaccessible to affirmation of others and may report feeling lonely even when supposedly surrounded by friends. This person usually is emotionally engaged in a search for activities and/or a search for a network or group in which to be accepted as a member.

The symptoms Weiss described for emotional isolation have a more piercing, driving quality. He stated that the symptoms are reminiscent of the child who has been abandoned.

We might reasonably suspect that the loneliness states of adults are developmentally of the earlier childhood states. They may have been modified by the new strengths and understandings of maturation, but still they seem like the childhood syndrome in fundamental ways. (p. 20)

In emotional isolation, Weiss identified a sense of pervasive apprehension, inability to concentrate, over-vigilant behavior, and difficulty in relaxing. This kind of loneliness can create a sense of hypersensitivity to minimal cues in the environment, which can

otherwise feel barren and desolate to a person who feels devoid of intimate ties with anyone.

In reading Weiss's rather poignant descriptions of lonely people, one is struck by similarity of the symptomatology he described with the nature of loneliness as explained by ethologist/object-relations theorist John Bowlby (1973) and ego psychologist Margaret Mahler (1975) in their developmental perspectives on loneliness. Bowlby looked at loneliness as an emotional experience that has survival functions. In the development of emotional cues relevant to the survival of the species, loneliness would have served to signal separation from the group, leading to proximity-seeking behaviors and help-eliciting behaviors. The over-autonomous person would have been at risk for protection and safety, and would have represented a loss in support and contribution to the group's needs. Much of the vigilant and desperate tone to loneliness symptoms connotes a sense of hyper-arousal and fear, feelings that ultimately motivate a person to move out of the situation bringing on such feelings.

Mahler's (1975) seminal work, Psychological Birth of the Infant, paid great heed to the stages of ego development, which hinge on the successful mastery of a hierarchy of continuous stages evolving from an autistic and then symbiotic relationship to the caretaker to a more individuated and separate tolerance of existence. This successful individuation and separation process leads to a more secure identity and a reliance on an internal feeling of safety, warmth, and relatedness to carry one through during times of minimal quality contact with

others. This realization of object constancy, although alluded to in her writings as a stage-specific task, is actually a lifelong process of growth as people endure repeated separations, losses, and transitions throughout life.

Moustakas (1961) contended that loneliness is an integral aspect of human existence, in part due to our developmental origins, and that coping with loneliness in a successful manner involves drawing inward to further know one's loneliness and sense of pain. He promoted a mastery of loneliness via this inward, contemplative process, in much the same way as other existential thinkers. He believed that cultural constraints against being alone and isolated foster an anxiety about loneliness that impedes the positive growth that can be realized by succumbing fully to the experience of loneliness.

Social psychologists have emphasized the role that society and cultural norms play in the creation of lonely feelings (Lamont, 1979; Moustakas, 1961; Polansky, 1979; Zimbardo, 1979). Although these theorists recognized the underpinnings of loneliness within a context of ego-developmental structure, they nonetheless believed that the most potent forces for allowing lonely feelings to regerminate or reappear are due to social factors that, in essence, interact with one's own emotional or social vulnerability. Such factors that are identified were (a) social indicators, such as marital status, income, education, and occupational status; (b) communal or kinship systems; (c) socio/political aspects of society, such as economic pressures and

standards; and (d) cultural norms regarding privacy, social networking, self-disclosure, and processes of social adjustment.

Social cognitive theorists look toward individual variation in cognitive process (attribution, appraisal, discrepancy models) to identify how broader social forces affect people differently (Beck, 1976; Jones, Hanson, & Smith, 1980; Ostrov & Offer, 1980; Seligman, 1975).

Two questions regarding individual differences in experiences with loneliness are: To what extent do intrapersonal factors play a part in causing someone to become lonely? And, why is it that some people may have bouts with loneliness, whereas other people seem to suffer from a chronic loneliness? Looking at studies that have investigated personality correlates to loneliness sheds light on these questions.

### Correlates of Loneliness

One of the most consistent findings in research on loneliness is that lonely people often feel worthless, incompetent socially, and unlovable. Studies have explored the relationship between loneliness and self-appraisals, loneliness and attitudes toward others, and social skills in varying social settings.

A number of studies have demonstrated significant correlations between loneliness and self-esteem. Low self-esteem may be associated with loneliness either as a causative factor and/or as a result of the experience of loneliness (Wood, 1972). From either perspective, self-esteem affects one's feelings of acceptability, one's expectations of

others, and one's level of comfort in social settings. Much of the research on loneliness and self-esteem has been conducted with student samples, although some studies have involved specific subpopulations of other types.

Loucks (1980) in his work on construct validity on the Bradly Loneliness Scale found loneliness related to variables such as low self-esteem, self-criticism, and uncertainty of self-view. Brennan and Auslander (1979) found loneliness related to self-pity in a group of adolescents, as well as to feeling rejected by one's parents and feeling unpopular among peers. Barret and Becker (1978) identified feelings of self-derogation and negative emotions among lonely widows. Rubenstein and Shaver (1980) found that self-depreciation, including feelings of being unattractive, feeling stupid, and feeling ashamed were correlates of loneliness in a large-scale study with an adult sample. Paloutzian and Ellison (1979) found a correlation of  $-.57$  between self-esteem (high) and loneliness as measured by the abbreviated loneliness scale.

Rogers's (1961) work on self-congruency provides some insights as to the potential for self-esteem problems to lead to loneliness. His theory of the self discusses loneliness as an estrangement between a person and his/her true inner feelings. Rogers contended that people develop facades for feeling acceptable to others, and yet feeling untrue to themselves, the definition of low self-esteem for Rogers. Thus, the feeling of discrepancy between true and outer self can lead to an alienated, or lonely position with oneself. Lowenthal et al.

(1976) reported greater loneliness among older men who believed they saw themselves as different from the ways others viewed them, lending some support to this notion of self-discrepancy leading to loneliness. Belcher (1973) reported a significant relationship between loneliness and a Q-sort measure of self-ideal discrepancy ( $r = .75$ ). Moore (1972) also reported that lonely students have higher discrepancy scores between self and reflected self-concepts than do nonlonely students.

Russell, Peplau, and Cutrona (1980) found a correlation of  $-.49$  between scores on the Revised UCLA Loneliness Scale and the Texas Social Behavior Inventory, a measure of social self-esteem. This study was conducted on undergraduate college students. Other studies have shown a correlation between low self-esteem and loneliness among undergraduate students (Jones, Freemon, & Goswick, 1981; Jones, Hanson, & Smith, 1980; Moore & Sermat, 1974; Paloutzian & Ellinson, 1980; Russell, Peplau, & Ferguson, 1978). Cutrona, Russell, and Peplau (1979) found that self-esteem was an important factor in whether new college students experienced only initial loneliness at the outset of the school year or whether freshmen reported loneliness to have endured over a 7-month period in which a survey on loneliness was conducted. Students with low self-esteem were more likely to report persistent feelings of loneliness after the year was in progress, whereas students with higher self-esteem appeared to make friends and make an overall more positive adjustment to school.

It is believed that social competence is related to self-esteem, given that low self-esteem can hinder one's efforts to relate successfully to others. Zimbardo (1977) contended that a person with low self-esteem is more likely to be passive, overly sensitive to criticism, and more socially anxious. Loneliness can result from ambiguous social situations, and people with low self-esteem may tend to interpret ambiguous social exchanges more negatively than others (Jacobs, Berscheid, & Walster, 1971). People who devalue themselves may also have the tendency to assume that others appraise them in a similar manner, thus leading to potentially rejecting or hostile mannerisms toward others, affecting the potential for new relationships. Berscheid and Walster (1978) and Solano and Batten (1979) found that lonely college students had self-disclosure problems in mixed-sex dyads. Goswick and Jones (1981) found that lonely students were more self-focused in their attention in social situations, suggesting that perhaps students with low self-esteem have less empathy or responsiveness to others. This study can also be interpreted in the reverse--that loneliness already existing in someone can lead to self-absorption and consequently hinder further relating to others.

Loneliness can also be viewed as a cause of low self-esteem, especially as loneliness becomes more chronic. Parmelee and Werner (1978) described the stereotype of a lonely person as socially awkward, cold, unattractive, and unable to make friends easily. Gordon (1976) and Milner (1975) both identified the state of being friendless as equated with being a social failure in our society. Thus, the

inadequacy that stereotypically is associated with feeling lonely can create or exacerbate low self-esteem. James (1908) presented one of the first theories of low self-esteem, stating that self-esteem was based on one's actual successes in relation to one's idealized perception of oneself. Thus, the self-appraisal of being a social failure would increase the discrepancy between one's idealized image of oneself and the realistic confrontation with one's social state. Low self-esteem can result from the lack of correspondence between one's pretensions and the social deficits one experiences. Given that one's self appraisals can be highly subject to one's style of attribution, it is possible to speculate that social difficulties attributed to personal inadequacies would have greater effect on self-esteem than situational constraints. Miceli, Morasch, and Peplau (1979) asked college students to evaluate people who were lonely as to reasons for their loneliness. When the perceived reason was attributed to internal causes, the individual was seen as less likable, less resourceful, and was assumed to have less self-esteem.

Depression is also an emotion that has been correlated with loneliness. One can see how depression can be viewed as a causative factor with loneliness, given that depressive individuals often withdraw from others as part of their depressive state. In persistent loneliness, especially loneliness that one perceives is not under control, loneliness could be viewed as a causative factor for depression, in that a person begins to feel that his/her attempts to override the loneliness are futile.



Empirical investigations have frequently found correlations between loneliness and depression (Bradburn, 1969; Bradley, 1969; Bragg, 1979; Ellison & Paloutzian, 1979; Perlman, Gerson, & Spinner, 1978; Russell, Peplau, & Cutrona, 1980). For example, Bradley (1960) found a significant relationship ( $r = .37$ ) between loneliness and the D scale of the MMPI, a scale measuring depressed affect. Shaver and Rubenstein (1980) found that 60% of a lonely sample of adults from a mid-sized city in Massachusetts listed depression as an emotion they experienced in their loneliness. The factor analysis of emotions associated with loneliness that Shaver and Rubenstein performed on their data yielded a host of depressive labels, including melancholy, sorry for self, empty, and sad. These authors conceptualized the depression people report as a part of loneliness as a reactive depression to the state of loneliness. Perlman et al. (1978) reported that lonely people are more unhappy, less satisfied, more pessimistic, and more depressed than nonlonely subjects.

Further examination into the conceptual relationships between depression and loneliness have led some researchers to consider loneliness as a subset of depression. Horowitz, French, and Anderson (1982) asked 40 subjects to describe with adjective labels someone they knew to be depressed and someone they knew to be lonely. These subjects were students in an introductory psychology class at Stanford University. A hierarchical clustering procedure was used to analyze the adjectives applied to each prototype. The "depressed" person was demonstrated by this procedure to be considered in a broader, more

varied manner than a lonely person. It appears that loneliness may include features of depression, whereas depression does not necessarily encompass loneliness. These researchers concluded that the lonely prototype is nested within the depressed prototype. Depression can result from nonsocial events such as the loss of one's job, illness, poor academic performance, or failing at some avocational pursuit. Loneliness, however, is viewed as being more exclusively triggered by a loss of a significant relationship or by deficits in one's social need satisfaction.

One of the more serious relationships seen between depression and loneliness is the association of suicide with social isolation (Becker, 1974; Colson, 1973). Indirectly, the evidence for significant suicide rates among adolescents (Jacobs, 1971) and the evidence for loneliness in college students being related to campus suicides (Lamont, 1979) raises concerns about understanding the potential for interaction of loneliness and depression.

Bragg (1970) proposed the idea that there are depressed lonely people and nondepressed lonely people. He compared groups of lonely students who were first matched for their degree of loneliness, but who scored differently on the Beck Depression Inventory for degree of depression. Results supported the idea that depression is reflective of a more negative picture of one's world and a more global sense of dissatisfaction, whereas nondepressed lonely subjects are dissatisfied primarily with social concerns, but not necessarily with other areas of their lives. Bragg also found that people who scored higher on the

Beck Depression Inventory who were also lonely were people who attributed the causes for their loneliness to social versus environmental reasons.

Young (1982) contended that the relationship between depression and loneliness can be explained by the fact that lonely individuals who attribute their reasons for loneliness to internal traits or deficiencies in social ability will also tend to become depressed as a result. He saw depression, as did Shaver and Rubenstein (1980), as a reactive state to loneliness.

Russell, Peplau, and Cutrona (1980) addressed the concern of overlap between loneliness and depression from a psychometric viewpoint. These researchers found a correlation of .55 between loneliness (as measured by the revised UCLA Loneliness Scale) and depression (as measured by the Beck Depression Inventory). Although this correlation provided strength for the revised UCLA scale for concurrent validity for the instrument, in performing linear regression to measure the predictability of affiliative tendency, depression, social desirability, and social risk taking as determinants of loneliness, only 14% of the variance in the loneliness scores could be accounted for by the Beck Depression Inventory scores.

Weeks, Michela, Peplau, and Bragg (1980) performed structural equation analysis on data collected from 330 psychology students at UCLA on degree of loneliness and affective states. Their analyses yielded results supporting the impression that loneliness and depression are correlated but clearly different constructs. Neither

appeared to be a direct cause of the other. These researchers contended that they shared common origins. Both states appeared stable over a 5-week period.

Thus, research on the correlations found between loneliness and depression has provided some contradictory viewpoints. On one hand, there are theorists who have conceptualized loneliness as a separate construct from depression, although seeing both loneliness and depression as sharing in similar affective states. There are researchers who have identified depression as a component of loneliness, while seeing loneliness as a reaction to social dissatisfaction that goes beyond depression. In reverse, there are researchers who have cited evidence for loneliness being understood as a subset of depression, or a "type" of depression that results from more causes that are all concerned with lack of intimacy or loss of intimacy. Little research has looked into the question of depressed persons being more vulnerable to loneliness. This is an interesting question that the correlational data have raised. Research up to this time has investigated the statistical differentiation of loneliness and depression and the descriptive differences between the two, with a tendency to see depression as either a result of loneliness or a derivative of the same conditions that may also lead to loneliness. Samples of subjects for this research have most typically been college students.

#### Loneliness and Social Skills

Studies that have explored the social-skill differences between lonely and nonlonely subjects have found some interesting differences

between these two groups. Most studies have been based on self-report data. Poor communication and social skills have been implicated in the loneliness that adolescents experience. These difficulties are seen particularly with respect to initiating contact with others (Brennan & Auslander, 1979; Zimbardo, 1977). Social-skill problems are also implicated in loneliness in the elderly (Perlman et al., 1978) and in divorced subjects (Jones et al., 1980). NeViano and Gross (1976) reported that lonely alcoholics were higher on social inhibition than nonlonely alcoholics. Horowitz and French (1979) found that lonely students reported problems of inhibited sociability, such as initiating communication in groups, enjoying social gatherings, giving up control in relationships, and introducing oneself. Among college students, loneliness was associated with lower social risk taking, lower affiliative motivation, less expression of affection for others, and less self-disclosure. Paloutzian and Ellison (1979) reported a negative correlation of  $-.55$  between positive social skills and loneliness in a study identifying correlates with loneliness measured by their abbreviated loneliness scale.

The appraisal one has of his/her social skills has implications for how one copes if lonely. Paloutzian and Ellison (1979) found that lonely students who saw themselves as having positive social skills were more apt to become involved in social activities with friends as a coping device, whereas students lacking confidence in their social skills tended to use more "escapist" coping devices like drinking, overeating, or sleeping. Given that students evaluate the social

provisions received from friendships as more important than the social needs met by family relationships or even by love relationships, the effect of social-skill difficulties can have a large effect on coping and the persistence of loneliness.

Some studies have provided evidence that lonely college students indeed have less social contact than do nonlonely students (Jones et al., 1980; Russell et al., 1980; McCormack & Kahn, 1980). Lonely students date less frequently, spend more time alone, and engage in fewer social activities.

Very little research has been conducted to actually observe social-skill behavior in lonely versus nonlonely subjects. The few studies that have been done have used college student samples and provided some interesting results. Solano and Batten (1979) found that college students who were lonely had particular difficulty with self-disclosure in mixed-sex dyads, but interestingly enough, higher self-disclosure in same-sex dyads. Perhaps lonely students are inhibited about heterosexual relations or lack confidence in this area, but have a tendency to share inappropriately in same-sex relationships. Platt and Spivack (1975) tested subjects for social competence in problem solving. Subjects were asked to provide solutions to 11 interpersonal situations that needed to be assigned explanations for the outcomes provided. Results were significant and demonstrated that lonely people (as measured by the UCLA Loneliness Scale) were less able to think of ways to solve problems posed by

interpersonal situations. They were comparable to nonlonely subjects on a control situation that was not interpersonal in content.

Jones, Hobbs, and Hockenberry (1980) asked lonely college students to engage in videotaped discussions with opposite-sexed strangers who were also college students. Lonely subjects differed from nonlonely subjects in that they asked fewer questions of their social partner, responded more slowly to partners' statements, changed the topic of conversation more frequently, and made fewer personal-attention statements about their conversational partner. These studies indicated the degree to which social competency can influence the comfort level people have in interpersonal situations, suggesting that social skills may have more to do with loneliness than social isolation or physical isolation.

Other personality correlates with loneliness are low social risk taking and hostility. Sermat (1980) conjectured that repressed hostility may be associated with loneliness because people may feel an accumulated sense of dissatisfaction if there are developmental deficits in terms of parental security and warmth, and consequent fears of entering into interpersonal interaction. Passivity and anxiety also show repeated correlations with loneliness in individuals and also seem likely to be characteristics associated with a history of problematic social learning (Moore & Sermat, 1974). These authors contended that lonely people tend to become overly concerned with external pressures and approval and are less internally motivated.

### Loneliness in Adolescence and Early Adulthood

Peplau and Perlman (1979) and Cutrona (1980) all represent the recent trend in loneliness research that looks at more normative populations and focuses on the social and cognitive factors involved in loneliness. One reason this kind of research is becoming more prevalent in loneliness inquiries is that identifiable risk factors and reported behaviors can be associated with one another, providing for an observable loneliness process. One can infer why a college student is lonely, due to separation problems that are reactivated by the upheaval in leaving home and undertaking a less certain and more demanding environment, but if one asks a student how s/he feels when lonely, what their thoughts are about loneliness, and what types of behavior they engage in when lonely, a more dynamic picture results. These theorists believe that loneliness is both an emotional and cognitive process, in that one's evaluations and expectations influence one's assessment of relational deficits.

With regard to late adolescence and early adulthood, the study of loneliness is most pertinent because there is a psychological "shifting" occurring which can provide the necessary prerequisites for loneliness. In Weiss's framework, a student who has always relied on a best friend in high school for the identity of being the popular, successful over-achiever in a moderately competitive school may find totally different circumstances and challenges awaiting him/her at a large university. A student can be vulnerable to both emotional and social isolation, according to Weiss's terminology.



Adolescence has been termed by Blos (1961) as the second "separation-individuation" phase of human development, recapitulating early separation-individuation phase that occurs within the first 3 years of life. College students represent the older range of adolescence, when certain tasks of leaving home, asserting their individuality in a new way, and confronting new challenges and conflicts undoubtedly promote this second separation-individuation. The ambivalence of becoming more separate can be particularly painful at this time of a person's life, when it is realized that one is becoming more responsible for one's decisions and commitments.

Erikson (1950) identified the particular life-cycle stages of adolescence and young adulthood as the identity versus role confusion and intimacy versus social isolation stages, both addressing specific tasks that are necessary to achieve in order to psychologically have a sense of a meaningful self and to create intimate relationships with people. In addition to the pressures many college students experience in adjusting to college life, our culture places great emphasis on one's social popularity, competition, and achievement as hallmarks of success, imposing difficult and often contradictory demands on young adults (Gordon, 1976). Thus, the combination of changes in a college student's social milieu, the new demands being encountered academically, and the developmental transactions occurring at this point in the life cycle make the study of loneliness in undergraduate students a rich and worthwhile endeavor.

Several studies have indicated that there is severe loneliness reported in college students. Phillips and Pederson (1972) tried to assess the "general mood" of students and found that boredom, loneliness, and a sense of futility were the most prevalent problems. Christaans (1965) identified loneliness as debilitating to concentration and related to the lack of motivation. Ostrov and Offer (1978) found that 14% of a male sample aged 16 to 20 years felt very lonely, as did 12% of a female sample of the same age span. Brennan and Auslander (1979) found that 10 to 15% of adolescents sampled (a 9,000 sample group) reported feeling severely lonely. Lamont (1979) wrote about the difficulties of students on large college campuses. Lamont believed that suicide rates and alcoholism rates on college campus are related to loneliness experienced by students, thus providing clinical reasons of great importance for learning more about loneliness in college students. Mijuskovic (1979) spoke of the development of a reflective self-consciousness during adolescence (as did Piaget, 1952; Selman, 1971), in which the adolescent and young adult senses his/her own separateness in a new, existential manner, inviting introspection and increased differentiation from the environment.

Cutrona has been one of the few researchers to investigate loneliness and social adjustment among undergraduate college students. In her New Student Study (UCLA, 1979), she found that approximately 75% of a sample (N greater than 300) of new students in a large university setting experienced at least occasional loneliness since they arrived on campus. Of that 75%, over 40% reported that their

loneliness had been severe. At the end of the first academic year, 9 months after the study was initiated, 25% of the original 75% were still experiencing loneliness (Peplau & Perlman, 1982).

Cutrona was particularly interested in investigating the course of loneliness in freshmen during their first year at college. One striking difference between those students who overcame loneliness and those who did not was in the expectations that students had of themselves at the beginning periods of their lonely states. Those students who had expectations that were positive regarding their capacity to overcome their loneliness were able to make new friends. Such cognitions that these students reported were: (a) satisfaction with personality, (b) belief that changeable aspects of their personalities may have been partly responsible for their loneliness, and (c) belief in the need to lower standards for relationships. Students who blamed their loneliness on what they saw as unalterable aspects of their personalities were more apt to still be suffering from loneliness at the end of their first year. Another finding was that students who overcame their loneliness were more likely to attribute causes of their problem to both situational conditions in their lives as well as to personal characteristics, instead of primarily labeling personal qualities as the causes of their loneliness. Cutrona found that students who made unfavorable comparisons of themselves with other students, believing that others had "better" friendships or more friendships, were also likelier to persist in feeling lonely. Cutrona concluded among a number of summary comments that it would be

worthwhile to investigate the actual behavioral responses that students use to cope with loneliness to further differentiate the coping patterns that result from the different expectations and cognitive attributions made about their lonely situations.

Two other researchers in the field of loneliness, Peplau (Peplau & Perlman, 1982) and Revenson (1981), have drawn upon Weiner's (1974) theory of attribution to provide more insights into how lonely people appraise their situations. Peplau's work has focused on theoretically linking Weiner's research to loneliness, and Revenson's work has explored the relationship between cognitive attribution of loneliness and coping behavior.

#### Review of Attribution Theory

In understanding the applicability of attribution theory to the study of loneliness, some major concepts and contributions of attribution theory are cited. One assumption of attribution theory is that people attempt to construct a meaningful explanation or account for situations they encounter, in part to feel more control over situations that can otherwise feel vague and confusing (Schank & Abelson, 1977).

Attribution theory deals with an individual's knowledge of cause and effect. Different from cognitive appraisal, which is concerned with how people make evaluations and judgments, attribution theory focuses on the explanations people have for the phenomena they appraise as occurring in their phenomenological world.

Heider (1958), considered the founder of attribution theory, identified three assumptions of an individual's manner of explaining what happens between the self and the environment. (a) A person's behavior is contingent upon the way s/he perceives the social world. (b) People desire to control and predict what is going on around them. (c) People apply perceptual properties of their objective world to their social, interpersonal world (i.e., people apply cause-and-effect reasoning to interpersonal transaction). Heider also postulated four perceived causes of success and failure in situations that people could identify as achievement related: ability (or power), effort, task difficulty, and luck. Heider believed that these four aspects of control (intrapersonal and extrapersonal) were generalizable to many situations and were the basis for causality constructs.

Much research on attribution has focused attention on these aspects of cognitive construction of events. Attribution theorists generally are interested in looking at the ways people form attributions about phenomena as well as investigating how attributions affect attitudes, emotions, and consequent behavior. Causal attribution refers to the process of identifying causes for events. Determining a particular cause for a situation or event is most complex because most sociopsychological situations or experiences that people have (including their own affective states) are not unidimensional, and causative factors are chronologically and conceptually difficult to distinguish or differentiate. Events are associated with other events, both spatially and temporally. Heider spoke of a "cause" as an event that

precedes the event of interest and can be shown to have an invariant relationship to the particular event of interest.

The degree to which an individual makes causal attributions can influence the degree to which that individual feels control over him/herself and his/her environment. This is particular true as individuals identify causes that are modifiable (Kelley, 1971). Weiner (1974) and his associates have done extensive research into the effect of causal attribution on the degree of control people feel they can exercise over themselves and their environment. Weiner also included in his attributional research the concept of stability attributions--attributions regarding the degree to which an individual sees an outcome as amenable to change in the future.

Weiner's theory incorporated the concepts of internal control (Heider's effort and ability) as internal causality phenomena. He incorporated Heider's concepts of luck and task difficulty (or "environmental" difficulty) as external locus of causality phenomena. He then "crossed" the concept of stability with locus of causality, believing that some identified causes of problems or events are changeable (or stable) to the perceiver. His theory of attribution has, therefore, identified two cognitive dimensions that he believed people employ to define their success or failure at life's challenges in a way that provides meaning for them. He studied the level of motivation and belief in future success in subjects who had failed in certain achievement-related situations. He identified that whether individuals look to internal or external factors in determining the

cause of their failure influences their emotional reaction (i.e., depression, helplessness, surprise, unconcern) to their failure situation. He also found that whether people view their dilemma as changeable or not changeable influences the degree to which they feel they can be successful in future attempts with the difficult situation. The general predictions of his theory are that internal attributions lead to a greater sense of personal responsibility and, in some circumstances, more self-blame. His theory predicts that stable attributions lead to more debilitation in terms of believing in hopefulness of a more positive outcome in the future. For example, if an individual believes that s/he failed a math test because of being innately unintelligent, the individual will more likely than not believe (or expect) to be unsuccessful on the next test, and the consequent behavior may be reflective of a hopeless, defeated attitude.

Other studies using Weiner's attribution theory and its predictions about consequent effect and behavior have consistently found results demonstrating that internal/stable attributions are associated with depression, decreased motivation, and lowered self-esteem (Harvey, 1981; Hugdahl, 1980; Zemore & Johansen, 1980). Additional studies have supported the idea that depressed people attribute positive outcomes to external/unstable causes (implying less controllability and reflection of self) and negative outcomes to internal/stable causes, whereas nondepressed subjects do the reverse (Forsyth, Donelson, & McMillan, 1981; Seligman et al., 1979). Although Weiner's attribution model has been heavily associated with depression, and

loneliness has been demonstrated to be a distinct construct separate from depression (Bragg, 1979; Peplau, Russell, & Cutrona, 1979; Weiss, 1973), the application of the theory to mood disorders does have relevancy for the study of attribution and loneliness. Loneliness, like depression, may or may not have clear precipitants.

Weiner's research focused on the consequences of attribution for performance and motivation. Other researchers have been interested in other aspects or consequences of attribution--primarily as attribution relates to attention to one's environment, effect of attributions on attitudes, and the ways in which differences in individual attribution styles relate to different causal identifications. Still other researchers have looked at the degree to which the emotional effect of arousal depends on the source to which the emotional arousal is attributed, thus resulting in emotions being labeled according to the explanations provided for arousing events. Dweck (1975) explored the effects of altering the attributed cause of failure on children's responses to these failures. Dweck worked with 12 children who had difficulties with mathematics and told some children, upon completion of some experimental tasks, that their failure was due to poor ability, whereas other subjects were informed that they would increase their successes if they made more effort. Those given the low-ability explanation for their failures still evidenced debilitating responses after subsequent attempts at the tasks and were more upset than children who made repeated attempts at the tasks, based on increasing their effort. These results were similar to those of the studies done on



learned helplessness (reviewed by Wortman & Brehm, 1975) and psychological response. Studies done by Kukla (1972) and Riemer (1975) also suggested a similar relationship between learning and motivation (as discussed earlier in relation to Weiner's work), suggesting that individuals who are high in achievement motivation are more likely to take personal responsibility for both success and failure, whereas people low in achievement motivation are more likely to attribute success to external factors and failure to internal and unchangeable factors.

Further research on consequences of attributions has looked at issues pertaining to the effect of attributions on attentional processes (information searching), labeling of arousal states, and attitude change. Girodo (1972) exposed students to a gruesome film and told one-half the group of subjects that an irritating gas would be released in the air during the presentation of the film. The other half of the subjects were told that there would be harmless compressed air (the accurate explanation). Those students who did not attribute their anxiety during the film to the alleged noxious air were found to have much greater recall of details about the film, thus demonstrating that, in trying to understand why one feels as s/he does during exposure to a stimulus, searching behavior is engaged in, causing greater attention. Attributions are apparently a way that people can organize stimuli, and actually limit the amount of concentration required to attend to what is happening around them. If one has an expectation beforehand as to what one might experience, the expectation (causal

attribution) then might reduce one's alertness or concentration. Schacter and Singer (1962), in a classic experiment, found that subjects labeled drug-induced states of arousal as being that of euphoria, anger, sadness, and so on, depending on the external cues they had been exposed to. The researchers concluded that a person's response to arousal is affected by the source to which the arousal is attributed. Pittman (1975) found that the source of attribution can also affect attitude. Students were exposed to two sources of arousal: presenting a speech on a topic they disagreed with and experiencing an electric shock. When students were told that their arousal was most likely a result of advocating a position in their talk that was contrary to their beliefs, they changed their attitudes toward the topic material, whereas students who attributed the arousal to the anticipation of the shock did not experience any attitude change.

Storms and Nisbett (1970) demonstrated an interesting consequence of attribution on behavior in their treatment of insomniacs. They asked one group, who were led to believe that they were participating in dream research, to wake up at a certain time nightly to take an "arousal" pill as part of creating interesting dream material (really a placebo). The other subjects, also insomniacs, were given placebos that were presented as tranquilizing pills. Those subjects who attributed the waking up during the night as due to the "arousal" pill they had taken experienced falling asleep as gradually more easy than those who had no positive explanation as to their arousal during nighttime.

Strong (1973) suggested the applicability of such attribution studies to the field of social psychology and psychotherapy, stating that such studies have provided an empirical understanding of one's motivation to make important self-changes. Thus, in terms of loneliness and coping behavior, the ability to choose coping behaviors may be contingent on the attributions one has made about his/her current state of loneliness. These studies have indicated that the effect of causal attributions is relevant to emotional, cognitive, and behavioral responses by people to events going on around them.

Responsibility for one's actions is an area of causal attribution that was also of interest to Heider (1958). He proposed five main ways of approaching personal responsibility for actions: (a) global association, whereby any association with an event involves personal responsibility; (b) extended commission--whereby persons are responsible for actions that appear to be causally linked to subsequent events; (c) careless commission, whereby persons are held responsible for all actions that could have been foreseen; (d) purposive commission, whereby a person must intend a particular effect in order to be held responsible for it; and (e) justified commission, in which people are held responsible for their actions only if there are not any convincing reasons for their actions from their environment. Much further research, particularly done by Holmes and Strickland (1970) and Collins and Hoyt (1972), has been concerned with the causal attributions one makes dependent on the degree of choice or intention one feels in a given situation. It has been found that most people

attribute causes to internal factors in situations where no environmental determinants can be logically identified to describe an individual's behavior or responses. If the environment is not perceived as contributing to a given situation (i.e., a person feels lonely at a university, and yet the student perceives that the university is not a lonely place, and that there is no explanation externally for the loneliness), then an individual is more likely to identify internal causes for his/her dilemma. Justified commission, whereby someone places responsibility on externals, diminishes as the actions or feelings go against the expectations created by the environment.

Kelley (1971) proposed that people determine the cause of events by means of attending to three variable situations: (a) evaluation of an event over time (consistency), (b) stimuli (distinctiveness), and (c) degree of agreement or disagreement as to responsibility for situation (consensus). Kelley addressed both attribution of causality and stability.

Kelley demonstrated that the more severe the consequences of a situation, the more concerned an individual becomes with finding an attribution to explain the phenomenon. This was further studied by Harvey, Harris, and Barnes (1975). This relates to Kelley's notion of distinctiveness in attribution theory. The more severe an action or event, the attribution will tend to be either applied to the actor or not, depending on the unusualness (distinctiveness) of the event for the individual. Thus, the more discrepant one's situation feels to oneself, the implication is a desire to find an external cause.

Another important implication is the usefulness of helping an individual recognize the normalcy, consistency, or pattern of events that s/he has overlooked in responding to crisis situations as a way of forming more accurate attributions of causality and stability.

Jones and Nisbett (1972) focused their attribution research on the tendency of observers to attempt to provide either intrapersonal-factor or situational-factor explanations for actors' behaviors. The attributions of people were determined by these researchers to be affected by the valence (importance) of the situation and the observer (hedonic relevance). They made a significant contribution to attribution inquiries by conducting experiments that demonstrated the discrepancies between actor and observer attributions of the same event (i.e., the performance of the actor [subject]). This was meaningful in attempting to understand how people could conceptualize events in such different ways, depending on whether an individual was personally involved in the event or affected by it, or was merely an onlooker.

Causal chaining, by which an individual can identify a series of causes, one leading to another, is another important aspect of attribution, in that enabling someone to broaden his/her thinking on causality allows for more variables to be taken into consideration. Brickman, Ryan, and Wortman (1975) have done important research on causal chaining, indicating that as people are able to identify more underlying causes, these influence consequent behavior more than immediate causes people identify for events. The important implication from this research is that behavior is affected by analyzing one's

accepted causal inferences, and permitting oneself to question exactly what are the crucial determinants in a given situation or event. This research team also found that internal causal attributions led to more of a sense of control and responsibility on the part of subjects than external causal attributions.

### Loneliness and Attribution Theory

Peplau, Russell, and Heim (1979) believed that attribution theory lends itself well to loneliness. An analysis done on the reasons people gave for being lonely resulted (by way of factor analysis) in a two-dimension typology very congruent with the dimensions of locus of causality and stability proposed by Weiner (Michela, Peplau, & Weeks, 1981). Peplau stated that loneliness is also like a failure experience and that one's cognitive attributions regarding his/her loneliness will determine the expectancies and affects of lonely people, thus affecting their expectations for successfully overcoming loneliness.

What may initially "set off" depression or loneliness may not be accountable for the continuance of the depressive state or loneliness state (difference between precipitant and maintaining causes). A student may arrive on a large university campus, feel alienated from his/her fellow students in the awkwardness of trying to make new friends, and then continue to feel lonely when he/she is not accepted into the honors classes. The student may label the cause of consequent loneliness as the belief that the campus is filled with unfriendly people, whereas the cause may be more attributable to the student's

being unable to direct his/her energies toward membership in a different academic group (hurt over the rejection) where s/he may find acceptance and a beginning reference group. In much the same way that Beck (1976) and Ellis (1958) had depressed clients look at the cognitive assumptions they used to explain their depression, so as to understand how they perpetuated their depression, so the attributions in loneliness may serve to perpetuate loneliness instead of allowing for a redefinition of the situation.

The authors made some predictions about how people are likely to cope with loneliness, depending on the attributions and consequent reactions they have. She and her colleagues predicted that depressed affect is the result of loneliness when internal and stable attributions (jointly) are made. Weiner et al. (1978) found these results in the achievement domain. Peplau and her colleagues also believed that feelings of pessimism and hopelessness about the future will be characteristic only for individuals who ascribe their loneliness to stable causes. The link between stability and expectancy has been demonstrated by extensive evidence in achievement behavior (Weiner, Nierenberg, & Goldstein, 1976). Peplau further predicted that feelings of shame, guilt, and embarrassment will be most often associated with internal attributions that an individual feels s/he has control over, such as effort, and that these serve as motivating feelings for overcoming the problem. She stated that "whether people respond to loneliness with depression or hostility, with passive withdrawal or

active striving, may depend on their personal explanations for loneliness" (in Peplau & Perlman, 1982, p. 142).

Studies done with lonely college students have lent support to the applicability of Weiner's attribution theory and Peplau's predictions. For example, Bragg (1979) reported that among lonely college students, severe depression was associated with causal attributions to internal, stable characteristics such as one's physical appearance, certain personality traits, and fears of rejection. Anderson (1980) provided evidence regarding the relationship between attribution and coping response. He found that less-effective interpersonal behaviors were found in lonely students who believed that their social problems were due to what they saw as enduring personality traits that prevented them from having adequate social skills, thus coping with loneliness by keeping at a distance from people. Students who believed their loneliness was due to a lack of effort or poor selection of interpersonal strategies had more effective interpersonal behavior during their periods of loneliness. Lazarus and Folkman (1984) reported evidence regarding coping behavior of students with regard to other types of pressures (other than loneliness) but found strong relationships between students' cognitions (for example, regarding test performance) and the ways the students coped with their pressures (i.e., test anxiety). Thus, there is evidence that the relationship between cognitive appraisal and coping is an important area for more study and lends itself well to college populations.



Peplau predicted that people will choose an active mode of coping when they make internal/unstable attributions because of the implications for control and changeability over one's situation. She found partial support for this from Cutrona's New Student Study (Peplau, Russell, & Heim, 1979). Weiner et al. (1979) hypothesized that coping efforts of people who make external/stable attributions will be characterized by more emotionally oriented responses because external and stable attributions have been linked to lower expectations and diminished sense of personal control.

#### Review of Theories of Coping Response

The categorizing of coping responses into emotionally oriented and problem oriented is the result of research in the area of coping behavior, largely pioneered by the research teams of Pearlin and Schooler (1978) and Lazarus and Folkman (1984). Pearlin and Schooler defined coping simply as "the things that people do to avoid being harmed by life strains. At the very heart of this concept is the fundamental assumption that people are actively responsive to forces that impinge upon them" (p. 1). They defined coping responses as the specific behaviors, cognitions, and perceptions in which people engage when actually contending with their life problems. These two theorists believed that coping behavior is directed toward (a) changing the situation in which the stressful experience originates; (b) trying to redefine the meaning of the stressful or harmful situation; and (c) controlling, in the sense of managing the stress that arises from the situation.

Coping behavior has been explored from a number of different theoretical biases. These will be reviewed, and then a rationale will be presented as to why Lazarus and Folkman's paradigm is viewed as applicable for a study of loneliness in college students.

Earlier theoretical formulations on coping behavior emerged from two very different areas of study. One was the field of animal experimentation, in which coping was viewed within a drive-reduction/behavioral approach. The other area of study to investigate coping was the field of ego psychology, based on neo-analytic concepts of how the ego functions, both consciously and unconsciously, as an autonomous part of the psyche, heavily oriented toward maintaining equilibrium of drives within the person's emotional self.

Obrist (1981) extended the precedents established on adaptive behavior in animals by looking at the psycho-physiology of coping, concentrating on the cardiovascular responses of people undergoing stressful situations. He derived an active versus passive model of coping, in which he identified different cardiovascular responses to each of these modes of coping with stress. Hypertension was a particular area of research for Obrist, and he used hypertension as a model for examining the psychobiology of behavioral responses to psychotherapeutic situations. Collaborative research with Cohen (Cohen & Obrist, 1975) resulted in a stage-response theory to stress, whereby skeletal/motor and cardiovascular responses were seen as the result of central nervous system operation. Cognitive attributions of situations and behavioral responses were then seen to have an effect on the

physiological coping responses. Thus, conclusions from this research were that cognitions play a significant role in determining physiological stress responses, as in the elevation or reduction of blood pressure.

This is reminiscent of the tremendous effect Selye's work has had in the area of adaptational "cost" to people, which he proposed in his eminent work on the General Adaptation Syndrome, in which he presented a three-stage process by which people respond to stressful experiences: the initial alarm reaction, the stage of resistance, and exhaustion (Pelletier, 1977). Selye's research served to distinguish between initial physiological responses that prepare people for either a "fight" or "flight" reaction to trauma (which can be conceptualized as the body's initial autonomic coping response) and a more extended exposure to stress, which can become deleterious to someone unless new coping mechanisms are established. Selye's research helped pave the way for more refined ways of looking at coping, whereby coping was not viewed merely as an automatic reaction to difficult or unpredicted trauma, but rather involved intentional learned behavior.

The ego-psychology literature on coping has stressed the use of the cognitive capacities of the ego to result in adaptive behavior. Coping is defined in this literature as realistic thoughts and behavior that result in problem solving and stress reduction. Most of the ego-psychology-minded coping theorists have formulated hierarchies of coping behavior, evaluating coping strategies from least to most effective and from least organized to most organized. Menninger

(1963) identified five orders of "regulatory devices" that are ranked according to the degree of internal psychological organization indicated, with highest-order devices being self-control, crying, use of humor, thinking through, and talking about a problem. In Menninger's formulation, in which coping behavior is clearly viewed as behavior including cognitions, coping has rational as well as regulating functions for the ego.

Valliant (1977) also approached coping from the viewpoint of ego processes. His four levels of defenses proceeded from psychotic mechanisms as the most primitive defensive response to trauma to the most mature responses, such as humor, anticipation, suppression, and altruism.

Blom (1984) defined coping as "specific behaviors having the qualitative characteristics of active problem solving and attempts to master situations that are stressful and challenging" (p. 9). His view differed from the paradigm offered by Lazarus (1977) in that emotion-oriented coping was seen by Blom as management of emotions that is a form of adaptation to stress but not coping in the sense of being oriented toward mastery of a given situation or problem. Thus Blom saw emotion-oriented responses as defensive adaptational responses, and problem-oriented responses as coping behavior that has a purpose in achieving "active mastery and life satisfactions" (Blom, Ek, & Kulkarni, 1984).

Haan (1977) viewed coping as an active effort one makes to effectively respond and master a crisis or personal dilemma. She

stated that important aspects of this intentional behavior are management of troubling emotions, information seeking, interaction with others, maintaining realistic perceptions of the problem, and having flexibility in behavior and cognition with which to problem solve and maintain emotional stability. Haan saw coping as the healthiest of three response patterns of life's problems: coping, defending, and fragmenting. Defending was seen as an active process in which an individual attempts to deny important emotions and keep out of consciousness the conflicts or anxieties raised by certain situations. Thus, defending is a process of withdrawing from a situation and closing off sources of awareness limiting one's capacity to learn more or increase one's awareness of the problematic situation. Fragmenting is seen as a process in which an individual misconstrues what is happening and therefore disengages with reality as a way to tolerate the pain or conflicts associated with personal problems or crises. Fragmentation is therefore seen as a dysfunctional process that leads to protecting the individual, at the expense of effortful behavior to change the course of the problematic dilemma at hand.

Murphy (1976), influenced by her studies of children, made the distinction between defending and coping as based on whether a behavior is oriented toward mastery (coping) or protection (defending). She stated that coping implies creative efforts at restructuring the reality one is confronted with, resulting in goal-oriented behavior toward desired outcomes.

Garmezy (1981) studied the coping behaviors of children who were living in sustained stressful situations, such as being mothered by depressed or schizophrenic mothers, or being raised in tough, inner-city neighborhoods. He identified problem-solving skills, hopefulness, regulation of emotional reactivity, optimism, impulse control, and future orientation as coping traits that the more resilient children displayed in adjusting to their chronic situations. Garmezy viewed coping as a process or chain of behaviors that involves researching behavior early in the process, followed by developing momentum to respond, with direct action on the problem as a consequence, and confining one's action to the parameters of the situation involved. Garmezy stated that there is a range in effectiveness in coping, with some individuals able to lend much creativity and flexibility to their coping style, whereas others are more constricted in their responsiveness.

White (1974) saw coping as one of the forms of adaptation available to people, in a manner similar to Haan (1977). Coping is distinguished from mastery and defense, in that coping involves new learning in order to adjust to a novel situation. Coping is called forth when a dilemma is such in part because the individual is initially at a loss as to how to respond to the dilemmas or else has no immediate behavior in his/her repertoire with which to respond. White saw coping as the process of contending with the discomfort of dilemmas in ways that allow for forward movement, whereas mastery is the process of engaging in behavior already identified as resolving the

problem. Thus, coping is characterized by behaving in a confident and resilient manner, before the outcomes of behavior or the known successful strategies can be employed. This view of coping therefore implies that coping involves strength and persistence. Defense behavior is marked by behaviors oriented toward managing anxiety. Defensive reactions occur when anxiety has arisen in response to a situation that overwhelms an individual.

The psychology of disability has provided for coping definitions that are focused on assessing what attitudes and behaviors result in positive adjustments to chronic disability. Wright (1960) believed that people adjust to disability in either a positive manner, in which they are mobilized to accept what has happened and emphasize positive aspects of their life, or by succumbing, in which they identify with a sick role and maintain negative attitudes. Coping is seen as a process involving acceptance, mourning losses, and realistically identifying expectations of success for the future. Succumbing is characterized as emotionally refusing to accept what has happened and therefore being caught in a perpetual struggle of feeling inadequate and identified with unrealistic standards of normalcy. Thus, this approach to coping addresses the need for positive self-definition in accepting dilemmas and progressing. This view also emphasizes the need for an individual to separate him/herself from the societal norms one has been enculturated into for purposes of redefining standards of success. Wright saw coping as constructive and active, and succumbing as destructive and passive. Vash (1981), in a similar vein, discussed

the need for flexibility with regard to internal (autoplastic) aspects of trauma and the environmental (alloplastic) options available for adjustment. Coping involves focusing inward to understand oneself, develop self-acceptance in the face of trauma, and identify internal resources for change, including value change and self-actualizing potential of problems. Coping also involves assessing how the environment affects one's feelings about a personal trauma, and identifying ways to interact more positively with one's environment (including dealing with social biases, constrictions, and assumed beliefs).

Lazarus and Folkman's (1984) model of coping was based on the assumption that coping actually provides both an ego-regulating function and a mastery function. Lazarus is a cognitive theorist who sees coping as contingent on the cognitive appraisals one makes regarding harmful or threatening circumstances. In an extensive study that was done by these authors in 1979 on 100 adults whose coping responses to stressful situations were recorded over a 12-month period, a factor analysis of the different responses yielded a two-factor inventory of problem- versus emotion-focused items. The Ways of Coping Inventory was derived from that study (Lazarus & Cohen, 1980), as well as a Revised Ways of Coping Inventory (Lazarus & Cohen, 1983). They defined emotionally oriented coping responses as those responses that are directed at making the individual more comfortable from the stress or distress being experienced from the perceived threat or problem. Problem-oriented responses were defined as responses that attempt to



take action to modify or change the situation, in an active, "taking action" manner. This can be accomplished by focusing on internal personal factors, or on external factors, or both. Both types of coping can involve cognitive as well as behavioral strategies.

Lazarus and Folkman adopted the person-in-environment model of coping, in which psychological stress or distress resides neither in the situation nor in the person, but in the transaction between the two. This model lends itself well to loneliness, in that most theories of loneliness look at the interaction between an individual and his/her social milieu for explanations regarding the cause and continuance of loneliness. These theorists agreed with Cutrona, Peplau, Weiner, and others that cognitive attribution can play a key role in determining consequent behaviors in reaction to upsetting situations and psychological states.

The importance of learning about coping with loneliness is because of the effect coping can have on integration and learning. Lazarus and Folkman stressed the fact that coping per se does not imply effective or ineffective responding, but is the responsiveness of an individual doing what s/he is capable of in responding to stress. The importance of learning more about how coping can be effective versus ineffective seems important, however, in determining the individual's prognosis for acquiring a changed internal capacity to understand and benefit from the current demanding situation or else to have the maladaptive situation be perpetuated. Coping can result in new insights, psychological changes, improved use of resources, and with regard to

loneliness, an appreciation of what loneliness has to offer instead of a dreadful feeling of malaise. If loneliness can help people become more acquainted with their inner selves, as Moustakas upheld, then perhaps coping strategies, such as spending time alone to think, are strategies that lead to greater self-trust.

Paloutzian and Ellison (1982) asked 260 college students what the most effective means of dealing with loneliness were for them. The most useful strategies cited were: (a) getting alone to think, (b) listening to music, (c) spending time with close friends, (d) reading, and (e) eating. It is interesting that among the top five choices, three involved being alone. In two other surveys done regarding coping responses to loneliness, results were similar to those of Paloutzian and Ellison (1979). Studies done by Cutrona, Russell, and Peplau (1979) and Shaver and Rubenstein (1979) indicated a range of coping responses involving time alone, time with friends, and pleasure-oriented responses. The study done by Cutrona et al. involved college freshmen, and the survey done by Shaver and Rubenstein encompassed responses from a range of adult age groups. Paloutzian and Ellison categorized the responses they found into the categories of reflective solitude, contact with friends, sensually oriented responses, searching responses, nonsocial diversion, passivity, and prayer. The other studies indicated responses that fit into these categories as well. In comparing Lazarus and Folkman's paradigm of emotion-oriented and problem-oriented coping responses, the categories presented by survey data specifically on loneliness coping seem

to cover both palliative and taking-action types of measures. What these survey studies did not provide is information on the range of responses used by individuals, or the effectiveness of responses for individuals who were inclined toward one coping style versus another.

## CHAPTER III

### METHODOLOGY

This chapter includes (a) a description of the sample, (b) discussion of recruitment of the sample, (c) discussion of the instruments used, (d) presentation and discussion of the research design, (e) a summary of the study and hypotheses, and (f) a summary of the analyses performed.

This research study looked at the relationship between attributions lonely students make about their state of loneliness, and the manner in which they cope with their loneliness. The attributions of interest were stability and locus of causality attributions. Attributions of stability are concerned with the degree to which an individual sees a situation as changeable or unchangeable. Attributions of causality are concerned with the degree to which an individual attributes the cause of a particular situation to internal or external sources. This attributional model is based on Weiner's (1974) theory of attribution. The coping paradigm that was used in relating attributional styles of subjects to coping response was that of Lazarus and Folkman (1984). This paradigm specifies two types of coping, emotion-focused and problem-focused coping. Loneliness was assessed in subjects through the use of (a) a scale designed to measure loneliness, (b) a question

"Are you lonely?" and (c) a Likert scale on loneliness. These are described under Instrumentation in this chapter.

Theoretical assumptions of this study were the following: (a) that loneliness causes people to experience distress that results in coping effort; (b) that people have a need to make sense out of ambiguous and stressful situations, such as loneliness, and that attributions fulfill this purpose of prediction and control; and (c) that people engage in purposeful cognitions and behaviors to cope with difficult circumstances. This coping can be oriented toward ameliorating distress (emotion-focused coping) or toward taking action on the problem at hand (problem-focused coping) (Lazarus & Folkman, 1984).

For purposes of this study, loneliness was defined as a painful emotional experience that results from the deprivation of desired relationships with others. Loneliness is characterized as a longing for human contact or intimacy, and can result from desiring an emotionally close relationship (such as a love relationship) or from desiring social contact with people with whom one identifies (such as a person suffering from cancer who longs to talk with other cancer patients even though s/he may have close relationships with family or friends). Loneliness can result from missing a particular person one longs for, or from wishing a relationship one has the expectation of having (Gordon, 1976; Perlman & Peplau, 1981; Sullivan, 1953; Weiss, 1973).

### Description of the Sample

The sample consisted of 199 undergraduate students from Michigan State University. Eighty-three of the students were male, and 116 were female. The ages of the sample ranged from 17 to 24 years, with 95% of the sample falling between the ages of 18 and 21. The breakdown by year in school was as follows: 69 freshmen, 47 sophomores, 54 juniors, and 28 seniors. Of the entire sample, there were 27 students who identified themselves as members of a sorority or fraternity.

The majority of the student sample lived in university housing, residence halls on the Michigan State University campus. One hundred sixty-three students lived in the residence halls, including eight who were members of a Greek house off campus. Nineteen students lived in a sorority or fraternity house, and nine students lived in their own apartments off campus. Thus, the student sample was primarily a group of students living within the university environment. Ninety-four of the residence hall students lived in what are considered to be smaller residence hall complexes, and 76 of the students lived in the larger residence hall complexes. Therefore, 86% of the sample resided on campus in residence halls, 10% lived in sororities or fraternities, and 4% lived in their own apartments. Of the 86% of the sample living on campus, 6% lived in small residence halls (fewer than 800 students) and 44% lived in larger residence halls.

In terms of background of students, 38% of the sample grew up in an urban area or city (50,000 inhabitants or more), 25% of the sample grew up in an average-sized town or small city (20,000-50,000

inhabitants), and 10% of the sample reported growing up in a rural area. Students in the sample came from a range of family sizes, with only 5% of the sample reporting having no siblings, and the majority of the sample (83%) reporting having between two and five siblings. One hundred ninety-one of the subjects reported growing up in a household in which the mother was present, and 176 of the subjects reported the presence of their father, thus leaving 13% of the sample growing up in fatherless homes or homes where someone other than the biological father was present.

### Procedures

Initially, contact was made with the Housing Director at Michigan State University to discuss the interest in conducting a survey study on loneliness, attributions, and coping behaviors. Strategies were discussed for recruiting as random a sample as possible of undergraduate students at the University. With the approval of the Acting Director of Housing, permission was granted to contact residence hall directors to set up plans for collecting data on campus.

The sample of students was recruited from residence halls, from undergraduate education courses, and from two off-campus "Greek" houses (a sorority and one fraternity). A description of the recruiting method follows.

Students in the residence halls were recruited on a voluntary basis by resident advisers who had been informed about the study. Meetings were conducted with residence advisory staffs in five

residence halls on campus that had been selected by the Michigan State University Acting Director of Housing as representing the best sex, age, and academic-interest variation on campus. These halls were also selected to provide for a diversity in "type" of student, such that students in this study would represent variation in academic performance, extracurricular activities, and maturity levels.

The nature of the study was explained to resident advisers, with emphasis placed on the privacy and confidentiality students would be guaranteed if they participated. Resident advisers were asked to identify volunteers on their halls or, if they desired, pre-select students they felt were lonely. It was left to the discretion of the residence hall advisers to whether they approached particular students or asked for volunteers on their respective halls. This was done in accordance with specifications from the Michigan State University Human Subjects Committee to provide for the maximum comfort of students asked to participate in the study.

In the meetings held in each residence hall with the respective group of resident advisers, student volunteers were given the opportunity to ask questions about the study, how the results were to be used, and why there was interest in exploring the question of coping with loneliness and attributional styles of students experiencing loneliness.

Resident advisers were then given packets of the instruments, which were all numbered in a like manner per packet so as to identify one subject with each set of the forms. A letter of information about



the study, students' rights in participating in research, a consent form included with the letter, and a code number matching the numbered questionnaires and data forms were provided to each student. Resident advisers were asked to collect materials within a week and submit them to their residence hall director. Data were then obtained from the resident directors.

Students were also recruited from Education 200 classes at the University. These classes have general undergraduate enrollment primarily from students within the College of Education. Students were told the nature of the study and what their participation would involve. Data packets were handed out to all students present in the classes, with the instructions that they were to return the packets, filled in or left empty, to their instructor within a week. The instructors then left the packets for collection in Erickson Hall at their offices.

Recruitment was conducted in one sorority house and one fraternity house, for purposes of providing some comparison data between residence halls and off-campus group living. The study was presented to the students living in these houses at their house meetings, and packets of the questionnaires were left for students who were interested in participating. Students in each house decided that they felt comfortable with handing their packets in to their house president, and the packets were collected from these individuals.

All students were informed that they could request feedback on their own data by contacting me and providing me with their code

number, appearing on their instructional letter. Students were also told that they could get in contact with me if they were interested in having a synopsis of the study results sent to them.

Because the questionnaires required a minimum of a half hour to complete, it was necessary to have students complete the forms on their own time, individually. They were encouraged to go through the forms in one sitting, and were asked not to discuss their form with anyone before filling it out. An advantage to having students complete their questionnaires privately is that there was a reduced opportunity for social anxiety to inhibit responses, as may have occurred in group settings. A disadvantage is the concern that concentration may have been compromised by some degree if students filled out the forms over a number of sittings.

It was assumed that in striving for a total of 200 respondents, there would be a sizable sample of lonely students within this total and that there would be a range in terms of loneliness. Although it was desirable at the outset to specifically recruit lonely subjects, the recruitment technique was to identify a need for students experiencing loneliness to participate, but that students who did not feel they were lonely at the present time could participate as well. This was done because previous research has indicated that there can be a stigma associated with loneliness, and that indeed there may have been students who were assessed as lonely by the loneliness scale used in the study who did not necessarily say they were lonely or want to be identified to themselves as participating in research because they

were lonely. Students were told that they would hopefully find the questionnaires and scales thought provoking and helpful in gaining self-awareness. Students were also made aware of resources for counseling and a telephone number to the researcher if there were any negative repercussions felt by completing the instruments in the study.

#### Rationale for Selection Criteria for Lonely Subjects

A decision was made to select a group of lonely subjects from the entire sample to look at relationships between variables among lonely subjects and to make comparisons between lonely and nonlonely subjects. Additionally, there was interest in looking at which items on the dependent measures might successfully discriminate lonely from nonlonely subjects.

There were three measures in the study that identified lonely subjects. The first measure was the Revised UCLA Loneliness Scale. The second was a direct question, "Are you lonely?" The third was the Loneliness Questionnaire, asking students who were lonely to circle a number from 1 to 10 indicating the degree of loneliness they were experiencing. It was decided that a particular score and above on either the UCLA Loneliness Scale or on the Likert scale would allow for subjects who either measured objectively as lonely based on a standard instrument or self-reported as lonely. Solely depending on a minimum score and above on the UCLA Loneliness Scale to determine the sample did not seem sufficient, given that there were students who

received scores at or below the mean on the UCLA Loneliness Scale who nonetheless indicated that they were lonely on one of the other measures. It was therefore decided that any students scoring at one standard deviation above the mean or higher on the UCLA Loneliness Scale or at one standard deviation above the mean or higher on the Likert scale would be included in the Lonely sample. Students who endorsed the answer "Yes" to the question "Are you lonely?" but did not score at one standard deviation above the mean on either instrument were excluded from the Lonely subsample since their only indicator of loneliness was not corroborated by one of the other measures as indicating "strong" loneliness. For purpose of identifying a sample of lonely subjects on which to do further study and analysis, it seemed more sensible to make the inclusion criteria somewhat stringent. This sample yielded a Lonely sample of 49 subjects, 30 females and 19 males.

For purposes of comparing a Lonely sample with a Nonlonely sample, criteria needed to be established for choosing the Nonlonely sample as well. It was decided that students scoring at one-half standard deviation below the mean on the UCLA Loneliness Scale and responding negatively to the question "Are you lonely?" would be included in the Nonlonely subsample.

The UCLA Scale tends to measure loneliness by means of assessing degree and quality of interpersonal relationships. Therefore, it was considered possible for a student to experience an inner sense of loneliness despite ostensibly satisfying relationships, and thus to

report loneliness although receiving a low score on the UCLA measure. The maximum score a student could have on the UCLA Loneliness Scale is 35. This score was considered "not lonely" in previous research studies that were conducted with college-aged students (Peplau & Perlman, 1982). Likewise, there were students who scored at 35 or below who did endorse low numbers on the Likert scale, but these students were permitted in the Nonlonely sample, given that the Likert scale may have been misinterpreted by students who thought that they were supposed to circle a number whether lonely or not. There were students who endorsed "no" on the direct question, "Are you lonely?" and who also had low UCLA scores, but did circle a low number on the Likert scale. It was presumed that these students may have thought that they had to circle a number. Therefore, the Likert self-rating measure was considered less reliable. Again, there would have been a sacrifice of subjects had there been a more stringent requirement of including only subjects scoring 35 and below on the UCLA Scale and responding "no" to the loneliness question who did not endorse the Likert scale at all. These inclusion criteria for the Nonlonely sample yielded a sample of 60 students (24 males, 36 females).

### Instrumentation

The instruments used in the study were as follows (see Appendix B for copies):

1. The Student Information Sheet
2. Loneliness Questionnaire
3. The Revised UCLA Loneliness Scale

4. Grant Attribution Scales
5. The Attributional Style Questionnaire--Negative Situations Subscale
6. Coping Inventory
7. Lubin Depression Adjective Checklist--Form A
8. Coopersmith Self-Esteem Inventory--Adult Form

#### Student Information Sheet

The Student Information Sheet asked students to respond to some simple demographic items and then asked questions about the students' present status regarding loneliness. This sheet provided identifying information, such as age, sex, year in school, and living situation. In addition, the questions regarding loneliness provided some concurrent validity data for the Revised UCLA Loneliness Scale and some data for the correlational analyses.

#### Revised UCLA Loneliness Scale

The Revised UCLA Loneliness Scale was used to measure loneliness. The scale is a 20-item list of statements that asks respondents to indicate on a 4-point Likert scale how frequently the statements are true for the respondent. Statements reflect interpersonal involvement, feeling of attachment to others, degree of feeling understood by people, and satisfaction with relationships. The scale has no mention of the words "lonely" or "loneliness" in any of the statements, and items are phrased in both positive and negative ways, to reduce response bias.

The scale was developed by Russell, Peplau, and Cutrona (1980) and is a revision of an earlier UCLA Loneliness Scale by Russell, Peplau, and Ferguson (1978). The items for the scale were generated from interviews with college students and adults in both nonclinical and clinical settings. The scale was revised in order to change items from all negatively phrased items to a combination of positively and negatively worded statements. Social desirability was a second concern with the original UCLA Loneliness Scale, due to the desire for people to appear less lonely than they actually are (Gordon, 1976).

The revised scale was administered to a sample of 237 college undergraduate students at two different universities. A coefficient alpha of .94 was obtained for internal consistency of the items. Loneliness scores were also significantly correlated with responses to questions regarding social activities and social relationships of the respondents, supporting concurrent validity. Discriminant validity was supported by the comparison of a correlation of .71 between the scale and a self-labeling loneliness index and a lower correlation between the scale and measures of mood and personality characteristics. The results have indicated that the scale does measure a distinct construct from that of depression or social anxiety and has been used in a number of studies with college students. The reliability estimate of this instrument for the large sample was .89.

### Causal Attribution and Stability Attribution Scales

One set of attribution scales used was written by Peter Grant (1984) at the University of Saskatchewan. He developed scales to measure loneliness attributions on a sample of middle-aged adults. The overall scale is a 20-item instrument consisting of statements about loneliness that one indicates agreement or disagreement with on a Likert scale response format. The reliability figures for the scales reported by Grant were .71 (causality) and .74 (stability). There was a moderate correlation between the two scales of .52. These scales, which were an extension of Revenson's (1982) scales from her study on causal attribution and coping with loneliness, were the most applicable scales available that measure attributions of stability and locus of causality regarding loneliness.

The Grant Attribution Scale, subscale of Locus of Causality, was altered for purposes of the analyses, based on the reliability coefficients ( $\alpha$ ) that were obtained on the entire sample. The original scale consisted of four items that are concerned with both statements attributing loneliness to situational determinants and statements that attribute loneliness to personality traits. Grant (1984) reported a reliability coefficient on a group of middle-aged, lonely people as .71 for this four-item scale. The reliability for the sample in this study was .45, indicating that college-aged students respond differently to the instrument. The five items were divided into two subscales, one consisting of three statements addressing the extent to which the respondent believes his/her loneliness is attributable to



the situation one finds oneself in, and the other containing the two items attributing loneliness to internal personality factors. These two new subscales yielded alpha coefficients of .69 and .80, respectively. These two subscales are thus termed an External subscale and an Internal subscale.

A reliability estimate (coefficient alpha) of .76 was obtained on the five-item Locus of Stability subscale of the Grant Attribution Scale. This compares with a reliability coefficient of .74 reported by the author of the instrument (Grant, 1984) for his Locus of Stability subscale.

One additional change that was made in the use of the Grant Attributional Scale for this research study was the extension of the Likert scale from a five-number response set for each item to an eight-number response set for each item. This was done in order to provide for increased variance in the response set to the instrument, and for the avoidance of encouraging responses falling toward the middle number of the original odd-numbered set.

An alternative way of assessing students' attributions about loneliness was to ask them directly on the Loneliness Questionnaire whether they saw their state of loneliness as attributable to factors internal to them or external to them, and whether they saw their state of loneliness as modifiable or resistant to change. Each of these questions was a forced-choice question allowing for a "yes" or "no" response. Obtaining these data allowed for the possibility of grouping students if necessary into attributional-style cells as an

alternative to using correlational methods of analysis if reliability or variance difficulties with the independent measures were extreme enough to warrant some analysis of variance tests to be run. The data from these direct questions also provided for the comparison of responses to the different attribution instruments, as a way of further understanding the task of measuring attributions.

#### Attributional Style Questionnaire

Given the scarcity of instrumentation available concerned with measuring attributions about loneliness, inclusion of a more widely used attributional-style questionnaire in the data collection was seen as necessary for purposes of comparing the overall attribution instrument with the instrument designed specifically to measure attributions about loneliness (the Grant Attribution Scale). This was seen as an opportunity to compare attributional style regarding loneliness with attribution style in general, as the selected instrument, the Attributional Style Questionnaire, measures attributional style across a range of positive and negative situations. Given that there have been questions posed regarding the belief that attribution style may be more state specific versus uniform across situations, the inclusion of two different instruments could both address concerns pertaining to concurrent validity for the Grant Attribution Scale and further the exploration as to the nature of attributional style in general.

The Attributional Style Questionnaire (Seligman, Peterson, Semmel, von Baeyer, Abramson, & Metalsky, 1980) assesses the extent to which individuals show characteristic attributional tendencies. The test measures the three dimensions of locus of causality, stability, and globality for positive and negative situations. There are 12 situations that subjects are asked to respond to, and questions regarding each event are posed, with answers indicated on a 7-point Likert scale. A strength of the scale is that stability and locus of causality are treated as orthogonal concepts, which is a departure from Weiner's theory but in accordance with how loneliness theorists have applied Weiner's general framework to loneliness studies. Subjects are asked to generate a cause for each of the events presented and then respond to a set of standardized questions regarding each event.

This questionnaire yields a number of different subscales. The authors of the questionnaire advised using composite scores that provide summation scores of the three different attributional dimensions measured: locus of stability, locus of causality, and globality. The authors further advised using composite scores for positive situations posed in the questionnaire, and for negative situations posed in the questionnaire, thus yielding the different composite attributional scales. The reliability estimates (alpha coefficients) provided for these composite scales are .72 for attributions of positive events and .75 for attributions of negative events. The reliability estimates for this study sample for the composite attributional styles

were very similar: .74 for the combined attributions for positive events ( $N = 173$ ) and .70 for the combined attributions for negative events ( $N = 173$ ) (.66 and .58 for the Lonely subsample, respectively). Reliability estimates on this study sample were lower for scores that were summed either by attributional dimension alone (of interest to this author were the causality and stability scores) or summed by a further scale division into attributional dimensions by positive or negative events (i.e., positive causal scale, positive stability scale). Those reliability estimates are provided below.

The composite scale for negative situations was chosen as a measure of the predictor variable for both the total sample and the Lonely subsample. It was decided to use only the subscale since it seemed most relevant to the issue of measuring attribution regarding loneliness, considered a negative situation. The use of the composite scale raised concerns in two areas. One is the inclusion in the summary score of the attributional dimension of globality, which is not a variable of particular interest in this study. However, this additional aspect of the measure, while adding some complexity to the interpretation of the measure, nonetheless was regarded as a potential source of information that might offer interesting additional insights. A second concern was with the interpretation of a composite score in general, in that it is difficult to know to what extent a particular attributional dimension score is accounting for the entire summed score. Again, compromises in measurement accuracy were made in including this instrument, with the option of having strong

interpretive possibilities should there be very strong correlations between this scale and other variables. The following is an example of a negative situation posed on the questionnaire and the types of questions that accompany each item: "You have been looking for a job unsuccessfully for some time." Following each statement, the respondent provides his/her own reason for the situation described, and then indicates to what degree the situation results from internal or external factors (causality) and to what degree these factors will be present again in the future (stability). (There are also two other questions that are concerned with globality and importance of the situation to the respondent.)

#### Coping Inventory

A combined inventory of items from two extensive loneliness studies was used in this research. Cutrona's New Student Study (1979) and Paloutzian and Ellison's Loneliness and Quality of Life Study (1979) both yielded similar coping lists that were empirically derived from interviews with approximately 360 undergraduate college students. There are overlapping items, and some items exclusive to one or the other. The items have high face validity and content validity for both relevance to coping with loneliness and categorizability into problem- or emotion-focused strategies. A pilot study was conducted using four expert raters who were asked to assign items to either a problem-focused category or an emotion-focused category, and there was 100% agreement on 23 of 27 items presented to the raters.

After investigating responses from the Emotion-Focused and Problem-Focused Coping subscales, the correlation of  $r = .56$  ( $p < .001$ ) indicated a need to look into the possibility of refining these subscales. A factor analysis of the Coping Inventory yielded two factors that rationally looked like an emotion-oriented subscale and a problem-oriented subscale. There were items, however, that did not correspond conceptually well enough to remain in the particular scales. After further examination of correlations between scale items and overall scale scores, items were deleted, yielding two scales using 19 of the original 35 Coping Inventory items. The two subscales have a correlation of  $r = .47$  ( $p < .001$ ). The Emotion-Focused Coping subscale contains 12 items and has an alpha coefficient of .77. The Problem-Focused Coping subscale contains six items and has an alpha coefficient of .72.

Examples of items from the Emotion-Focused Coping subscale are (in response to being asked how often respondent uses the following ways of coping with loneliness), "Think about possible benefits of being lonely, such as thinking you are learning to be more self-reliant or growing from the experience" and "Take your mind off feeling lonely by using drugs or alcohol." As can be seen by these two items, the Emotion-Focused Coping subscale includes items that are considered both passive or escape items, and items that are cognitive ways of feeling better. At the finest level of analysis, these items yielded a more sound factor by being grouped together in one scale, whereas attempting to form an emotional subscale of passive items and

a subscale of constructive or cognitively positive items did not provide for sufficient reliability estimates to make them worthy of use in this study.

Examples of Problem-Focused Coping subscale items are "Try harder to be friendly to other people (like making a greater effort to talk with students in classes)" and "Do something to improve your social skills (learning to dance, learning to be more assertive, improving conversational skills,, etc.)." The reliability estimate for various subscales of Problem items proved inadequate for use in the study, and therefore a scale was formed of as large a number of items as possible with the highest reliability and the lowest correlation with the Emotion-Focused Coping subscale.

#### Depression Adjective Checklist

The Depression Adjective Checklist--Form A (DAQ) (Lubin, 1981) is a 32-item checklist consisting of adjectives characteristic of depression and contentment. Examples from the checklist of depressive adjectives are "wilted" and "miserable." Examples from the checklist of positive adjectives are "safe" and "enthusiastic." Scores are determined by adding up the number of depressive adjectives that are endorsed plus the number of positive adjectives that are not endorsed. There are 22 depressive adjectives and 10 positive adjectives on the checklist. Form A of this checklist was used in this study. The use of this checklist provided a measure of an emotional state that has been highly correlated with loneliness, and therefore was considered

important as a way of further describing the sample of students in this study.

Internal consistency of this checklist has been reported to be .81 for male subjects and .86 for females, based on a sample of adults. These items on the checklist were originally drawn from a pool of 171 items that successfully discriminated at a significance level of .01 between well-adjusted adult males and males rated as markedly or severely depressed after undergoing psychiatric interviews. Normative data on the DAQL have been derived from an adult sample with a mean age of 44.5 years, students of high school age, college and graduate students, and adolescent psychiatric populations. A correlation for college students between this measure and a train measure of depression, the College Inventory of Depression (Lubin, Nathan, & Nathan, 1982), was found to be .68 ( $p < .01$ ). Correlations between scores on the DAQL (Form H) for females and males and the MAACL Depression Scale (Zuckerman & Lubink, 1965) were found to be .80 and .79, respectively ( $p < .01$ ).

#### Coopersmith Self-Esteem Inventory-- Adult Form

The Coopersmith Self-Esteem Inventory--Adult Form contains 25 statements that respondents endorse as being "like me" or "unlike me." Examples of such items are "I have a low opinion of myself" and "Most people are better liked than me." The definition of self-esteem used as a basis for this inventory is that self-esteem



refers to the evaluation a person makes and customarily maintains with regard to him- or herself. 'Self-esteem' expresses an attitude of approval or disapproval and indicates the extent to which a person believes him- or herself capable, significant, successful, and worthy. (Coopersmith, 1984, p. 5)

The adult form was adapted from Coopersmith's School Short Form, a 25-item inventory derived from the original 50-item Self-Esteem Inventory--School Form. The Adult Form is basically a rewording of the 25-item School Short Form that poses statements in more mature language. Reliability coefficients are not provided on the Adult Form of this inventory by the author of the inventory. A study conducted on 103 college students by Bedefian, Geagud, and Zmud (1977) reported KR 20's of .74 for males and .71 for females.

#### Design of the Study

This research study is a descriptive study using data derived from a voluntary group of student subjects. The main variables of interest were investigated by means of a fixed-effects model of analysis of variance, with planned comparisons. Paired-sample  $t$ -tests were used for one main hypothesis. Post-hoc analyses involved use of linear regression and cluster analysis. Analyses were conducted on the total sample as well as on the Lonely subsample. Attempts were made to obtain subjects from as random a population as possible. Thus, efforts were made to recruit students from a variety of university settings, providing for a range of personality, demographic, and academic characteristics.

The data collection was conducted according to principles of naturalistic field survey research, in which anonymous survey data

were collected in a manner so as to preserve the integrity of unbiased results.

### Analyses

The main analyses used to measure the strength of the relationship and direction of relationship between attribution style, loneliness, and coping response was analysis of variance with a priori contrasts. This method of analysis requires the following assumptions:

1. Variables are normally distributed and are continuous.
2. There are linear relationships between variables.
3. Observations on variables are independent of one another.

The variables in this study satisfied these assumptions. Frequency distributions on all of the instruments used to measure the independent and dependent variables, and scattergrams to indicate the different pairwise relationships among variables, ensured confidence in adhering to these assumptions. One variable, depression, was found to have a positively skewed distribution. The log transformation of observations on this variable was used in assuming the strength of association with other variables.

### Post Hoc Analyses

In addition to the prediction equations run to measure the multiple correlations of different variables with coping behavior, correlations were obtained between all of the instruments used in the study and between the instruments measuring loneliness and attribution

and particular coping items of interest. These correlations provided further information on the sample of subjects, as well as clarifying the relationship between different pairs of independent variables. These correlations were derived for both the overall sample and for the subsample of lonely subjects. Multiple linear regression equations were also run on loneliness, with attribution, self-esteem, depression, and demographic variables as predictors.

T-tests were conducted to compare the overall sample of students and the Lonely subsample on a number of key variables. Thus, lonely and nonlonely subjects were compared on demographics, affective measures, attribution measures, and the dependent variables of emotion- and problem-focused coping. Cluster analyses were run to obtain further information on variables and observations. The cluster analysis done on the variables in the study was performed by oblique rotation methods. The Fastclus cluster procedure was used to identify groups of observations among the total sample.

### Summary

This chapter has provided the "plan" for the research study. Discussed were the sample of subjects, instruments used in the study, design of the study, testable hypotheses, and analyses employed to test these hypotheses. The research study consists of both analyses run on the original hypotheses, as well as post hoc analyses done on subsamples of the original sample of student subjects. The post hoc analyses provided further understanding of the sample of students and

addressed the issue of describing in greater detail the phenomenon of loneliness in the lonely students. The section on instrumentation provided explanations for the derivation of scales and the rationale for using particular scales. Given the relative paucity of measurement tools in the area of loneliness, attribution, and coping behavior, instrumentation became a major focus of the endeavor. Factor analysis of the coping instrument and item analysis on the attributional scales resulted in a more greatly refined instrument. Thus, instruments were not used in final form until there was satisfaction that, at the finest level of analysis, the highest reliability possible was obtained, along with rationally appearing items. The statistically stated hypotheses are included in Chapter IV, as the results of each hypothesis are presented and then discussed.

## CHAPTER IV

### RESULTS

This chapter provides results and interpretation of results regarding performance on measures of variables, results of main hypotheses, and post hoc analyses. Relevant discussion pertaining to the findings follows the presentation of data.

The first section of the chapter presents descriptive and statistical data pertaining to the major instruments used in the study. This is organized according to the main variables of interest in the study, with tables containing corresponding reliability, frequency information, and Pearson correlations. Observations pertaining to patterns of responses on the attribution and coping instruments are provided, as well as descriptive information on reasons for being lonely that were endorsed by the subjects in the research.

The second section restates the hypotheses and presents the results of the hypothesis testing, along with explanations of the analyses used. The third section then presents the post hoc analyses, followed by discussion and interpretation of these results, integrating these with results of the original hypotheses of the study. A

fourth section provides a summary of all of the results of the data analysis.

In exploring the hypotheses for this study, decisions had to be made regarding what samples to test the hypotheses on, given that there was a general sample of students recruited, not all of whom were lonely. In that the hypotheses are concerned with the relationships between attribution and coping in reference to loneliness, it seemed most relevant to discuss these in terms of a lonely sample of subjects. The general sample recruited for data collection numbered 199 students. It was decided to use all of the data from the sample in looking at the hypotheses, as well as to test the hypotheses on a select group of "lonely" students, as discussed in Chapter III. Therefore, the layout of this chapter entails presentations of data with respect to a general sample of 199 subjects, as well as to a subsample of lonely subjects (Lonely subsample). The hypotheses tested on the whole sample need to be regarded in view of the fact that this whole sample included subjects who responded to measures "retrospectively," as well as subjects who were lonely at the time of data collection and were responding to the questionnaires with current information about themselves. One concern was the combining of retrospective and current reporting by subjects, and this is looked at further in the discussion section of this chapter. As the hypotheses are presented, reference is made to the results both to the general sample (total sample) and to the subsample of lonely subjects, which is called the Lonely subsample.

The main variables of interest in this study were (a) locus of stability (unstable/stable), (b) locus of causality (internal/external), (c) loneliness, and (d) coping response (emotion-focused and problem-focused). The main independent variables were locus of stability and locus of causality. The outcome variables were both emotion-focused coping and problem-focused coping. The reader is reminded that the two types of coping responses were considered independent outcome variables. Thus, the focus of the research was on the investigation of the relationship between attribution style and coping response, for each of the coping styles of interest. Loneliness was entered into the research design in significant ways. One was with respect to using subjects' measures on the various loneliness scales as a way to form a subsample of lonely subjects for the purpose of further understanding correlates of loneliness and drawing comparisons between lonely and nonlonely subjects on particular variables. Loneliness was also looked at with respect to three main hypotheses and some post hoc analyses that considered the combined effect of loneliness and attribution on coping response. Loneliness was also investigated in its own right as an outcome variable in multiple linear regression post hoc analyses.

The first section that follows contains tables of reliabilities and frequencies for all of the instruments in the study, as well as tables of Pearson correlations for all of the variables of interest. Data are tabled for both the total sample and the Lonely subsample.

### Results on Main Variables

#### Locus of Stability

Locus of stability was measured by the Grant Locus of Stability subscale. Of a possible range of scores from 10 to 40, with 40 representing the most unstable attributions, the mean response for the whole sample was 29, with a SD of 6.4. This scale was slightly skewed negatively. This subscale mean for the Lonely subsample was 24.6, with a SD of 6.6. The distribution on this scale for the Lonely subsample is indicative of a direction slightly more oriented toward stable attributions. (See Tables 4.1 and 4.2.)

The correlations between locus of stability and locus of causality (measured by the Grant Locus of Causality subscale) were  $r = .53$ ,  $p < .01$  for the total sample and  $r = .44$ ,  $p < .01$  for the Lonely subsample. The locus of stability correlated moderately both among the total sample and the Lonely subsample with the UCLA measure of loneliness, the Likert self-rating scale on loneliness, and with low self-esteem and depression. (See Tables 4.3 through 4.5 for specific breakdowns of correlations in reference to loneliness measures.)

Correlations between locus of stability and the previously mentioned correlates were slightly lower for the Lonely subsample, which is expected due to the decreased variance within the more homogeneous subsample.

One final set of correlations worth mentioning here is the correlations between the locus of stability and the Seligman Attributional Style Questionnaire Subscale for Negative Events. These



Table 4.1: Reliabilities and Frequency Statistics: Total Sample

Scale/Measure	Alpha	Mean	<u>SD</u>	Range
Likert scale	.00	3.7	2.3	1-9
Revised UCLA scale	.90	39.9	9.7	22-70
Grant Locus of Stability subscale	.76	29.0	6.4	10-40
Grant Locus of Causality subscale	.58	27.7	5.6	12-40
Emotion-Focused Coping scale	.77	34.0	5.8	15-46
Problem-Focused Coping scale	.72	15.3	3.5	4-23
Lubin Depression Adjective Checklist (Form A)	.66	8.9	6.6	0-31
Coopersmith Self-Esteem Inventory	.35	17.1	5.5	1-25

Table 4.2: Reliabilities and Frequency Statistics: Lonely Subsample

Scale/Measure	Alpha	Mean	<u>SD</u>	Range
Likert scale	.00	4.1	2.2	1-9
Revised UCLA scale	.91	51.7	8.3	30-70
Grant Locus of Stability subscale	.80	24.6	6.6	10-39
Grant Locus of Causality subscale	.64	24.8	5.98	12-40
Emotion-Focused Coping scale	.67	32.7	5.3	18-45
Problem-Focused Coping scale	.59	15.1	3.3	6-22
Lubin Depression Adjective Checklist (Form A)	.71	15.0	7.7	2-31
Coopersmith Self-Esteem Inventory	.53	12.1	5.1	1-24

Table 4.3: Pearson Correlations: Total Sample

	Age	Sex	Are You Lonely	Likert Rating	How Long Lonely	UCLA	ACL <sup>a</sup>	SEI <sup>b</sup>	ASQ- Neg. <sup>c</sup>	Locus of Causality	Locus of Stability	Emotion- Focused Coping	Problem- Focused Coping
Age	--	-.02	.04	-.17	.08	-.02	-.09	.06	-.06	--	.08	.13*	.03
Sex	-.02	--	.07	.10	--	-.01	.07	-.15*	-.05	.07	-.05	.24**	.29**
Are you lonely	.04	-.07	--	.26*	-.54**	-.29**	-.37**	.11	-.12*	.02	.15	.01	--
Likert rating	-.17	.10	-.26*	--	.37**	.39**	.62**	-.42**	.23*	-.15	-.43**	-.22*	-.19*
How long lonely	.08	--	-.54**	.37**	--	.34**	.45**	-.27**	.21*	-.19**	-.32**	.04	--
UCLA	-.02	-.01	-.29**	.39**	.34**	--	.52**	-.61**	.38**	-.44	-.41**	-.11	-.04
ACL--A	-.09	-.07	-.37**	.62**	.45**	.52**	--	-.56**	.34**	-.24**	-.42**	-.13*	-.10
SEI	-.06	-.15*	.11	-.42**	-.27**	.61**	-.56**	--	-.33**	.46	.46**	.14*	.08
ASQ-Neg.									--	-.23**	-.27**	-.08	.02
Locus of causality									-.23**	--	.53**	.13*	.14*
Locus of stability									-.27**	.53**	--	.20*	.07
Emotion- focused coping									-.08	.13*	.20*	--	.39**
Problem- focused coping									.02	.14*	.07	.39**	--

<sup>a</sup>ACL refers to the Lubin Depression Adjective Checklist. The higher the score, the greater the level of depression.<sup>b</sup>SEI refers to the Coopersmith Self-Esteem Inventory. The higher the score, the greater the self-esteem.<sup>c</sup>ASQ-Neg. refers to the Seligman Attributional Style Questionnaire Subscale for Negative Events. The higher the score, the greater the tendency toward internal-stable-global attributions.

\*p &lt; .05.

\*\*p &lt; .01.

Table 4.4: Pearson Correlations: Lonely Subsample

	Age	Sex	Are You Lonely	Likert Rating	How Long Lonely	UCLA	ACL <sup>a</sup>	SEI <sup>b</sup>	ASQ-Neg. <sup>c</sup>	Locus of Causality	Locus of Stability	Emotion-Focused Coping	Problem-Focused Coping
Age	--	--	.08	.05	.04	-.18	-.05	.03	.06	-.02	.19	.01	-.05
Sex	-.15	--	-.08	.09	-.06	-.17	-.07	-.05	-.08	.29*	.11	.16	--
Are you lonely	.08	-.08	--	-.20	-.23	-.10	-.25	.08	-.13	-.06	.10	.08	--
Likert rating	.05	.09	-.20	--	.41*	-.14	.45**	-.01	.01	.14	.21	-.20	-.42*
How long lonely	.04	-.06	-.23	.41*	--	.06	.46**	-.19	.25*	-.20	-.35*	.15	-.15
UCLA	-.18	-.17	-.10	-.14	.06	--	.16	-.32*	.29*	-.45*	-.30*	-.02	.05
ACL--A	-.05	-.07	-.25*	.45**	.46**	.16	--	-.28*	.35*	.01	-.36*	-.13	--
SEI	.03	-.05	.08	-.01	-.19	-.32*	-.28*	--	-.23*	.42**	.54**	.21	.13
ASQ-Neg.									--	-.23	-.42**	--	.08
Locus of causality									-.23	--	.44**	--	-.12
Locus of stability									-.42**	.44**	--	.23	.14
Emotion-focused coping									--	--	.23	--	.41**
Problem-focused coping									.08	-.12	.14	.41**	--

<sup>a</sup>ACL refers to the Lubin Depression Adjective Checklist. The higher the score, the greater the level of depression.<sup>b</sup>SEI refers to the Coopersmith Self-Esteem Inventory. The higher the score, the greater the self-esteem.<sup>c</sup>ASQ-Neg. refers to the Seligman Attributional Style Questionnaire Subscale for Negative Events. The higher the score, the greater the tendency toward internal-stable-global attributions.\* $p < .05$ .\*\* $p < .01$ .

Table 4.5: Pearson Correlations: Attributions With Depression and Self-Esteem

Attributions	Depression <sup>a</sup>	Self-Esteem <sup>b</sup>
<u>Total sample</u> (N = 199)		
Locus of causality	.25	-.45
External items	-.03	.11
Internal items	.28**	-.59**
Locus of stability	-.42	.45**
<u>Lonely subsample</u> (n = 49)		
Locus of causality	.01	-.42
External items	--	.11
Internal items	-.13	-.40*
Locus of stability	-.36*	.54**

Note: Locus of causality is scored in direction of increasing values signifying increasing externality of attributions. Locus of stability is scored in direction of increasing values signifying increasing instability of attributions.

<sup>a</sup>The higher the Depression Adjective Checklist score, the greater the level of depression.

<sup>b</sup>The higher the Self-Esteem Inventory score, the higher the self-esteem.

\* $p < .05$ .

\*\* $p < .001$ .

Table 4.6: Pearson Correlations: Attributions With Loneliness

Attributions	UCLA	Likert Rating
<u>Total sample</u> (N = 199)		
Locus of causality <sup>a</sup>	.44	-.15
External items	-.08	-.01
Internal items	.58**	.23*
Locus of stability <sup>b</sup>	-.41**	-.43**
<u>Lonely subsample</u> (n = 49)		
Locus of causality	.45**	.14
External items	-.17	.04
Internal items	-.48**	.04
Locus of stability	-.30*	-.21

<sup>a</sup>The higher the score, the more external the score.

<sup>b</sup>The higher the score, the more unstable the score.

\* $p < .05$ .

\*\* $p < .001$ .

correlations for the total and Lonely subsamples, respectively, were  $-.27, p < .01$  and  $-.42, p < .01$ . These correlations suggest that locus of stability as it relates to the problem of loneliness is different from one's attributions toward negative events in general. This may be due in part to the fact that loneliness involves a strong emotional component, whereas the negative events presented on the Seligman Questionnaire tend to be more event specific, involving social or achievement situations that have an immediate effect, and therefore different from conditions that arouse an on-going feeling of loneliness.

#### Locus of Causality

Locus of causality was measured by the Grant Locus of Causality subscale. Of a possible range of scores from 10 to 40, with a higher score representing greater externality, the mean score for the total sample was 27.7 with a SD of 5.6. The mean score for the Lonely subsample was 24.8 with a SD of 5.98. Thus, this subscale was normally distributed for both samples. The distribution on this subscale for the Lonely subsample is indicative of a direction slightly more oriented toward internal attributions. Reliability coefficients of each sample were moderate. The alpha coefficient for the total sample was .58 and for the Lonely subsample, .64. (See Tables 4.1 and 4.2.)

Locus of causality correlated with locus of stability in the direction of internal causal attributions associated with unstable

attributions (or external causal attributions associated with unstable attributions of stability) ( $r = .53$ ,  $p < .01$  [total sample] and  $r = .44$ ,  $p < .01$  [Lonely subsample]). Among both samples, locus of causality, in the direction of internal attributions, was also found to correlate with low self-esteem and loneliness as measured by the UCLA scale. (See Table 4.6 for summary of correlations with loneliness.) Although internality is often associated with depression, these correlations were small between locus of causality and depression for both samples, whereas depression was found to correlate significantly with locus of stability among both samples. Internality appeared to be related more highly with low self-esteem than with an emotional experience of depression. (See Tables 4.3 and 4.4.) Table 4.5 specifies correlations between both the internal items and external items of the Locus of Causality subscale with the measures of self-esteem and depression.

As was found with the locus of stability, locus of causality correlated only moderately with the Seligman Attributional Style Questionnaire for Negative Events. This is important in that the moderate correlations ( $r = -.23$ ,  $p < .01$  for the total sample and  $r = -.23$ ,  $p < .05$ ) for the Lonely subsample) indicates that attributions of causality for loneliness occurred differently from attributions for specific negative social or achievement events. As was speculated in reference to the locus of stability, perhaps loneliness, due to the nature of its experience as a personal emotional problem, alters the way causality is perceived.



### Loneliness

The main measure of loneliness in the study was the UCLA Loneliness Scale. This measure had high alpha coefficients for both samples, .90 for the total sample and .91 for the Lonely subsample. The mean score on loneliness among all of the subjects was 39.9 on a scale that ranged from 22 to 70. Thus, the scale was skewed somewhat positively for the total sample. The mean loneliness score for the Lonely subsample was 51.7 among a range of scores from 30 to 70. This distribution approximates a normal distribution for this sample. (See Tables 4.1 and 4.2.)

There were correlations identified between loneliness and depression, as well as between loneliness and low self-esteem. Pearson correlations between loneliness and depression for the total sample and the Lonely subsample were .52 ( $p < .05$ ) and .16 ( $p > .05$ ), respectively. Correlations between loneliness and low self-esteem for the total sample and the Lonely subsample were .61 ( $p < .05$ ) and .32 ( $p < .05$ ), respectively. (See Tables 4.3 and 4.4.)

The UCLA measure of loneliness correlated positively with the self-rating of loneliness by students among the total sample ( $r = .39$ ,  $p < .01$ ). The correlation between these two measures among the Lonely subsample was a negative correlation and was not significant ( $r = -.14$ ,  $p > .05$ ). These correlations indicate that the objective measure represented by the UCLA Scale and a subjective Likert measure were perhaps allowing for different types of loneliness to be endorsed. Most of the items on the UCLA measure are related to loneliness that

is the result of emotional or social deprivation of close or supportive relationships. Perhaps the Likert rating scale identifies endorsements of loneliness that are of a different nature, such as loneliness associated with alienation, boredom, or anxiety. In looking at the comparison of correlations of each of the measures of loneliness to depression and low self-esteem, it was observed that the self-rating of loneliness correlated more highly with depression than low self-esteem ( $r = .62, p < .01$  and  $r = .42, p < .01$ , respectively), whereas the UCLA measure correlated more highly with low self-esteem than depression ( $r = .51, p < .01$  and  $r = .52, p < .01$ , respectively). (These are correlations among the total sample.) Thus, perhaps the UCLA measure was identifying a type of loneliness characterized by the low-self-image problems of low self-esteem, whereas the self-rating measure identified a form of loneliness characterized more by hopelessness or negative feelings of the future. It is also possible that people who were not wanting to identify themselves as lonely on the self-rating measure were measured as such when it came to the more objective questions asked on the UCLA Scale. Thus, the small correlations between the two loneliness measures raised questions about the social stigma involved in admitting to loneliness. (See Tables 4.3 and 4.4.)

Loneliness (UCLA) correlated significantly with locus of causality, and in investigating this correlation, it was seen that the internal items of that scale accounted for the correlation ( $r = .58, p < .001$  for the total sample;  $r = .48, p < .001$  for the Lonely

subsample). (See Table 4.6.) Loneliness (UCLA) also correlated at a significantly more moderate strength with locus of stability ( $r = -.41$ ,  $p < .001$ ) for the total sample in the direction of stable attribution. This correlation was  $-.30$ ,  $p < .05$  for the Lonely subsample. (See Table 4.6 for complete data.)

Reasons for being lonely. The most selected reason for being lonely was having no friends or feeling a lack of good friendships. Twenty-five percent of the students who responded to this question indicated that their reason for loneliness was having no friends or feeling a lack of good friendships. Another 20% indicated that they were homesick. Approximately 15% indicated that they had no boyfriend or girlfriend, or had recently broken up with a romantic friend. Eight percent indicated that they did not know why they were lonely.

A cluster analysis on variables provided evidence that different reasons for feeling lonely were related to other aspects of the subjects. For example, feeling homesick or missing important people who were away was more symptomatic of younger students, as would be expected.

Attribution style was associated more with having no boyfriend or girlfriend. Having no friends or lacking good friendships was most associated with loneliness, depression, low self-esteem, and a tendency to view situations as stable and internally caused. Reasons seldom stated were (a) feeling a lack of sex, (b) not knowing the meaning of life, (c) having personal problems, and (d) having roommate difficulties.

### Coping Behavior

There were 35 coping strategies, both cognitive and behavioral, that students rated (from "never used" to "often used") to indicate their coping style. Twelve of these items made up the Emotion-Focused scale and six of these items made up the Problem-Focused scale. (Other items were not included due to reliability difficulties with including them.) (See Appendix B for examples of scales.)

The average coping scores for the total sample and the Lonely subsample are presented in Table 4.7. These scores are the mean values for the designated groups. Coping responses varied from approximately 55% to 60% endorsement of the possible highest scores on each coping subscale. Thus, it appeared that students were engaging in moderate levels of coping and that the differences in coping, depending upon loneliness or attribution, were minimal.

Table 4.7: Mean Coping Scores

	Emotion-Focused (Possible Score Range: 12-48)	Problem-Focused (Possible Score Range: 10-24)
Total sample	34.15	15.38
Lonely subsample	32.77	15.18

On the whole, correlations between coping behavior and other variables were very modest. (See Tables 4.3 and 4.4 for all correlational data.) Among the total sample, the degree of relationships between these variables was essentially the same. The highest correlation found for emotion-focused coping with other variables was again with problem-focused coping (.39,  $p = .001$ ). The correlation of emotion-focused coping with locus of stability was .20 ( $p = .002$ ). This relationship was extremely moderate.

Among the Lonely subsample, emotion-focused coping had some moderate relationships with a few other variables. It correlated most highly with problem-focused coping (.41,  $p = .001$ ). It correlated very moderately with the Grant Locus of Stability subscale (.23,  $p = .05$ ). Emotion-focused coping also correlated again very moderately with the causality question on the Loneliness questionnaire in the direction of externality ( $r = .25$ ,  $p < .05$ ). This correlation was in the direction of more emotion-focused coping used as an individual perceives his/her state of loneliness as unchanging or unchangeable. This was contrary to what was expected in this relationship. (See Tables 4.3 and 4.4.)

Problem-focused coping was not found to be related strongly to most other variables as well. The only correlation worthy of special comment is the correlation between problem-focused coping and the Likert self-rating measure of loneliness among the Lonely subsample ( $r = .42$ ,  $p = .002$ ). The more lonely a student claimed to be, the

less likely the student was to use problem-focused coping. Problem-focused coping was not found to correlate to any significant degree with the UCLA measure of loneliness in either sample.

Correlations between coping behavior and affective states of depression and self-esteem were basically inconsequential. (See Tables 4.3 and 4.4.) The very small correlations all suggested, however (among the range of nonlonely to lonely subjects), that both emotion- and problem-focused coping were not associated positively with affective distress, but rather increased with self-esteem and absence of depression.

#### Tendencies in Attribution Style

One interesting result was the finding that more subjects were grouped into (a) unstable and external attributional style or (b) stable and internal attributional style. This finding was not independent of loneliness, in that nonlonely students did not demonstrate a preference for a particular attributional style regarding loneliness.

Table 4.8 identifies the four attribution "cells" and the numbers of people who were assigned to each cell. The columns in the table are associated with three different selections of students: the total sample, the Lonely subsample, and the Nonlonely subsample. The percentages that each attribution cell number represents for the number of subjects in the given cell are also provided.

Table 4.8: Proportion of Samples in Attributional Groups.

Attribution	Total Sample <sup>a</sup> (N = 199)		Lonely Subsample <sup>b</sup> (n = 49)		Nonlonely Subsample (n = 58)	
	n	%	n	%	n	%
Unstable/ internal	29	14.6	6	12.2	13	22.0
Unstable/ external	71	35.7	16	32.6	16	27.0
Stable/ external	24	12.0	9	18.4	15	25.0
Stable/ internal	75	37.7	18	36.8	14	24.0

Note: Grant Attribution subscales were used as determinants of attribution style (cells formed by median split method).

<sup>a</sup>For the total sample:  $\chi^2 (3, N = 199) = 43.87, p < .05$ .

<sup>b</sup>For the Lonely subsample:  $\chi^2 (3, n = 49) = 7.87, p < .05$ .

Therefore, there was representation across all four attribution styles, but there was preference for the unstable/external and stable/internal orientations among the total sample and the Lonely subsample. However, among a group of nonlonely subjects, their reported attributions about loneliness (answered from the perspective of imagining that they were lonely) took on a little different pattern. Among this group, the numbers per attribution cell appeared to be more similar, and indeed there were no significant differences between cells (see Table 4.8). Thus, attributions about loneliness appeared more varied

among the sample of students who were not lonely at the time of the data collection.

### Hypotheses Tested

Analyses of variance, along with some a priori contrasts, correlational analyses, and paired sample  $t$ -tests, were all forms of analysis used to investigate the main hypotheses. The particular type of analysis used for each respective hypothesis is indicated with the presentation of results for each of the hypotheses addressed.

The first five hypotheses were all tested by means of an analysis of variance. The model of the analysis is provided in Table 4.9. The reader is referred to specific tables of data that are indicated for each particular hypothesis.

### Hypothesis 1

Students having stable attributions of their loneliness will show more use of emotion-focused coping than students who have unstable attributions of their loneliness.

Null hypothesis stated in terms of the model of analysis:

Locus of stability will have no positive significant effect on emotion-focused coping such that the mean value of emotion-focused coping for people with stable attributions of their loneliness will be the same as or less than the mean value of such coping among subjects with unstable attributions.

Stated symbolically:  $H_0: U_{A1} \leq U_{A2} \leq U_E$

$H_1: U_{A1} > U_{A2}$

Legend: Where  $U_{A1}$  and  $U_{A2}$  are mean scores for emotion-focused coping for subjects with unstable and stable attributions, respectively, and  $U_E$  is the overall mean score for emotion-focused coping.



Table 4.9: Model of Summary Data Tables for Analysis of Variance:  
Mean Scores for Coping Response

Factor A	Factor B		
Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	$U_{A1 B1}$ ( $U_1$ )	$U_{A1 B2}$ ( $U_2$ )	$U_{A1}$
Stable	$U_{A2 B1}$ ( $U_3$ )	$U_{A2 B2}$ ( $U_4$ )	$U_{A2}$
	$U_{B1}$	$U_{B2}$	$U^a$

<sup>a</sup>In hypotheses that follow,

$U_E$  refers to  $U$  for emotion-focused coping

$U_P$  refers to  $U$  for problem-focused coping

$U_D$  refers to difference between emotion- and problem-focused coping

Linear model for two-way fixed effects analysis of variance:

$$X_{ij} = U + a_i + B_j + e_{ij}$$

Where  $x_{ij}$  is single observation

$U$  is contribution of dependent variable

$a_i$  is contribution of Factor A

$b_j$  is contribution of Factor B

$e_{ij}$  is error term for observation

For the total sample. The sample mean for emotion-focused coping among subjects with stable attributions of their loneliness was 33.06, and the sample mean for emotion-focused coping among subjects with unstable attributions was 35.24. These two means did not prove to be significantly different from one another, as there was no significant main effect for locus of stability on emotion-focused coping;  $F(1,195) = 2.45, p > .05$ . (See Tables 4.10 and 4.12.) Therefore, the null hypothesis was not rejected. The analysis of variance performed on the total sample did not suggest that locus of stability affected emotion-focused coping to a significant degree. In addition, the emotion-focused coping mean score for subjects with stable attributions for their loneliness was lower than the mean score for students with unstable attributions (rather than higher), indicating further absence of support for the belief that stable attributions are associated with increased amounts of emotion-focused coping. The correlation of locus of stability with emotion-focused coping among the total sample was  $r = -.20, p < .01$ . There was a slight linear relationship seen between unstable attributions for loneliness and emotion-focused coping with loneliness. Thus, this correlation was also indicative of a relationship between these two variables in the opposite direction than was hypothesized in the alternate hypothesis.

For the Lonely subsample. There was no significant effect found for locus of stability on emotion-focused coping among the Lonely subsample as well;  $F(1,45) = 2.87, p > .05$ . The group mean scores of emotion-focused coping among students with unstable and stable

Table 4.10: Summary of Results From Analyses of Variance (Total Sample)

Outcome Variable	Source of Variation		
	Locus of Stability F <sub>—</sub>	Locus of Causality F <sub>—</sub>	Combined Main Effects F <sub>—</sub>
Emotion-focused coping	2.45	2.98**	5.10*
Problem-focused coping	.019	.875	.65
Difference between coping styles	1.24	.20	1.23
			.17

\* $p < .05$ .

\*\* $p < .10$ .

attributions, respectively, were 34.09 and 31.70. The main effect approached significance ( $p = .097$ ) but again in the reverse direction to that hypothesized. (See Tables 4.11 and 4.15.) The direction of difference supported the possibility that students with stable attributions for their loneliness had a tendency to engage in less, not more, emotion-focused coping. The null hypothesis was not rejected. One further note is that within this subsample of students, the correlation between locus of stability and emotion-focused coping was  $-.23$  ( $p = .05$ ). This significant correlation demonstrated the existence of a slight association between unstable attributions and increased use of emotion-focused coping.

### Hypothesis 2

Students having stable attributions of their loneliness will use less problem-focused coping than students having unstable attributions of their loneliness, based on the assumption that students with stable attributions will feel less belief in the ability to make an impact on their loneliness.

Null hypothesis stated in terms of the model of analysis:

Locus of stability will have no significant effect on problem-focused coping, such that the population mean for problem-focused coping associated with stable attributions will be the same as (or more than) the population mean for problem-focused coping associated with unstable attributions.

Stated symbolically:  $H_0: U_{A1} \geq U_{A2} \geq U_p$

$H_1: U_{A1} < U_{A2}$

Legend: Where  $U_{A1}$  and  $U_{A2}$  are mean scores for problem-focused coping for subjects with stable and unstable attributions, and  $U_p$  is the overall mean score for problem-focused coping.

Table 4.11: Summary of Results From Analyses of Variance (Lonely Subsample)

Outcome Variable	Source of Variation			Interaction $F_{\_}$
	Locus of Stability $F_{\_}$	Locus of Causality $F_{\_}$	Combined Main Effects $F_{\_}$	
Emotion-focused coping	2.87	.40	1.43	.496
Problem-focused coping	.134	1.12	.919	.036
Difference between coping styles	.98	2.55	1.35	.138

Note: No  $F_{\_}$  value approached the standard levels of significance.

Table 4.12: Summary Table of Mean Scores for Emotion-Focused Coping Behavior by Attribution (Total Sample)

Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	34.34 (n=29)	35.60 (n=71)	35.24 (n=100)
Stable	32.58 <sup>a</sup> (n=75)	34.54 (n=24)	33.06 (n=99)
Total	33.46 (n=104)	35.09 (n=95)	34.15 (n=199)

<sup>a</sup>This group was found to have significantly less emotion-focused coping than the other three groups by means of an a priori contrast;  $t(195) = -2.56$ ,  $p < .05$ .

Table 4.13: Summary Table of Mean Scores for Problem-Focused Coping Behavior by Attribution (Total Sample)

Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	15.44 (n=29)	15.59 (n=71)	15.55 (n=100)
Stable	14.98 (n=75)	15.95 (n=24)	15.22 (n=99)
Total	15.21 (n=104)	15.77 (n=95)	15.38 (n=199)

Note: A priori contrast on testing comparison of unstable/internal group with all other groups proved insignificant for the unstable/internal group mean being higher for problem-focused coping;  $t(195) = -.08$ ,  $p > .10$ .

For the total sample. There was no main effect for locus of stability on problem-focused coping; therefore, the null hypothesis was not rejected;  $F(1,195) = .019, p > .05$ . The mean score for problem-focused coping for students with stable attributions was 15.22, and for students with unstable attributions, this mean score was 15.55. The overall mean score for problem-focused coping for the entire sample was 15.38. (See Tables 4.10 and 4.13.) Looking at the table of correlations (Table 4.3), one sees that there was little evidence of an association between locus of stability and problem-focused coping as indicated by this analysis as well ( $r = .07, p > .05$ ).

Table 4.14: Difference Between Emotion-Focused and Problem-Focused Coping (Total Sample)

Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	.29 (n=29)	.37 (n=71)	.34 (n=100)
Stable	.22 (n=75)	.22 (n=24)	.21 (n=99)
Total	.26 (n=104)	.30 (n=95)	.28 (n=199)

Note: Difference scores were derived by subtracting a weighted problem-focused score from a weighted emotion-focused score for each subject. This was done to account for unequal numbers of items in each of the coping subscales. The difference score means are therefore the means of the weighted difference scores. The weighted difference scores can have values from -3 to 3, with -3 representing total endorsement of all problem-focused items to the exclusion of emotion-focused items; +3 represents the opposite endorsement pattern.

For the Lonely subsample. There was no significant effect seen for locus of stability on problem-focused coping for this subsample as well;  $F(1,45) = .134$ ,  $p > .05$ . The mean score of problem-focused coping for students with unstable attributions was 15.63, and the mean score for students with stable attributions, 14.81. (See Tables 4.11 and 4.16.) The null hypothesis was not rejected. Lonely students did not appear to engage in a higher level of problem-focused coping if they had unstable attributions of their loneliness.

Table 4.15: Summary Table of Mean Scores for Emotion-Focused Coping by Attribution (Lonely Subsample)

Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	35.83 ( $n=6$ )	33.43 ( $n=16$ )	34.09 ( $n=22$ )
Stable	31.72 ( $n=18$ )	31.66 ( $n=9$ )	31.70 ( $n=27$ )
Total	33.77 ( $n=24$ )	32.54 ( $n=25$ )	32.77 ( $n=49$ )

Note: An a priori contrast done to see whether the group mean for unstable/internal subjects had a significantly higher use of emotion-focused coping was not significant;  $t(45) = -1.19$ ,  $t$  prob. = .24.



Table 4.16: Summary Table of Mean Scores for Problem-Focused Coping by Attribution (Lonely Subsample)

Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	15.00 ( <i>n</i> =6)	15.87 ( <i>n</i> =16)	15.63 ( <i>n</i> =22)
Stable	14.38 ( <i>n</i> =18)	15.66 ( <i>n</i> =9)	14.81 ( <i>n</i> =27)
Total	14.69 ( <i>n</i> =24)	15.76 ( <i>n</i> =25)	15.18 ( <i>n</i> =49)

Note: An a priori contrast done to see whether subjects with unstable/internal attributions for loneliness engaged in a significantly higher level of problem-focused coping proved insignificant;  $t(45) = -.21$ ,  $p \text{ prob.} = .83$ .

The correlation of problem-focused coping with locus of stability for this subsample was not significant as well ( $r = .14$ ,  $p > .05$ ), adding further support to the belief that unstable attributions are not associated with problem-focused coping to a greater degree than stable attributions. In fact, the mean scores of problem-focused coping for all four attributional-style groups (see Table 4.16) were all within 1.5 points of one another, demonstrating that the range seen in problem-focused coping (see Table 4.2) was not attributable to variation imposed by the locus of stability.

### Hypothesis 3

Students with stable and internal attributions of their loneliness will use more emotion-focused coping than students who engage in one of the other three attributional styles (unstable/internal, stable/external, or stable/internal). This is based on the expectation that these students will feel self-blame for their loneliness, and will see the situation as hopeless.

Null hypothesis stated in terms of the model of analysis:

The means for emotion-focused coping for the four stated attribution groups will be estimates of the same population mean. (All means are from one population.)

Stated symbolically:  $H_0: U_1, U_2, U_3, U_4$  the same or less than population means

$H_1: U_1 > U_2, U_3, U_4$

Legend: Where  $U_x$  is the population mean for emotion-focused coping for each attribution group, and  $U_1$  is the population mean for emotion-focused coping of the stable and internal attribution population.

For the total sample. An a priori contrast of the data yielded a significant difference in emotion-focused coping between stable/internal attribution group and the other three attribution groups;  $t(195) = 2.56, p < .05$ . This difference was in the opposite direction from that hypothesized. Emotion-focused coping was found to be significantly lower for the internal/stable group than for the other three groups, rather than higher, with a mean emotion-focused coping score of 32.5. (See Table 4.12 for summary of data.) Of further interest is that the unstable/external group had the highest use of emotion-focused coping, in terms of the raw data. Therefore, the null hypothesis was not rejected. There appeared to be slightly more

emotion-focused coping on the part of people who had unstable and external attributions of their loneliness. Thus, people who felt that their loneliness was caused by external circumstances and was changeable tended to use more palliative measures of coping.

For the Lonely subsample. An a priori contrast of the four attributional groups with respect to emotion-focused coping on the Lonely subjects yielded no significant differences in emotion-focused coping dependent on attributional style;  $t(45) = -1.19, p > .05$ . (See Table 4.15 for summary of data.) The null hypothesis was not rejected.

#### Hypothesis 4

Students who have unstable and internal attributions of their loneliness will engage in more problem-focused coping than students in the other three attributional groups, based on the assumption that these students should feel a sense of control and motivation over a phenomenon they see as changeable.

Null hypothesis stated in terms of the model of analysis:

The mean of the population of students having unstable and internal attributions of their loneliness will be the same as or less than the means of students from the other three populations representing the other three attributional groups.

Stated symbolically:  $H_0: U_1 \leq U_2, U_3, U_4$

$H_1: U_1 > U_2, U_3, U_4$

For the total sample. An a priori contrast of the data yielded no significant differences among attributional group means with respect to problem-focused coping;  $t(195) = -.0879, p > .05$ . (See

Table 4.13 for summary of data.) This result was consistent with the finding that there was no significant combined effect of locus of stability and locus of causality on problem-focused coping. (See Table 4.10.) The null hypothesis was not rejected. Problem-focused coping among students did not appear to increase significantly with an unstable/internal approach to one's loneliness. According to this analysis, all four attributional groups appeared to engage in a similar level of problem-focused coping. Therefore, the group means were considered estimates of the same population parameter.

For the Lonely subsample. No significant difference was seen between the unstable/internal attributional group for problem-focused coping contrasted with the other three groups;  $t(45) = -.20$ ,  $p > .05$ . (See Table 4.16 for summary of data.) The means among the four attributional groups of the Lonely subsample were also very close in value for problem-focused coping. Thus, the null hypothesis was not rejected for this subsample as well.

### Hypothesis 5

Students who have stable attributions of their loneliness will use more emotion- than problem-focused coping than students with unstable attributions. This is based on the assumption that stability is associated with a lack of expectation that things can change, thus discouraging a problem-focused orientation and encouraging self-comforting measures of coping.

Null hypothesis stated in terms of the model of analysis:

Locus of stability will have no significant effect on difference between emotion- and problem-focused coping, in the direction of stable attributions being associated with greater difference between coping styles.

Stated symbolically:  $H_0: U_{A1} \leq U_{A2} \leq U_D$

$H_1: U_{A1} \quad U_{A2}$

Legend: Where  $U_{A1}$  and  $U_{A2}$  are the population means for the difference scores between emotion- and problem-focused coping for those with stable and unstable attributions of their loneliness.  $U_D$  is the population mean for difference between coping style for all students.

For the total sample. Analysis of variance indicated no significant effect for locus of stability on difference in use of each coping style;  $F(3,195) = 1.23, p > .05$ . The outcome variable of difference in use of coping style was measured by difference scores. These difference scores were derived by subtracting a weighted problem score from a weighted emotion score, and the scale that resulted ranged from -3 to 3. It was necessary to calculate weighted difference scores since the subscales for emotion- and problem-focused coping had unequal numbers of items. The mean difference scores for the stable and unstable groups of subjects were .21 and .34, respectively, showing a slightly greater use of emotion-focused coping. (See Table 4.14.) The null hypothesis was not rejected. Students appeared to engage in similar levels of emotion- and problem-focused coping, irrespective of their locus of stability orientation.

For the Lonely subsample. Analysis of variance indicated no significant effect for locus of stability on difference in use of each coping style for this subsample as well;  $F(1,45) = .98, p > .05$ . The mean difference scores for the stable and unstable groups of students among the Lonely subsample were .17 and .23, respectively. (See Table

4.17 for summary of data.) The null hypothesis was not rejected on the basis of this analysis also.

Table 4.17: Difference Between Emotion- and Problem-Focused Coping (Lonely Subsample)

Locus of Stability	Locus of Causality		
	Internal	External	
Unstable	.48 (n=6)	.14 (n=16)	.23 (n=22)
Stable	.24 (n=18)	.02 (n=9)	.17 (n=27)
Total	.36 (n=24)	.08 (n=25)	.20 (n=49)

Note: See note to Table 4.14 for explanation of how these mean scores were derived.

### Hypothesis 6

Students who have unstable and internal attributions of their loneliness will show more use of problem-focused than emotion-focused coping, based on the assumption that people with unstable and internal attributions will feel both motivation and personal control over their problem of loneliness.

Null hypothesis stated in terms of the model of analysis:

This hypothesis was investigated by making an inference about the means between emotion- and problem-focused coping for people in the given attributional group. This was done by means of a difference score between the two types of coping for this attributional group. Thus, the null hypothesis was stated as follows:

There will be no difference between the population means of emotion- and problem-focused coping for people with unstable and internal attributions of loneliness, as the mean of differences scores will be equal to zero.

Stated symbolically:  $H_0: D = 0$

$H_1: D < 0$  (stated as "less than zero" due to the direction in which the difference scores were computed for the sample data)

Legend:  $D$  is the population parameter of difference between emotion- and problem-focused coping (a negative number signifies more problem- than emotion-focused coping).

For the total sample. A paired samples  $t$ -test run on the mean difference scores for students with stable and internal attributions yielded nonsignificant results. These difference scores were derived by subtracting a weighted problem-focused coping score from a weighted emotion-focused coping score, and the scale that was derived ranged from -3 to 3. The mean difference score for students with unstable and internal attributions of their loneliness was .28;  $t(74) = .03$ ,  $p > .05$ . There was very slight favoring of emotion- over problem-focused coping that was not meaningful in degree. This was not in the direction expected, and therefore the null hypothesis was rejected.

For the Lonely subsample. The paired samples  $t$ -test run on the difference scores of students within the Lonely subsample who had stable and internal attributions of their loneliness yielded nonsignificant results for differences between emotion- and problem-focused coping. The mean difference score was .48;  $t(17) = .61$ ,  $p > .05$ . Again, a very slight favoring of emotion-focused coping over problem-focused coping was seen, but at a nonsignificant level. The null hypothesis was not rejected.

Hypothesis 7

Students who have stable attributions of their loneliness (measured by the Grant Attribution Scale) will experience greater degrees of loneliness (as measured by the UCLA Loneliness Scale or the Likert scale) than students who have unstable attributions of their loneliness.

Null hypothesis stated in terms of the model of analysis:

Locus of stability will not bear a positive linear relationship with loneliness, such that the tendency to see loneliness as a stable phenomenon will not correlate with an increase in degree of loneliness experienced.

Stated symbolically:  $H_0: P_{xy} < .20$

$H_1: P_{xy} \geq .20$

(.20 selected as the lowest correlation acceptable for purpose of significance, given that lower correlations, irrespective of significance, indicate extremely slight relationships)

For the total sample. A correlation between loneliness (as measured by the UCLA Loneliness Scale) and locus of stability was .41;  $p = .001$ . The correlation among the total sample for the degree of loneliness as measured by the subjective indication, the Likert scale rating, with locus of stability (also measured by the Grant Attribution Scale), was .43;  $p = .001$ .

For the Lonely subsample. The correlation between scores on the UCLA Loneliness Scale and the Grant Locus of Stability subscale was .30;  $p < .05$ . The correlation within this subsample for the Likert scale measure of loneliness and the same locus of stability measure was .21;  $p > .05$ .

The correlations were all in the direction of indicating a positive relationship between stable attributions of loneliness and



increased degree of loneliness. It appeared that stable attributions of loneliness, attributions that saw loneliness as difficult to affect or change, were associated with an increased degree of reported loneliness.

### Hypothesis 8

Students who have stable and internal attributions of their loneliness will experience the greatest degree of loneliness compared to students who have either stable/external attributions, unstable/internal, or unstable/external attributions. This is based on an expectation that stable and internal attributions lead to a sense of hopelessness or passivity for dealing with problems.

Null hypothesis stated in terms of the model of analysis:

This hypothesis was investigated by use of an analysis of variance a priori contrast. The null hypothesis was that there will be no difference in the degree of loneliness between students who have stable and internal attributions of their loneliness and students who have stable/external, unstable/internal, or unstable/external attributions of their loneliness.

Stated symbolically:  $H_0: U_1 = U_2, U_3, U_4$

$H_1: U_1 > U_2, U_3, U_4$

Legend:  $U_1$  is the mean of loneliness for the population of students having stable and internal attributions.  $U_2, U_3$ , and  $U_4$  are means of loneliness for the populations of other attributional groups.

For the total sample. There were significant differences found among the means for loneliness (UCLA measure) for the four attributional groups;  $t(194) = 4.92, p < .001$ . An a priori contrast done of their mean loneliness scores indicated that the group with stable and internal attributions of loneliness had a significantly higher mean loneliness score (44.6) than the other three groups. Thus, the null hypothesis was rejected based on this analysis. (See Table 4.18.)

Table 4.18: Loneliness (UCLA Scale) by Attributional Style: Total Sample

Group	Count	Mean	SD
Unstable/internal	29	40.75	9.62
Unstable/external	71	35.43	6.80
Stable/external	24	37.54	9.60
Stable/internal	75	44.67	10.17
Total	199	39.92	

Note: An a priori contrast analysis comparing the stable/internal group with the other three groups reached significance;  $t(194) = 4.92, p < .001$ .

This hypothesis was also investigated with the use of another measure of locus of causality, the direct question on the student information sheet asking students whether they thought that their loneliness was caused by internal or external factors. Students placed into attributional groups by means of their responses to this question and their scores on the Grant Attributional Scale for locus of stability yielded four attributional groups as well ( $n = 130$  for this sample). Students in the stable and internal attribution group by this group formation also had a mean score of loneliness on the UCLA measure that was significantly higher (44.60);  $t(126) = 2.85, p < .05$  than mean scores for the other three groups. (See Table 4.20.)

The null hypothesis was rejected, given that the mean score on loneliness for the sample of students with stable and internal attributions suggested that they did indeed experience a greater

degree of loneliness and hence came from a different population than did the other students.

For the Lonely subsample. According to an a priori contrast analysis, the group representing students with internal and stable attributions for their loneliness had a significantly higher mean score for loneliness (55.66) compared to the other three attributional groups;  $t(45) = 2.36, p < .05$ . Thus, students who had stable and internal attributions for their loneliness were found to have a higher degree of loneliness than students in the other three attributional groups. (See Table 4.19 for summary of data.) The null hypothesis was rejected on the basis of this analysis as well.

Table 4.19: Loneliness (UCLA Scale) by Attributional Style: Lonely Subsample

Group	Count	Mean	SD
Unstable/internal	6	54.50	4.03
Unstable/external	16	49.25	8.66
Stable/external	9	46.44	11.58
Stable/internal	18	55.66	4.97
Total	49	51.73	

Note: An a priori contrast comparing the stable/internal group with the other three groups reached significance;  $t(45) = 2.36, p < .05$ .

Table 4.20: Loneliness (UCLA Scale) by Attributional Style--Total Sample (With Locus of Causality Measured by Causality Question on Student Loneliness Questionnaire)

Group	Count	Mean	SD
Unstable/internal	19	38.10	8.37
Unstable/external	41	37.68	8.79
Stable/external	41	44.02	10.38
Stable/internal	29	46.00	11.54
Total	130	41.60	

Note: An a priori contrast comparing the stable/internal group with the other three groups reached significance;  $t(126) = 2.85$ ,  $p < .01$ .

### Hypothesis 9

As the degree of loneliness increases, the use of emotion-focused coping will increase, based on the belief that students who are lonelier will need to engage in more palliative measures of self-comfort.

Null hypothesis stated in terms of the model of analysis:

There will be a positive linear relationship between emotion-focused coping and loneliness, with loneliness measured by the UCLA Loneliness Scale.

Stated symbolically:  $H_0: P < .20$

$H_1: P_{xy} > .20$

(.20 chosen as least acceptable degree of correlation considered meaningful)

Legend:  $P_{xy}$  is the population correlation coefficient for  $x$ , emotion coping, and  $y$ , loneliness, two variables assumed to have a bivariate normal distribution.

For the total sample. The correlation for the total sample was  $-.11$  at the .05 level of significance, indicating that an extremely

slight relationship was found in the direction of emotion-focused coping relating inversely with degree of loneliness.

For the Lonely subsample. The correlation found for this subsample was  $-.02$  at a nonsignificant level.

This hypothesis was also investigated with the use of the Likert scale of loneliness as another means of testing this hypothesis. The correlation between loneliness, as measured by the Likert scale, and emotion-focused coping for the total sample was  $-.22$ ,  $p < .01$ . For the Lonely subsample, this correlation was  $-.20$ ,  $p > .05$ . On the basis of these analyses, the null hypothesis was not rejected, as there was no evidence that these two variables in question correlated linearly in a positive direction.

#### Post Hoc Analyses

Multiple linear regressions were run on loneliness (as measured by the UCLA Scale) to gain further insights into the relationships between loneliness, attribution, and coping behavior. For the total sample, a hierarchical regression equation was run, including the variables of problem- and emotion-focused coping; stability, causality, and their interaction; self-esteem; and depression. These variables together accounted for 46% of the variance on the UCLA Scale, and the regression equation was significant;  $F(7,190) = 23.48$ ,  $p < .001$ . (See Table 4.21.) The variable accounting for the most variance in loneliness was locus of stability (stable attributions), which contributed 17% of the variance to the total amount. The partial regression coefficient did not reach significance. Low self-esteem

accounted for 16% of the variance on loneliness. This partial regression coefficient did reach a level of significance;  $F(7,190) = 24.65$ ,  $p < .001$ . Variance accounted for by the other variables totaled 13%, and no one variable was responsible for more than 7% variance on loneliness. The partial regression coefficient for locus of causality (more internal attributions associated with increasing loneliness) also reached significance, with  $F(7,190) = 7.52$ ,  $p < .001$ .

Table 4.21: Regression of Variables on Loneliness: Total Sample

Variable	R <sup>2</sup>	R <sup>2</sup> Change	B <sup>a</sup>
Locus of stability	.17	.17	-.01
Locus of causality	.24	.07	-.18
Interaction of stability/causality	.25	.01	.07*
Self-esteem	.42	.16	-.35
Depression	.46	.04	.25
Emotion-focused coping	.46	.00	-.02
Problem-focused coping	.46	.00	.06*

Note: Hierarchical multiple regression procedure. Loneliness measured by the Revised UCLA Loneliness Scale.

<sup>a</sup> Standardized regression coefficients.

\* $p < .05$ .

As can be seen from Table 4.21, locus of stability was entered first in the equation, with the expectation that stable attributions may predispose one to being more vulnerable to loneliness. Although from the tabled variance changes ( $R^2$ ) it appears that locus of stability accounted for the largest proportion of variance in loneliness, computing the partial correlation coefficient for the other variables revealed that low self-esteem accounted for 22% of the unexplained variance on loneliness after locus of stability had been entered into the equation. The reader is reminded that locus of stability and low self-esteem had a correlation of .46,  $p < .001$  for the total sample. These two variables shared some common variance and contributed significantly to the variance of loneliness as measured by the UCLA Scale (for the total sample).

The same variables were entered in a hierarchical regression equation for the prediction of loneliness as measured by the UCLA Scale on the Lonely subsample. These variables accounted for 26% of the variance on the dependent variable. (See Table 4.22.) Locus of causality accounted for 12.6% of the variance on the dependent variable, and locus of stability was responsible for 9.5% of the variance. This regression equation was not significant;  $F(1,47) = 4.27$ ,  $p > .01$ . The relationships between locus of stability and locus of causality with loneliness were in the direction of stable and internal attributions being associated with increased degrees of loneliness. The partial regression coefficient for locus of causality was significant;  $F(1,47) = 4.61$ ,  $p < .05$ .

Table 4.22: Regression of Variables on Loneliness: Lonely Subsample

Variable	R <sup>2</sup>	R <sup>2</sup> Change	B <sup>a</sup>
Locus of stability	.09	.09	-.03*
Locus of causality	.22	.12	-.41
Interaction of stability/causality	.22	.00	.00
Self-esteem	.23	.01	-.10*
Depression	.24	.01	.12*
Emotion-focused coping	.24	.00	-.03*
Problem-focused coping	.26	.02	.13

Note: Hierarchical multiple regression procedure. Loneliness measured by the Revised UCLA Loneliness Scale.

<sup>a</sup>Standardized regression coefficients.

\* $p < .05$ .

Hierarchical regressions on length of time lonely failed to prove significant for either sample. The regression equation for the Lonely subsample approached significance;  $F(44) = 1.97$ ,  $p = .095$ . Of the variables that were entered into the equation, the only one that contributed a significant degree of variance was the degree of loneliness (14% of the variance on length of time lonely). The prediction was in the direction of length of time lonely being predictive of a gradually decreasing degree of loneliness, thus suggesting that



chronic loneliness may be of a less intense degree than shorter episodes of loneliness, which may be acute and dealt with more effectively or quickly as a result.

Post hoc analyses on loneliness by attribution were done to further investigate possible differences between groups (separate from Hypothesis 8 pertaining to only one group). These indicated that the unstable/external group of students within both samples had significantly lower UCLA loneliness scores than students in the other three groups. (See Tables 4.23 and 4.24.)

Table 4.23: Attributional Style by Loneliness (Revised UCLA Scale): Total Sample

Group	Count	Mean	SD	F-Ratio	F-Prob.
Unstable/ internal	29	40.75	9.62	13.577	.000
Unstable/ external	71	35.43	6.80		
Stable/ external	24	37.54	9.60		
Stable/ internal	75	44.67	10.17		
Total	199	39.92			

Note: The Scheffe method of post hoc comparisons identified three subsets of homogeneous groups:

- Subset 1: Unstable/external, stable/external
- Subset 2: Unstable/internal, stable/external
- Subset 3: Unstable/internal, stable/internal

**Table 4.24: Attributional Style by Loneliness (Revised UCLA Scale):  
Lonely Subsample**

Group	Count	Mean	SD	F-Ratio	F-Prob.
Unstable/ internal	6	54.50	4.03	3.745	.0174
Unstable/ external	16	49.25	8.66		
Stable/ external	9	46.44	11.58		
Stable/ internal	18	55.66	4.97		
Total	49	51.73			

**Note:** The Scheffe method of post hoc comparisons identified two subsets of homogeneous groups:

Subset 1: unstable/internal, unstable/external, stable/external  
 Subset 2: unstable/internal, unstable/external, stable/internal

#### Differences Between Lonely and Nonlonely Subsamples

Investigations of the differences between lonely and nonlonely groups were conducted to derive more information about loneliness. It was hypothesized that there would be significant differences between lonely and nonlonely students with respect to depression, self-esteem, and age (with younger students experiencing more loneliness). Other variables of interest for exploration purposes were attributional

style, living environment (i.e., off campus, residence hall), number of siblings in family of origin, and sex.

I-tests for independent samples were run, comparing the lonely group of students (the Lonely subsample) with the nonlonely group of students (Nonlonely subsample). Significant  $t$ -tests are described below.

There were significant differences found with respect to attributional style, depression, and self-esteem. Table 4.25 provides the statistical information. As can be seen by investigating the mean values and  $I$ -probabilities, lonely students were higher for locus of causality, in the direction of internality, higher on locus of stability for the direction of stable attributions, lower in self-esteem, and more depressed.

There were no differences found between the two groups with respect to age, sex, year in school, living arrangements, or number of siblings present in the household. Nor were there any significant differences found in the level of emotion- or problem-focused coping reported between the two groups, taking into consideration the fact that the nonlonely group was reporting "retrospectively" with respect to describing their coping behaviors when lonely.

Table 4.25: Comparisons of Lonely and Nonlonely Subjects

Variable	Mean Value	I-Value	Two-Tailed p-Values <sup>a</sup>
Locus of causality			
Nonlonely group	29.72	-5.04 <sup>a</sup>	<.000
Lonely group	24.83		
Locus of stability			
Nonlonely group	30.99	5.65 <sup>a</sup>	<.000
Lonely group	24.65		
Self-esteem			
Nonlonely group	20.28	-9.50 <sup>a</sup>	<.000
Lonely group	12.14		
Depression			
Nonlonely group	5.65	7.36 <sup>a</sup>	<.000
Lonely group	15.02		

<sup>a</sup>I-values for pooled variance estimates were used when F-ratios for variances were not significant at the .05 level or less. I-values for the separate variance estimates were used when the F-ratio for variance proved significant at the alpha level (Norusis, 1982, p. 47).

#### Post Hoc Analyses on Coping Behavior

There was a significant difference found between attributional groups with respect to emotion-focused coping among the total sample by means of a post hoc comparison analysis. Students having internal and stable attributions for their loneliness actually used less emotion-focused coping than other students, and students with unstable and external attributions used more emotion-focused coping;  $F(3,195) = 3.45, p < .05$ . (See Tables 4.26 and 4.27.) Again, this difference

was not large, and yet it was interesting because it was in the opposite direction to that anticipated.

It is also interesting that problem-focused coping did not differ among any of the four attributional groups, although there was one group that appeared less lonely in both the total sample and in the Lonely subsample (the unstable/internal group). (See Table 4.26.)

Table 4.26: Coping by Attributional Style

	Emotion-Focused Coping	Problem-Focused Coping
<b>A. Overall Means</b>		
Total sample	34.15 (possible score range 12-48)	15.38 (possible score range 6-24)
Lonely subsample	32.77	15.18
<b>B. By Attribution</b>		
Total sample		
Unstable/internal	34.34	15.44
Unstable/external	35.60*	15.59
Stable/external	34.54	15.95
Stable/internal	32.58**	14.98
Lonely subsample		
Unstable/internal	35.83	15.00
Unstable/external	33.43	15.87
Stable/external	31.66	15.66
Stable/internal	31.74	14.38

<sup>a</sup>On Scheffe post hoc comparisons, results of nonsignificance were  $F(195) = .610$ ,  $p > .10$  for the total sample and  $F(45) = .949$ ,  $p > .10$  for the Lonely subsample.

\*Group was significantly higher for emotion-focused coping.

\*\*Group was significantly lower for emotion-focused coping.

Table 4.27: Emotion-Focused Coping by Attributional Style: Total Sample ( $df = 3,195$ )

Group	Count	Mean	SD	F-Ratio	F-Prob.
Unstable/ internal	29	34.34	5.26	3.450	.0176
Unstable/ external	71	35.60	6.05		
Stable/ external	24	34.54	5.40		
Stable/ internal	75	32.58	5.65		
Total	199	34.15			

Note: The Scheffe method of post hoc comparisons identified two subsets of homogeneous groups:

Subset 1: unstable/internal, stable/external, stable/internal

Subset 2: unstable/internal, unstable/external, stable/external

The coping strategies used with the most frequency by the subsample of lonely students were:

- \*1. Tell yourself that your loneliness would not last forever.
- \*2. Remind yourself that you actually do have good relationships with other people.
3. Take naps or sleep longer at night to get away from the feelings of loneliness.
4. Go for a walk by yourself.
- \*5. Try to figure out why you are lonely.
6. Spend time with a close friend just to be together.
7. Distract yourself from feeling lonely with a quiet activity such as reading a book, listening to music, or watching TV.
- \*8. Think about things you can do to overcome your loneliness.
- \*\*9. Work extra hard to succeed at some activity (such as studying extra hard for an exam, putting extra effort into practicing an instrument, etc.).

\*Items appearing on Emotion-Focused Scale.

\*\*Item appearing on Problem-Focused Scale.

These coping items represent both thinking and action types of strategies. The thinking strategies, while considered emotion-focused strategies in this study, nonetheless are oriented to comforting an individual in a constructive manner. The behavioral strategies endorsed above are both active-constructive and passive in nature (such as sleeping or watching TV).

There was a relatively low amount of endorsement of what may be considered passive-destructive kinds of coping, such as drinking, going to bars, or becoming sexually involved for companionship. There was also an absence of certain very constructive strategies, such as seeking help from a therapist or doing something to improve social skills. The least endorsed item was seeking help from a counselor.

I-tests performed on gender to explore differences between males and females with respect to coping behavior indicated that females engaged in significantly more emotion-focused coping than did males, although this difference was very small. The mean for females was 37.9, and the mean for males was 35.1 ( $t(197) = -3.21, p < .01$ ). Females also had a higher mean for problem-focused coping (3.81) compared to males (29.1);  $t(197) = -3.76, p < .001$ . Again, this difference, although significant, was very slight. (See Table 4.28.)

Lonelier students appeared more lethargic and withdrawn in their coping choices than did students in general. For example, lonely students resorted to more sleeping and overeating compared to the general student sample. Forty-three percent of the lonelier sample endorsed the item of frequent sleeping on an "often" basis compared to

25% of the total sample. Only 51% of the lonelier students stated that they engaged in some type of sports activity "sometimes" or "often" as a way to cope with their loneliness, compared to 65% of the total sample. Thirteen percent of the lonelier students endorsed the "sports activity" item on an "often" basis compared to 26% of the total sample.

Table 4.28: I-Tests: Comparison of Lonely and Nonlonely Groups (df = 105)

Variable	Lonely (n=47)	Not Lonely (n=10)	Two-Tailed I-Value
Age	19.10	19.30	-.69
Year in school	2.00	2.10	-.45
No. of siblings in family	3.60	3.50	.25
UCLA	52.55	30.94	18.40*
Emotion-focused coping	32.90	34.20	-1.71
Problem-focused coping	15.10	15.80	.83
Locus of stability	24.40	30.90	-5.81*
Locus of causality	24.50	29.70	-4.94*
ASQ-Negative <sup>a</sup>	4.54	3.91	-4.94*
Depression <sup>b</sup>	15.06	5.65	7.36*
Self-Esteem <sup>c</sup>	12.00	20.33	-9.50*

<sup>a</sup>Attributional Style Questionnaire-Negative Situation items. The higher the score, the greater the tendency toward internal, stable, and global attributions.

<sup>b</sup>Depression measured by Lubin Adjective Checklist. The greater the score, the higher the level of depression.

<sup>c</sup>Self-esteem measured by the Coopersmith Self-Esteem Inventory. The higher the score, the greater one's self-esteem.

\*p < .001.



Lonelier students used certain positive strategies less often than did students as a whole. For example, in response to the coping strategy "Remind yourself that you actually have good relationships with other people," 36% of the lonelier sample indicated use of this strategy "often" compared to 49% of the total sample. With respect to the coping strategy of telling oneself that one's loneliness will not last forever, 40% of the Lonely subsample endorsed this item as a frequently used strategy compared to 54% of the total sample. A third positively oriented item, "Thought about good qualities that you possess," all lonely students (in the Lonely subsample) endorsed this item. However, 57% of this subsample endorsed the item as being used "sometimes" or "often" compared to 84% of the total sample.

Hierarchical regressions that were run on both emotion- and problem-focused coping were indicative of the "imperviousness" coping seemed to demonstrate in this study to other variables, as these variables were defined and measured. The multiple linear regression conducted on emotion-focused coping for both samples resulted in less than 12% variance of emotion-focused coping being explained by the prediction equation ( $F [189] = 1.68, p > .05$  for the total sample;  $F [44] = 1.43, p > .05$  for the Lonely subsample). The multiple linear regressions run on problem-focused coping resulted in less than 6% of the variance of problem-focused coping explained by the prediction equations ( $F [189] = 1.83, p > .05$  for the total sample;  $F [44] = .58, p > .05$  for the Lonely subsample). Neither procedure seemed to improve on the minimal relationships found with the Pearson

correlations. Thus, loneliness, attribution, depression, and self-esteem were not identified as probable predictors of coping behavior, as measured in terms of self-reported problem- and emotion-focused coping.

### Cluster Analyses

Two different cluster analyses were performed on the data to obtain more descriptive information on the sample. One such analysis was done on the variables included in the study. There were eight variables identified by the method of cluster analysis. Interesting groupings of variables were the following:

1. Loneliness (measured by the UCLA Scale), low self-esteem, depression, internal and stable attributions for negative situations (the Seligman Attribution Style Questionnaire), and loneliness caused by few friends constituted one cluster.

2. A second cluster comprised emotion-focused coping, problem-focused coping, and being female.

3. The Grant Attribution measures of locus of stability and locus of causality clustered with reason for loneliness attributed to the lack of girl/boyfriend. Given that this is a commonly endorsed reason for being lonely, students' attributions about their lonely situation were associated with their perceived reason for being lonely.

4. A fourth "logical" cluster was the grouping of age and year in school with homesickness and missing certain people who are far away.

All of the eight variables combined accounted for 12% of the variance among variable distance for the 25 variables entered into the cluster analysis. These clusters all had eigenvalues between .91 and .97.

A second, more revealing cluster analysis was performed on all of the observations in the sample. This analysis yielded five clusters that bear interesting relationships among 11 variables that were entered into the cluster analysis. The reader is referred to Table 4.29 for a summary table of the statistics for this cluster analysis. The analysis was done by the centroid method of clustering by distance among scores on all variables per observation.

All five groups identified in the cluster analysis are worthy of more discussion because of the distinguishing characteristics of their results. One such cluster comprised 12 students who had the highest mean score for loneliness, a score that was over 1 standard deviation above the mean for the total sample (UCLA measure) and had the highest Likert rating score as well. This cluster group was characterized as having (a) the most stable and internal scores on the attribution measures, (b) more stable attributions for negative situations, (c) the lowest self-esteem, and (d) the highest depression scores as well. These students had coping scores that were below the mean for the total sample, including the lowest coping score for problem-focused coping. There was little difference between the levels of emotion- and problem-focused coping used by these subjects.

Table 4.29: Cluster Analysis of Variables

Cluster	Cluster Variation	Variation Explained	Proportion Explained	Second Eigenvalue
1. UCLA ASQ-Neg. Self-Esteem Inventory Depression Adjective Checklist	5.0	2.42	.48	.91
2. Year in school Age Feeling homesick Missing people far away	4.0	1.88	.47	.97
3. Emotion-focused coping Problem-focused coping	3.0	1.49	.49	.92
4. Grown up in rural area Grown up in city Not liking school or having school-related problems	3.0	1.30	.43	.92
5. Number of siblings in family Grown up in small town Lack of sexual contact	3.0	1.26	.42	.97
6. Internality of attributions Stability of attributions Not having boyfriend/girlfriend	3.0	1.60	.53	.93
7. Grown up in average-sized town Don't know meaning of life	2.0	1.07	.53	.92
8. Feelings of insecurity Having many personal problems	2.0	1.02	.51	.97

A second cluster ( $n = 30$ ) was the next loneliest group, with a mean UCLA group score also beyond 1 standard deviation above the sample mean, but a Likert rating score just slightly above the sample mean. These subjects had a self-esteem mean score for their group that was below the mean score for the total sample, and therefore did not appear to be suffering particularly from low self-esteem. The cluster mean scores on attributions for their loneliness were in the stable and internal direction, like the first cluster. The mean scores for both emotion- and problem-focused coping were slightly above the mean values for the total sample.

A third cluster ( $n = 52$ ) of subjects was characterized by (a) having a group mean score on the UCLA measure for loneliness that was slightly higher than the total sample mean, (b) moderate self-esteem, (c) coping levels below the sample means, and (d) locus of stability and causality means that were in the direction of stable and internal attributions of loneliness. Like the first cluster discussed, this group had moderate levels of coping behavior, along with an internal and stable attribution approach to loneliness.

A fourth cluster group ( $n = 69$ ) was characterized by a mean UCLA Loneliness score well below the sample mean. This group had a high self-esteem score, well above the sample mean, and cluster means for attributions in the direction of instability and externality. This cluster had the highest emotion- and problem-focused coping scores of the five clusters.

The fifth cluster ( $n = 36$ ) was not a lonely cluster either. The mean UCLA score was 29.8. This group had the highest self-esteem score and the lowest depression score, but low coping scores, below the total sample mean scores. This group also had lows of stability and causality mean scores in the direction of unstable and external attributions.

The cluster analyses indicated that indeed there were different groups of subjects among the entire sample with respect to coping, loneliness, attribution, and affective states. (See Table 4.30.) Loneliness was seen to relate to attribution in that all of the lonely clusters (three) had mean attribution scores in the direction of stable and internal attributions. Mean scores on the Attributional Style Questionnaire also corresponded accordingly. Loneliness was highest among the cluster group characterized by the most internal and stable attributions for loneliness. The locus of stability dimension of attribution seemed to play a critical role in relation to loneliness, given the range of locus of stability mean scores across the clusters from the most lonely to the nonlonely clusters. These results regarding the relationships seen between attribution and loneliness corresponded to the results presented earlier in this chapter regarding the analyses of variance run on the total sample and the Lonely subsample, crossing loneliness with attributional cells. Lonely subjects were seen to have from low to moderate levels of self-esteem and depression. Lower degrees of or absence of loneliness seemed to be related to external and unstable attributions of loneliness.

Table 4.30: Cluster Analysis on Observations: Cluster Means ( $N = 199$ )

Cluster	Age	Ratio	UCLA	Scale <sup>a</sup>	Stability	Causality <sup>b</sup>	ASQ- Neg. <sup>c</sup>	Emotion- Focused Coping	Problem- Focused Coping	Self- Esteem <sup>d</sup>	Depres- sion
1. $\underline{n} = 69$	19.5	.66	34.4	1.3	31.3	30.1	4.0	39.0	16.5	19.7	6.4
2. $\underline{n} = 52$	19.5	.53	42.7	1.7	29.3	26.4	4.2	32.3	14.8	16.5	9.0
3. $\underline{n} = 18.9$	18.9	.47	29.8	.9	32.3	31.0	3.9	30.0	14.5	21.5	4.7
4. $\underline{n} = 30$	19.1	.66	52.7	3.7	23.4	24.5	4.3	33.2	15.6	11.1	13.3
5. $\underline{n} = 12$	18.6	.50	56.5	6.1	21.2	16.8	5.0	30.1	14.0	8.3	24.6

<sup>a</sup>The higher the score (possible range of 6-48), the more unstable the attributions of loneliness.

<sup>b</sup>The higher the score (possible range of 6-48), the more external the attributions of loneliness.

<sup>c</sup>Attributional Style Questionnaire--Negative Situations subscale. The higher the score (1-7), the greater the tendency toward stable, internal, and global attributions.

<sup>d</sup>Coopersmith Self-Esteem Inventory. The higher the score (possible range of 0-25), the higher the self-esteem.

Emotion-focused coping behavior varied widely among the cluster groups. (See Table 4.30.) Among lonely subjects (three clusters), it was seen that coping behavior for both emotion- and problem-focused coping increased with unstable and internal attributions, and decreased with stable and internal attributions. Among the two nonlonely clusters, one group was above the mean for coping, particularly with respect to emotion-focused coping, and the other group was below the mean, again particularly with respect to emotion-focused coping. One nonlonely cluster also had a problem-focused coping mean score that was above the mean scores for problem-focused coping for both the total sample and the Lonely subsample. These clusters did not differ particularly in terms of degree of loneliness, attribution style (unstable/external), or levels of self-esteem and depression. Implications of this last result are discussed in Chapter V.

### Discussion

Relationships were seen as predicted between stable attributions and degree of loneliness, as well as between internal attributions and degree of loneliness. Attribution style was not seen to bear a strong or even moderate relationship with coping behavior. The relationships that were seen were found to be in the reverse directions to what had been predicted. Thus, coping behavior was seen to relate only slightly to both attribution and degree of loneliness, posing further contemplation on the nature and prediction of coping behavior in response to loneliness. Lonely students were seen to be depressed, to have low



self-esteem, and to engage in less positively oriented coping behaviors than less lonely students. Correlations between affective states and loneliness indicated that there were most likely other affect states or components to the lonely experience for students as well. Absence of close friendship, homesickness, and romantic relationship problems were common reasons for loneliness among students.

In general, students were found to cope at moderate levels, and there were no strong differences between the amounts of emotion- and problem-focused coping. Coping behavior in response to loneliness was not seen to increase among lonely students as degree of loneliness increased. Nor was coping behavior seen to increase by type of coping, emotion- or problem-focused, depending on the presence of unstable/internal attributions or stable/internal attributions for loneliness, respectively. Rather, coping behavior appeared to increase slightly with both decreased loneliness and unstable/external attributions for loneliness.

Cluster analyses indicated that indeed there were different groups of subjects among the total sample with respect to coping, loneliness, attribution, and affective states. External and unstable attributions seemed related to lower degrees of or absence of loneliness. Coping behavior was seen to vary more widely than was evident with analyses of variance, especially emotion-focused coping. It was seen that, among lonely subjects, increased coping appeared related to unstable and internal attributions, whereas low coping appeared related to stable and internal attributions. Loneliness was seen to

relate to attribution in that the lonely clusters (three) had subjects maintaining internal and stable attributions for loneliness. Lonely subjects were seen to have from low to moderate levels of self-esteem and depression. Loneliness was worst among the cluster group characterized by the lowest mean scores for internality and stability. This cluster was also characterized by the lowest degree of self-esteem and the highest level of depression. The internal/external dimension of attribution (locus of causality) appeared to play a critical role in relation to loneliness, given that the cluster group with an externally oriented mean score on this attributional dimension was characterized by a loneliness mean score almost 1 standard deviation below the total sample mean (on the UCLA measure). These results corresponded to the findings of the analysis of variance performed on the total sample and the Lonely subsample with respect to loneliness across attributional cells.

T-tests and other descriptive analyses supported the correlations and cluster analyses, indicating that lonely students were likely to suffer from low self-esteem and depression and to maintain stable as well as internal attributions. Younger students were slightly more lonely than older, and many students indicated lack of friendships or absence of a romantic relationship as the precipitant. Coping levels were less for more lonely than less lonely students. Women engaged in slightly more coping than men, and emotion-focused coping tended to be favored over problem-focused coping.

An interesting finding was that there were very few lonely people characterized as having unstable and internal attributions for their loneliness as compared to other lonely students. It may be that, given an unpleasant situation such as loneliness, students felt that internal causes for loneliness were more likely to be resistant to change, and therefore the propensity for internal and stable versus internal and unstable combinations for attributions. This seems to be important, given that the attribution literature has suggested that the unstable/internal attributional style is more associated with a feeling of motivation, personal power and control, and attribution to the self for positive changes.

### Summary

This chapter presented the major hypotheses and their results, along with post hoc analyses run on the data. Of the main hypotheses presented, those supported were that loneliness increased along with stable attributions and increased most significantly with attributions that were both stable and internal in nature. The post hoc analyses provided for some interesting findings that lent further support to the impression that coping behavior tended to decrease as loneliness increased, particularly if the attributions for loneliness were stable and internal. Furthermore, post hoc comparisons and descriptive characteristics of the clusters identified in the cluster analyses revealed the tendency for emotion-focused coping to increase with external and stable attributions of loneliness. There was not much variation seen in degree of problem-focused coping with respect to

degree of loneliness or type of attributional style. Rather, the range seen in problem-focused coping occurred across attributional groups and degrees of loneliness.

Lonely students were found to engage in a moderate level of coping and reported using a variety of cognitive and behavioral strategies. More solitary thinking or activity strategies were endorsed at higher levels by lonely students than strategies involving social interaction or involvement. On the whole, students across both the total sample and the Lonely subsample reported from slight to moderate levels of passive measures of coping, such as using drugs, sexual involvement, or drinking as a way to escape the pain of loneliness. Rather, more benign or positive forms of coping were endorsed, with the exception of (a) going to a counselor for help or (b) seeking social skills or assertiveness classes, two strategies one may have thought would be appealing.

I-tests comparing lonely and nonlonely students and regression analyses on loneliness both indicated that low self-esteem and depression were predictors of loneliness. Coping behavior, interestingly enough, was not found to be strongly or even moderately predicted by any of the variables in the study.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### Summary of the Study

This dissertation looked at the relationships between attributions of loneliness and manners of coping with loneliness in university undergraduate students. Loneliness was entered into the research design as a third variable of interest, with attributions and coping behavior investigated in terms of degree of loneliness being experienced. The sample consisted of students who were both lonely and not lonely. Criteria were established to investigate hypotheses both among the total sample of students ( $N = 199$ ) and among a Lonely subsample ( $n = 49$ ). In general, the total student sample demonstrated a range of loneliness typical of student populations seen on other large university campuses in the United States. Scores of 40 or greater on the UCLA Revised Loneliness Scale are considered to be indicators of loneliness, with 40 representing moderate loneliness all the way to 80 (the highest score possible) representing severe loneliness. The sample mean score for the 199 subjects in this study on the UCLA measure was 39.9. As would be expected in a normal distribution, close to half of the students had scores of 40 or greater (89 students scored above the sample mean), and approximately 19% of the students (38) scored beyond 1 standard deviation above the mean. Thus,

approximately half of the sample was considered lonely with respect to the UCLA measure, with 19% of the sample regarded as very lonely.

Coping behavior was investigated according to the paradigm of Lazarus and Folkman (1983), in which coping was seen as either emotion-focused or problem-focused in orientation. Hypotheses predicting relationships between one form of coping or another depending on the attributions of stability and causality of loneliness were generally not supported. Coping behavior was not seen to be predicted in the directions hypothesized, nor was coping behavior strongly related to attributions of loneliness. Correlational data and analysis of variance suggested that instability of attributions and externality of attributions were found to have a moderate and significant relationship with emotion-focused coping, suggesting that individuals are more prone to self-comforting coping strategies when they are feeling that the problem of loneliness is changeable and temporary. This was seen to a further degree with a cluster analysis that identified three lonely groups of students. One lonely cluster had significantly higher emotion-focused and problem-focused coping scores than an even lonelier group. An important distinguishing feature of this higher-than-average coping cluster was the greater tendency toward unstable and external attributions for loneliness than seen in the lonelier cluster. A third slightly lonely cluster with a tendency toward stable and internal attributions had significantly lower coping scores for both emotion-focused and problem-focused coping than the moderately lonely cluster. This seems to suggest that coping

was high for moderately lonely students with external and unstable attributions for their loneliness, whereas students who were very lonely or slightly lonely and showed greater tendencies toward stable and internal attributions for their loneliness engaged in significantly less coping behavior.

Lonely students were seen to suffer from depression and low self-esteem. However, other effects not identified in this study were also assumed to contribute to loneliness. Lonely students were more likely to be female than male. Reasons stated for being lonely were the absence of an intimate/romantic partner, homesickness or missing people who were far away, and feeling a lack of good friendships.

This study raised the question that perhaps those students who are most lonely are more apt to see their situation in negativistic terms and feel less motivated to seek change. Given that attempts to change a situation are one important aspect of coping behavior, and yet the affective components of loneliness that accompany negative cognitions work against self-promoting behavior, redefining the problem as a way to motivate coping is seen to be extremely important in a student population.

The findings of this study can only be considered within the scope of the parameters of the population studied. Thus, external validity is limited to university students studying within large university settings. There were not significant differences found in attribution, coping, or loneliness for students depending on year in school or living environment within the university setting. Nor were

there significant differences found pertaining to previous history of family background or environment. Moderate alpha coefficients for some instruments used in the study may have placed some limitations on the strength of the analyses, thus raising some concern regarding internal validity. However, the findings as such are of interest and suggest areas to pursue in further research on university populations with respect to coping with loneliness.

### Conclusions

#### Differences in Coping According to Attributional Styles

Students with stable attributions were hypothesized to use more emotion- than problem-focused coping based on the assumption that they would feel more pessimistic about changing their situation.

1. Students with stable attributions were not found to have more emotion-focused coping than students with unstable attributions. Rather, the reverse relationship was seen. Students with unstable attributions had higher emotion-focused coping scores.

2. Students with stable attributions were also hypothesized to use less problem-focused coping than students with unstable attributions. This was not seen, according to analyses of variance and correlation. However, one cluster of students, characterized as students with both stable and internal attributions, was found to have a slight decrease in problem-focused coping compared to the other cluster. The difference, however, was very slight and not considered worthy of examination for significance.



3. Students with stable and internal attributions were hypothesized to have the highest level of emotion-focused coping. Rather, the tendency was for this group to have lower coping scores in general than other attribution groups. Thus, students who were assumed to have the most negative view of their loneliness were those who appeared to engage in the lowest degree of coping and did not engage in more emotion-focused coping than other students.

4. On the other hand, students who had unstable and internal attributions for their loneliness were hypothesized to have the greatest degree of problem-focused coping, since it was assumed that these students would feel most control over their situation and most optimism for change. However, as mentioned with reference to Hypothesis 2, students did not differ very much with regard to problem-focused coping in relation to attribution. Rather, problem-focused coping was endorsed at a moderate mean level for students representing all of the attribution groups.

#### Differences Between Emotion-Focused and Problem-Focused Coping According to Attributional Group

5. Students with stable attributions for their loneliness were hypothesized to use more emotion-focused than problem-focused coping than students with unstable attributions, based on the assumption that these students would be in more need of palliative measures of coping and would feel less motivated to pursue change. Analysis of variance on difference scores failed to find significant differences across groups. In fact, there was really no difference found between

emotion-focused and problem-focused coping between students of stable and unstable attributional styles. Even within attributional groups, it was seen that emotion- and problem-focused coping seemed to go hand in hand rather than differing in degree within attributional groups.

6. Students who had unstable and internal attributions for loneliness were hypothesized to use more problem- than emotion-focused coping, based on the belief that the majority of coping effort would go into problem-solving and taking-action activities. However, as stated previously, problem-focused coping did not exceed emotion-focused coping for any attributional group as measured by analysis of variance or cluster analysis. Cluster analysis showed that all five clusters used more emotion-focused than problem-focused coping, with only one group showing much of a sizable difference. A cluster characterized by unstable and external attributions had a 5.6 point differential favoring emotion-focused coping. Again, this suggests that the least at-risk group for loneliness was engaging in the most coping. This also points to the slightly greater use of emotion-focused over problem-focused coping.

#### Attribution and Loneliness

7. Students who had stable attributions regarding their loneliness were hypothesized to have greater degrees of loneliness than students with unstable attributions. This was based on the notion that a low belief in ability to affect one's loneliness would lead to increases in the feeling of loneliness. A moderate relationship was

found between loneliness and stable attributions, in the direction of increased loneliness for students with stable attributions. Multiple linear regression analysis suggested that locus of stability in the "stable" direction is a predictor of loneliness to a moderate degree.

8. It was further hypothesized that students who had both stable attributions of loneliness and attributions of internality for cause of loneliness would have the highest degree of loneliness. This was based on the assumption that loneliness would be worse for those feeling that they have personal and relatively enduring characteristics that lead to loneliness. There were significant differences found among attribution groups for degree of loneliness, with this group having a significantly higher loneliness mean score (on the UCLA measure). This was found by way of analysis of variance and cluster analysis. However, the cluster analysis also identified a lonely group (although not the loneliest) that had internal and unstable attributions for loneliness. Thus, the cluster analysis raises the possibility that it is more likely that it is only among the loneliest of people that attributions will often be both stable and internal for loneliness.

9. It was hypothesized that as students became lonelier, they would use more emotion-focused than problem-focused coping strategies to respond to their level of distress. What was seen instead was little relationship between loneliness and emotion-focused coping, both via Pearson correlations and cluster analysis. The cluster analysis identified a very lonely group that used a below-average

level of emotion-focused coping and a moderately lonely group that used a level of emotion-focused coping equal to the total sample mean. Emotion-focused coping was also seen to play a small role as a predictor in loneliness, according to multiple linear regression.

#### Further Notions From Cluster Analyses and Other Post Hoc Analyses

Cluster analyses indicated that indeed there were different groups of subjects among the total sample with respect to coping, loneliness, attribution, and affective states. External and unstable attributions seemed related to lower degrees of or absence of loneliness. Coping behavior was seen to vary more widely than was evident with analyses of variance, especially emotion-focused coping. It was seen that among lonely subjects, increased coping appeared related to unstable and internal attributions, whereas low coping appeared related to stable and internal attributions. Loneliness was seen to relate to attribution in that the lonely clusters (three) had subjects maintaining internal attributions for loneliness. Lonely subjects were seen to have from low to moderate levels of self-esteem and depression. Loneliness was worst among the cluster group characterized by the lowest mean scores for internality and stability. This cluster was also characterized by the lowest degree of self-esteem and the highest level of depression. The internal/external dimension of attribution (locus of causality) appears to play a critical role in relation to loneliness, given that the cluster group with an externally oriented mean score on this attributional dimension was

characterized by a loneliness mean score almost 1 standard deviation below the total sample mean (on the UCLA measure). These results correspond to the findings of the analysis of variance performed on the total sample and the Lonely subsample with respect to loneliness across attributional cells.

I-tests and other descriptive analyses identified lonely students as more likely to suffer from low self-esteem and depression and to maintain stable as well as internal attributions. Younger students were slightly more lonely than older, and many students indicated lack of friendships or absence of a romantic relationship as the precipitant. Coping levels were less for more lonely versus less lonely students. Women engaged in slightly more coping than men, and emotion-focused coping tended to be favored over problem-focused coping.

### Discussion

The hypotheses as to how attribution of loneliness would predict coping behavior were not supported by the results of this study. Actually, there was not any strong relationship seen between attribution and coping. Those relationships seen were in directions that were opposite from what was expected. This occurred in two instances. One was the finding that locus of stability in the direction of unstable attributions for loneliness was related to more emotion-focused coping. People who see their situation of loneliness as changeable and see the causes of their loneliness as amenable to intervention may feel hopeful about their situation and cope by doing more palliative

things for themselves. Contrary to the expectation that, under duress, coping would resort to a more emotionally oriented form of trying to make oneself feel good, emotion-focused coping decreased slightly. The reader should be reminded of the fact that small differences are being discussed here. Nonetheless, that coping behavior which is emotion-focused was not found to be related to stable thoughts about loneliness is an intriguing finding. Considering the fact that people who see problems as less open to change usually feel worse and might logically be expected to cope with more palliative measures than others, this finding raises questions about influences on coping behavior. It is possible that this type of individual actually feels more depressed about his/her situation and is therefore less apt to find ways of obtaining pleasure or attending to his/her needs. Depression was found to be correlated with stable attributions, and the effect of depression on behavior may explain in part the lack of a positive relationship between emotion-focused coping and stability. Self-esteem was also found to be correlated significantly with stability. Low self-esteem may cause lonely people to feel unworthy of attempting to feel better when they are feeling dejected or alone. Perhaps people feel that their loneliness is their fault and feel they must endure the discomfort in a self-punitive manner.

An interesting finding was that there were very few lonely people characterized as having unstable and internal attributions for their loneliness as compared to other lonely students. It may be that given an unpleasant situation such as loneliness, students feel that

internal causes for loneliness are more likely to be resistant to change, and therefore the propensity for internal and stable versus internal and unstable combinations for attributions. This seems to be important, given that the attribution literature has suggested that the unstable/internal attributional style is more associated with a feeling of motivation, personal power and control, and attribution to the self for positive changes. Students may feel frightened or unduly concerned when they see in themselves qualities that they believe are implicated in their loneliness condition, and may be constricted in their thinking as to how they might work with their observation or self-awareness to improve upon their situation. A student, for example, who feels ostracized by fellow students due to inferior academic performance may isolate him/herself and become less secure both socially and academically. If this particular student could cope with the situation by asking a student for help (i.e., with material from a course) or seeking academic counseling, the student could counteract feelings of loneliness via these contacts and could develop increased confidence. One serious implication of diminished coping in the very students needing to engage in higher coping levels is that students may forego feedback or clarification of themselves that they would otherwise obtain through talking with friends, meeting with a counselor, or taking initiative with a new activity.

In comparison, students with unstable and external attributions for their loneliness coped slightly more than other students with respect to both emotion- and problem-focused coping. This, too, was

contrary to the expectation that students with internal and unstable attributions would be the "highest" copers with respect to problem-oriented coping strategies. In fact, students who view their state of loneliness as caused by circumstances external to their immediate control and see these circumstances as temporary are possibly less threatened by their condition of loneliness and apt to feel more motivated to do something about their concerns. They also appear more motivated to engage in self-comforting behaviors. In looking at the most widely used emotion-focused coping strategies, it was seen that students seem to use ego-enhancing methods more than escapist methods of self-comfort. Thus, students who have this more optimistic view of loneliness may see loneliness as manageable and therefore are more capable of both finding positive ways to feel secure as well as engaging in "taking-action" strategies. Students who may be regarded as the least at-risk for their condition of loneliness have a slight tendency to be the better copers. Students who experience the least loneliness (among lonely students) are also the better copers. Attribution does seem to play a role in this finding.

Weiner's (1974) theory on attributions in achievement situations can be helpful in interpreting these results. His theory postulates that people with internal and stable attributions for perceived failures will experience dejection and problems with motivation. Therefore, in considering the results of reduced emotion-focused coping among people with stable and internal attributions for their loneliness, it appears plausible that the absence of emotion-focused



coping can be regarded as due to a lack of motivation. Coping behavior, rather than being considered a self-comforting or actualizing behavior that is reactive in nature, may be contingent on the individual's belief that there is some hope for change before self-comforting or problem-solving measures can be undertaken.

Weiner's theory can also apply to the lack of results seen with respect to the expectation of finding more problem-focused coping among those students who had unstable and internal attributions for their loneliness. The theory postulates that attributing a problem to external causes results in assigning a problem to either a task difficulty or unfortunate luck. If a student is able to perceive the causes of loneliness as either resulting from an unlucky situation (such as being placed with an unfriendly roommate) or sees the task to be mastered (meeting people) as a concrete task that in time will be mastered, this student may feel more motivated to take care of him/herself and engage in coping behavior. The student who can find an external attribution may be acting in a self-preservative manner. S/he may be more likely to perceive external circumstances as temporary or malleable, given the multitude of explanations one can often identify and the emotional distance one can create for oneself in the avoidance of internalizing the causes of loneliness.

In research conducted by Weiner, Russell, and Lerman (1979) on affective responses to failure situations in which subjects assigned external causes for explaining the failures, it was found that these causal explanations were accompanied by particular affect states. If

luck was the external cause identified, subjects experienced surprise as an affect. If other people were blamed as the external cause for failure, then aggression was the affect experienced by subjects. Thus, interpreting the cause of one's loneliness to external sources may increase the likelihood of a situation being perceived as unstable, in part because the emotions elicited are more self-actualizing emotions, allowing for an emotion-cognition process that is constructive versus passive.

It is reasonable to raise the speculation (based on the above discussion) that perhaps the relationships seen among attribution, loneliness, and coping can all be explained simply by relationships between loneliness and coping. One might wonder if loneliness is associated with less coping behavior as loneliness increases, since an individual may become more unhappy and less motivated in general to respond to problems. This is an alternative way of approaching the relationship among these variables.

The cluster analysis on observations indicated that coping behavior did not necessarily increase or decrease with degree of loneliness. Rather, it was seen that a cluster of subjects who had a mean score on the UCLA scale that was below the total sample mean (regarded as a "not lonely" mean score) had considerably higher emotion-focused coping mean scores than the other clusters or the total sample.

This indicates that there were nonlonely subjects in this cluster group who reported a high level of emotion-focused coping when they

had previously been lonely. (These subjects were most likely reporting retrospectively, given that they were not experiencing levels of loneliness at the time of data collection.) It is of interest that the cluster group characterized by the lowest mean score on the Revised UCLA Scale also reported the highest emotion-focused coping level when lonely in the past. Is there some association between their current level of low degree of loneliness and their propensity to cope in a higher manner than others when experiencing the distress of loneliness? This leads to the speculation that perhaps people who are less lonely and indicate a high level of emotion-focused coping when lonely might actually be people who engage in a certain level of coping behavior on an ongoing basis. Their retrospective reports of coping behavior may actually reflect a certain capacity to cope that is an integrated part of their personality.

One might believe that these subjects inflated their self-reports of coping behavior, given that they had been lonely and therefore may not have been reporting accurately. However, the reader is reminded that there was another cluster group that had an even lower mean score for degree of loneliness (on the UCLA measure) that reported a very low mean score for emotion-focused coping, suggesting that indeed these groups differed somehow with respect to coping behavior. The only distinguishing feature between these two clusters that seems worthy of comment is that the high emotion-focused coping cluster was 66% female compared to a 47% proportion of females in the low emotion-focused coping cluster. In terms of depression and self-esteem, both

clusters measured high on self-esteem and low on depression. Given that the correlation between emotion-focused coping to gender was higher for females than males, the presence of females in the aforementioned cluster may explain in part the tendency toward self-comforting behaviors employed to cope with loneliness.

Thus, coping does seem related to attribution and to loneliness, with attribution playing an important role. It may be that the "internal" factor is the more important with regard to relationships with coping, in that correlations of attribution were higher for internality with loneliness.

It may be that lonely students who suffer from depression and/or low self-esteem are those who have the more negative attributional stance and the lower coping level. Students who are lonely who have less stability or internality combined as an attributional approach may also suffer less from depression and/or self-esteem (as suggested by correlations in Table 4.5) and therefore are more apt to have energy for effective coping.

In conceptualizing the three main variables of interest in this study, attribution, loneliness, and coping, there were several ways to see their interrelationships. One was to conceptualize attribution as affecting degree of loneliness, such that coping ability or level is associated to attribution via loneliness. Perhaps a student has a negative outlook on many situation in life, not just loneliness, and therefore is more prone to feel lonely. This may then lead to coping behavior that is correlated with both the degree of loneliness being

experienced as well as with the particular attributional style that the student characteristically applies in interpersonal situations. The scores on the UCLA Loneliness Scale correlated moderately among both the total sample and the Lonely subsample with the Seligman Attributional Style Questionnaire subscale for negative events ( $N = 199$ ,  $r = .38$ ,  $p = .001$  and  $n = 39$ ,  $r = .29$ ,  $p < .01$ ). These correlations suggested that indeed there may be a tendency for a particular response set to difficulties to make one more vulnerable to emotional distress. This level of distress may then serve to affect one's motivation to cope. The correlations of the negative subscale of the Attributional Style Questionnaire were minimal with emotion-focused and problem-focused coping for both the total sample and the Lonely subsample, thus suggesting as well that coping might be a result of the interaction between loneliness and attribution. Lonelier students tended to cope slightly less, with attribution playing an important role in this relationship, given the role attribution seems to play in the experience of being lonely.

Another way to view these variables is that loneliness affected both attribution and coping, such that it was initially one's state of loneliness (or trait) that affected one's outlook and one's energy for coping. Thus, there might be a spurious relationship between attribution and coping. A third possibility was that coping actually preceded both, such that one's coping ability determined to what degree a student became lonely, which in turn affected his/her outlook on loneliness.

Considering the first two, the conceptualization of attribution influencing one's vulnerability to loneliness and influencing coping seems most supported by the data. After all, attribution was a predictor of loneliness and was associated moderately with emotion-focused coping. General attributional approaches to negative situations seemed to be more stable and internal for subjects who also demonstrated a greater tendency for loneliness, also supporting the notion that a particular attributional outlook on life can lead to vulnerability to loneliness.

Therefore, it seems useful to raise the possibility of looking at loneliness as an outcome variable in this study. Considering the way in which coping behavior seemed to bear only a minor relationship with loneliness in terms of straightforward correlations, and that attributional style was seen to relate to both coping response and loneliness, the three variables can be conceptualized in the following manner. Perhaps attributional style is an important predisposing factor to loneliness with (a) loneliness in general associated with increasingly stable attributions and (b) unstable/internal attributions associated with the greatest degree of loneliness. If one's general framework toward the explanation of emotional and social experiences is to interpret them as difficult to affect, especially as attributions become more internal in a causal direction, then coping may play an additional role in contributing to loneliness. Attribution may influence one's motivation to engage in coping. It is possible that the correlations seen between loneliness and coping (see

Tables 4.3 and 4.4) were low because attribution played an intervening role, and therefore the correlations were indicative of the low to moderate levels of coping among both lonely and nonlonely people that would have taken on different patterns with attribution regarded as a covariate. When attribution is taken into account, it appears that individuals with external and unstable attributions for their loneliness had the higher levels of coping among the range seen (in reference to emotion-focused coping) compared to other groups of people (as evidenced by the cluster analyses and the post hoc comparisons discussed in the Post Hoc Analyses section in Chapter IV). People with the stable and internal attributions were found to have the lower levels of emotion-focused coping. (The reader is reminded of the fact that there were virtually no differences identified for problem-focused coping according to attributional style.)

Thus, attribution along with one's premorbid coping ability (with the consideration that attribution may affect one's motivation to cope) may work in combination as prerequisites for experiencing loneliness with respect to types of loneliness and intensity of loneliness. There are more questions raised by the data that are answered by the conceptualization of loneliness as the result of particular attributional patterns and coping ability. One might ask how it is that an attributional approach can create or lead to susceptibility to loneliness. It is plausible that if an individual has the propensity to interpret problematic social interactions or separateness from others as the result of internal traits or characteristics,

this may engender a feeling of despondency, hopelessness, or even denial of dissatisfaction socially or emotionally. The result may be (a) a sense of despair that internal characteristics are too difficult to change, (b) a belief that change may create unpleasant feelings of self-disavowal, or (c) a fear that change may leave the individual open to the expectation that one's emotional life should improve.

Thus, individuals who are prone to internalization may have resultant concomitant attributions of stability to protect them from the risk of change, the unpleasantness of deliberately trying to change personal traits, or the expectations that they should feel more connected and involved with others. If coping skills are limited, or motivation is limited due to one's outlook or attitude, then this will only compound the problem, leading the individual to feel in less conflict by resigning oneself to his/her loneliness.

What is difficult to assess from this study is the degree to which coping behavior can operate independently of the situation coping occurs in or the attributional stance one has toward one's situation. In other words, how can coping behavior be enhanced so that it becomes a behavior less rooted in affective or cognitive conditions of one's situation and more determined by one's acquired learning of healthy coping mechanisms? One interesting observation about coping with loneliness is that the more direct coping mechanisms that had to do with actually discussing one's loneliness as a means of dealing with it were relatively unpopular mechanisms. One is reminded of Gordon's (1976) notion that loneliness is seen as failure and that coming to



terms with loneliness is difficult to do by directly acknowledging loneliness. It makes sense that coping may in large part be learned by simply repeating what we see others do around us. With loneliness, this has serious implications since people often do not talk about feeling lonely and therefore may not impart knowledge to others about effective ways of understanding and dealing with the experience. Few coping mechanisms speak to an acceptance of one's loneliness, but the one that addresses this on the Coping Inventory was widely endorsed by students, "Think about possible benefits of being lonely, such as thinking that you are learning to be more self-reliant by growing from the experience." Working with people to more directly delve into their loneliness and learn from it seems to offer potential that is missed by people who engage in minimization or denial strategies. It is possible that there was not as great a range seen in coping behavior as expected because certain ways of coping are not easily identifiable even to the subjects themselves and that those strategies provided speak to the more common range of strategies employed by most people when they experience loneliness. These commonalities are minimization, denial, distraction, involvement in studying, and looking at ways to overcome loneliness. Perhaps the more differentiating strategies are difficult to identify without having subjects actually study themselves during episodes of loneliness, so that the greater individual variations in coping can be more effectively observed and measured.

One concern regarding coping with loneliness that this study could not adequately address is the difference, if any, between one's coping behavior in general and one's coping with a specific situation such as loneliness. Lazarus and Folkman (1984) raised the possibility that coping may be primarily situation-specific. Therefore, it is of interest to examine the possibility that perhaps people do not regard loneliness as a situation that offers many alternatives for coping. In the lonely cluster group having the highest coping levels for the different lonely clusters identified, there were still approximately one-third of these 39 subjects who were coping at about half the coping capacity potential tapped by the Coping Inventory. Given Pearlin and Schooler's (1978) contention that coping involves (a) managing stress, (b) making changes in the trauma-inflicting situation, and (c) redefining the identified crisis or problem, the unhappiness or resignation one may have toward loneliness may unify the very adaptive and goal-oriented purposes of coping behavior.

It cannot be assumed that people know how to cope with a given problem just because they are in distress, nor can it be assumed that coping will always result in constructive change or adaptation in people. Particularly regarding the topic of loneliness, this is a subject generally not widely discussed or presented as a life difficulty that people should be prepared to encounter. Perhaps university campuses would profit by presenting loneliness in a more normative manner as a life issue that occurs with frequency and prevalence, and as Moustakas (1961) contended, offers great

opportunity for growth and enrichment. Coping may best be approached as a form of behavior (cognitive and behavioral) that is learned via teaching, modeling, practicing, and refinement versus being seen as naturally involving ego strength or skill.

There is an implication that attribution can strongly affect or cause emotions and behavioral responses to such emotions. One important question raised by this study is how coping behavior can be taught or enhanced in people such that it is more independent of precursors such as premorbid personality traits or cognitive styles.

Coping behavior appeared to occur in fairly equal levels between emotion- and problem-focused coping. Rather than finding significant differences among individuals for their preference of problem- or emotion-focused coping, apparently students had the tendency to have a general level of coping ability or coping performance. The more coping mechanisms a person is aware of or familiar with, the more s/he is likely to use all of those at his/her disposal. According to Lazarus and Folkman (1984), use of both types of coping is optimal, and predictions in this study that people within different attribution "cells" would have a predominant coping style did not seem evident. Thus, the more an individual learns about coping mechanisms that are problem solving or palliative in nature, the more enhanced his/her coping style is apt to become.

#### Implications for Future Research

It is important to look at ways in which the conceptualizations of coping, attribution, and loneliness in this study may be expanded

for further research that can succeed in enlightening people as to the critical aspects of coping behavior.

It is possible that a more fruitful way of looking at coping is to view coping as a process that changes in reaction to a difficult problem, such that measuring one's coping strategies at a static point in time or asking for a summary of one's coping resources does not provide an accurate picture of how an individual is dealing with a life problem. For example, in this study it is possible that it was difficult to identify differences between emotion- and problem-focused coping because these were measured at the same time, and therefore any differences that may have occurred in amount of or preference of coping depended on what point in the history of a problem the particular coping occurred. It is also possible that choices in both types of coping vary as reaction time to a problem increases, or according to the success or failure of initial coping strategies. Perhaps some people are initially emotion-focused copers, regardless of their appraisal of a problem, and others are problem-focused copers. It could be speculated that the appraisals they maintain about their problem affect their effectiveness of carrying out coping strategies, and the degree of success or failure leads to further coping choices. Perhaps an individual who maintains stable attributions of loneliness and is an initial problem-focused copers may become frustrated if the difficulties with loneliness do not become ameliorated quickly, hence resorting to the use of emotion-focused coping responses to deal with the continued problem. An individual may have a definite pattern to

his/her coping or may engage initially in problem-focused coping, but not long enough to see results, and then engage in more emotion-focused coping as s/he becomes more desperate to feel comfortable.

Coping may be viewed differently, as a result of the examination of the cluster analysis on observations and the absence of variability in coping levels seen among lonely individuals. Coping appears from the results of this study to possibly comprise a set of cognitions and behaviors that are practiced in more subtle, ongoing ways for individuals that protect such individuals from experiencing more serious crises (such as higher degrees of loneliness). Thus, among the lonely subsets within this study, coping behavior was engaged in at moderate levels and was possibly affected by feelings of low self-esteem and depression that would deplete an individual and reduce effective self-enhancing behavior. Contrary to expectation, more severe loneliness did not motivate coping. One group of individuals who had a fairly low mean score for loneliness on both the UCLA scale and the Likert self-rating scale was characterized by a high mean score for emotion-focused coping. (This was not the case for problem-focused coping.) Perhaps these individuals never experience a high degree of loneliness because they have learned a set of strategies for dealing with interpersonal problems on a daily basis that protects them from extreme loneliness. Or if this group is subject to more pronounced degrees of loneliness at given times, they may have a familiarity with a greater range of coping strategies that protect them and reduce the length of time they are lonely or the degree of discomfort they feel. One might

hypothesize for further research that coping is an ongoing process rather than just a reactive form of behavior that rises and ebbs in the face of different issues or problems, such that an individual's "pre-morbid" coping level takes on a preventive role in helping prepare for and withstand duress. For those with low coping abilities, when problems are of the magnitude experienced because of previously low ongoing levels of adequate responsiveness on a continual day-to-day basis, coping may not increase.

Research that would have people actually identifying their process of coping, such as the study done by Lazarus and Folkman (1985), may provide more specific information regarding coping with the problem of loneliness. It is possible that the amount of coping an individual engages in is difficult to measure without recording changes that occur in what these authors have termed the "coping process." Thus, not only may an individual have a certain limited reservoir of coping strategies, but may have many at first in confronting a problem and then taper off to staying with the few strategies that seem to be most effective. It is also possible that coping is reflective more of a combination of personal traits and coping behavior as well as of the particular problem for the individual, thus making a relationship between attribution and coping more difficult to identify. For example, greater degrees of loneliness for one person may be both uncomfortable, but also challenging, and thus we might see problem-oriented coping mechanisms on the part of that individual, such as looking for new friends or taking a class in assertiveness. Another person might

experience a strong degree of loneliness as uncomfortable and very unsettling or contrary to his/her self-image, and become anxious, needing to drink or sleep frequently to escape from the dilemma. In both cases, these individuals may have stable attributions of loneliness, the first individual saying to him/herself, "This loneliness is here to stay unless I do something about it!" and the second individual may say, "This problem is getting the best of me. I'm not sure how it came about or what to do, or how it will go away. I just want to be free of feeling it for awhile." Coping may proceed from a more automatic response out of habit to behavior that is more intentional once a problem has provoked more conscious thought on the difficulties.

It would be of value to learn more about the nature of emotional threat that students attribute to loneliness. According to Folkman and Lazarus (1983), every stressful encounter or situation can be perceived as beneficial, benign, or threatening. Appraisals that are of a threatening nature are then associated with different coping mechanisms than appraisals of a situation that are benign or positive. Thus, if a student sees loneliness as an opportunity to master a situation and reacts with feelings of challenge to the situation, then that individual may demonstrate a preference for problem-focused coping. A student who sees loneliness as threatening may be more likely to respond by using more emotion-focused coping mechanisms. Thus, a further refinement of the study could involve the separation into subsamples of students who have "challenge" responses, "benign"

responses, or "threat" responses to loneliness, to see whether initial appraisals are more predictive of coping in expected directions and whether particular coping strategies appear more dominant than others. Folkman and Lazarus's (1983) research on students coping throughout the process of a midterm examination provided evidence that attribution, coping, and emotion are intricately involved with one another and that differences do emerge in coping and emotional response, depending on the initial appraisals made about the stressful situation.

One other aspect of attribution that would be of benefit to explore in further research is the degree to which internal attributions of causality regarding loneliness are associated with skill deficit (ability) versus lack of effort. Weiner and his associates (1979) viewed skill and effort as the two important aspects of internal attributions, with skill deficits being perceived as more immutable to people and effort deficits feeling more malleable to people. It is conceivable that skill attributions of causality of loneliness (such as not feeling like a good conversationalist) leave students feeling more distressed than lack-of-effort attributions that may leave students believing that they simply had not tried hard enough (i.e., to be social or outgoing). It would be of interest to explore the degree to which different internal attributions create different emotional responses that in turn affect coping behavior or degree of loneliness.



Improvements in the design over this past study would include the following:

1. Having people record their own account of their lonely experience.
2. Having a measure of observation of people who are experiencing loneliness to provide for other than subjective data (i.e., in-depth interviews or peer ratings on loneliness).
3. Identifying a baseline coping level for subjects that could then be compared with an ongoing recording of coping measures used.
4. Grouping subjects according to type of loneliness such that relationships among attribution, loneliness, and coping could be studied within the context of a particular loneliness paradigm.
5. Attempting to differentiate people experiencing more of a "state" loneliness versus "trait" loneliness, for example, by obtaining affective measures that identify chronically depressed from reactive depressed people as a way to separate different forms of loneliness.
6. Maintaining regular personal interview contact with subjects in the study in order to capture in a more descriptive manner the ongoing qualitative aspects of their experience of loneliness.

Specific methodological changes:

7. Improving reliability on instruments whose reliability coefficients run in the moderate range--either by selecting some different instruments or conducting item analyses in order to refine several measures.

8. Obtaining some subjects from a clinically lonely sample in order to acquire a subsample experiencing intense degrees of loneliness.

9. Improving upon attribution measures used in order to increase both the number of items in the scales and including more choices of items in terms of content (so as to improve content validity in relation to loneliness).

The further study of attribution of loneliness, degree of loneliness, and coping with loneliness is considered valuable because of the commonality of loneliness among people and because of the importance in understanding adaptive behavior. Lynch's (1976) seminal work on the effect of loneliness on people in later life is indicative of the social importance loneliness plays in society, in that people are truly at risk physically and emotionally for loneliness that becomes chronic and isolating. Polanski's (1979) notion of situational versus self-imposed loneliness also speaks to the role people play in their loneliness and the importance of gaining more insight into the dynamics that create emotional distress from loneliness.

Results of this study compared in some interesting ways to results reported by Revenson's (1981) study discussed in Chapter II. The reader is reminded of Revenson's interest in looking at attribution of loneliness and coping behavior in an adult population (also students) irrespective of current state of loneliness. As found in Revenson's study, type of coping seemed less indicative of someone's coping style than amount of coping. However, in other areas of

findings, this study differed from Revenson's work. This study added three important features to make this study more comprehensive. A coping instrument was used that was specifically designed for coping with loneliness, as compared to use of a general coping measure. Second, the investigation of attribution, loneliness, and coping behavior was explored among all attribution groups instead of just among two attribution cells, as done in the Revenson study. Third, the investigation of the variables of interest was done both among the total sample, as well as among a Lonely subsample, so that relationships within a lonely group of people could be further understood or assessed. With these added dimensions to the work, Revenson's finding that internal attributions for the causality of loneliness prompt more coping behavior was reversed. In fact, internality of attribution was associated with both increased degrees of loneliness and decreased coping behavior. The following findings were also departures from the previous study. Locus of stability was also seen to relate to loneliness, and in the direction of less-stable attributions prompting a slight increase in coping behavior. Low self-esteem and depression were seen to be major affective components of the lonely experience reported for some of the lonely students. Attributional style of both stable and internal attributions was associated with the highest degree of loneliness and the lowest level of coping.

Thus, in helping students understand the etiology of loneliness, choices in reacting to and managing loneliness, and learn from lonely experiences, it appears necessary to help them see personal responsibility in a less-threatening and more growth-promoting manner.

One final question in research on coping with loneliness is the extent to which coping affects overall adjustment. It can be assumed that there are reciprocal influences in the relationships between the variables looked at in this study, such that students who cope more effectively with loneliness may then either experience less degree of loneliness subsequently or may find that they navigate better through subsequent episodes of loneliness. One may wonder to what extent coping behavior may have already influenced the degree of loneliness that some students were reporting, given that there was some variation in the length of time students reported experiencing loneliness.

It is possible that initial coping ability may actually influence one's cognitive perceptions of his/her loneliness, thus either increasing or decreasing one's experienced degree of loneliness. Thus, the extent to which a student has the ability to creatively respond initially to loneliness may make the loneliness experience feel either controllable or not controllable, temporary or immutable, or due to internal versus external circumstances. A student whose initial coping efforts are not very successful may begin to believe that the causes of the loneliness are due to personal ineptness, which could be a faulty but convincing cognition. This student may then resort to less-effective coping and have a continued experience of loneliness. Thus, the interrelationships between attribution, loneliness, and coping are complex and need to be pursued further in research.

## APPENDICES

**APPENDIX A**

**INSTRUCTIONAL LETTER AND CONSENT INFORMATION**

Loneliness Study

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Code Number

Dear Student:

This introduction letter and information sheet contain important information that is necessary to read before you continue to look through the forms in this folder or choose to fill them out. I want to tell you about the study and about your rights as a research participant.

I am interested in learning about the experience of loneliness in college students, from the standpoint of how students explain loneliness to themselves, and how they cope with loneliness. I want to see if there is a relationship between the thoughts that students have about loneliness and how they choose to deal with their loneliness. This can lead to important ways of knowing how to better help students when they feel lonely, and can indicate if there are certain ways of thinking about loneliness that lead to more effective coping styles.

To participate in this study, the only requirement is that you are an undergraduate college student. It does not matter whether or not you feel lonely at this time. As you fill out the questionnaires, you can try to think back to a time when you have felt lonely or you can imagine what you think you would do if you were to feel lonely (for the questionnaires that ask about attitudes towards loneliness and coping).

Included in this folder is a general information sheet asking about background and living information, some questionnaires about thinking style and attitudes toward loneliness, a list of coping responses, a self-esteem inventory, a depression inventory, a loneliness scale, and a form with some specific questions about loneliness. In filling out these forms, please remember that there are no right or wrong answers. Also, it is not necessary to spend too much time on any one item or question. A time period of forty-five minutes will be needed to complete all of the items. The forms can be filled in during one sitting or in several sittings. Some students find that choosing a time of day that is relaxing for them enables them to concentrate on questionnaires and move through them with greater ease.

Before proceeding with looking at the materials, the

following information provides you with a list of your rights regarding participating in the research. As I stated in the information meeting, you are under no obligation to participate in this study. Please read the following items carefully.

- (1) You have the right to additional information about this study after your participation has been completed.
- (2) You are free to discontinue your participation in the study at any time. Should you decide after you have sent materials to me that you would like to have your materials withdrawn, you can call me and give me the number indicated in the upper right hand corner of this letter, as this is the number that appears on all your forms. There is no need to identify yourself by name should you need to contact me to have your forms removed from the study and discarded.
- (3) It is possible that some of the items or statements in the questionnaires about moods and feelings could be upsetting for you. You may find that in responding to certain items, you experience unpleasant feelings. Please take this into consideration in thinking about participation in the study.
- (4) Should participating in the study lead to some troubling feelings, you have the right to contact me for suggestions for assistance. Included with this packet is an information sheet on resources for dealing with loneliness, and with other types of feelings or problems. There is a description provided for each of the resources listed.
- (5) Results of the study will be treated in a confidential manner and you will remain anonymous. Results of the study will be available to you upon request. The anticipated time of completion is December of 1985.
- (6) All forms and questionnaires received from students will be discarded once data has been coded and tabulated.
- (7) In choosing to complete the enclosed forms you give your consent to participate in this study, acknowledging that you have read the above information. Please retain this letter for your personal records, as it contains important information and your code number.

Any requests about this study, in terms of assistance, further explanations, or requests for results, can be



directed to me. If you should want to contact a faculty member regarding any aspect of this study, my faculty research adviser is Dr. Richard Johnson, Department of Education at M.S.U. He can be reached at 353-1824.

For those of you participating in the research, I have written a paper on loneliness and coping with loneliness that I will be handing out to students once the data is all collected from my study. I will bring copies of this paper to R.A.s in the residence halls, or the off-campus houses or classes that have participated in the research, so that all participants are sure to get a copy. If a student would like feedback on his/her forms, please contact me at the number provided below. If you give me your code number (make sure to keep this letter with the code number on it!) I will be glad to locate your submitted materials and discuss the results with you.

Thank you very much for participating in the research. I hope that you learn more about yourself and have new ideas to think about as a result of completing this packet of forms.

Shelley Smithson  
Ph.D. Candidate in  
Counseling Psychology  
332-0231

## **APPENDIX B**

### **INSTRUMENTS AND QUESTIONNAIRES USED IN STUDY**

PERSONAL INFORMATION SHEET

Sex \_\_\_\_\_

Age \_\_\_\_\_

Year in college \_\_\_\_\_

Live in \_\_\_\_\_ dormitory

\_\_\_\_\_ fraternity/sorority house

\_\_\_\_\_ in fraternity/sorority, but living in  
apartment

What type of environment did you grow up in?

\_\_\_\_\_ rural area

\_\_\_\_\_ small town (less than 20,000 people)

\_\_\_\_\_ average sized town (20,000-50,000 people)

\_\_\_\_\_ city (50,000-200,000 people)

\_\_\_\_\_ large city/metropolitan area (over 200,000 people)  
(including suburbs)

How many siblings were in your household? \_\_\_\_\_

Of these siblings, how many were \_\_\_\_\_ brothers

\_\_\_\_\_ sisters

\_\_\_\_\_ other children  
(i.e. cousins living  
with you)

How many adults were living in your household? \_\_\_\_\_

Please indicate what adults these were: \_\_\_\_\_ mother

\_\_\_\_\_ father

\_\_\_\_\_ step parent

\_\_\_\_\_ relative (i.e.  
grandparent,  
aunt, uncle)

## QUESTIONS ON LONELINESS

1. Do you feel lonely at the present time? \_\_\_\_\_ yes  
\_\_\_\_\_ no  
\_\_\_\_\_ don't know
2. If you do feel lonely, please indicate below how lonely you feel. the number 10 indicates severe loneliness, and the number 1 indicates only slight feelings of loneliness. Please indicate along the scale of numbers where you see yourself.  
  
1    2    3    4    5    6    7    8    9    10
3. How long would you say that you have been feeling lonely?  
  
\_\_\_\_\_ less than a week  
\_\_\_\_\_ about two weeks  
\_\_\_\_\_ about a month  
\_\_\_\_\_ a couple of months  
\_\_\_\_\_ six months  
\_\_\_\_\_ more than a half year  
\_\_\_\_\_ more than a year
4. I believe that the main reason I am lonely is:  
  
\_\_\_\_\_
5. Do you believe that the reason you have indicated above has more to do with you as a person or with the situation you find yourself in?  
  
\_\_\_\_\_ me as a person                  \_\_\_\_\_ the situation surrounding me
6. Do you believe that there are ways for the reason (you have indicated for your loneliness) to be changed or modified so that you won't continue to feel lonely?  
  
\_\_\_\_\_ yes                                  \_\_\_\_\_ no

**PLEASE NOTE:**

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**These consist of pages:**

<u>Appendix B, page 191 (Revised UCLA Loneliness Scale)</u>	
<u>page 192-198 (Seligman Attributional Style</u>	
<u>page 199 (Check List, DACL Form A.)</u>	Questionnaire)
<u>page 200 (Questionnaire)</u>	
<u>page 201-203 (Coping Inventory)</u>	
<u>page 204-206 (Grant Attribution Scale-1984)</u>	

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## Revised UCLA Loneliness Scale

Directions: Indicate how often you feel the way described in each of the following statements. Circle one number for each.

	Never	Rarely	Sometimes	Often
1. I feel in tune with the people	1	2	3	4
2. I lack companionship	1	2	3	4
3. There is no one I can turn to	1	2	3	4
4. I do not feel alone	1	2	3	4
5. I feel part of a group of friends.	1	2	3	4
6. I have a lot in common with the people around me	1	2	3	4
7. I am no longer close to anyone	1	2	3	4
8. My interests and ideas are not shared by those around me	1	2	3	4
9. I am an outgoing person	1	2	3	4
10. There are people I feel close to	1	2	3	4
11. I feel left out	1	2	3	4
12. My social relationships are superficial	1	2	3	4
13. No one really knows me well	1	2	3	4
14. I feel isolated from others	1	2	3	4
15. I can find companionship when I want to	1	2	3	4
16. There are people who really understand me	1	2	3	4
17. I am unhappy being so withdrawn	1	2	3	4
18. People are around me but not with me	1	2	3	4
19. There are people I can talk to	1	2	3	4
20. There are people I can turn to	1	2	3	4

## Seligman Attributional Style Questionnaire

Name \_\_\_\_\_

Date \_\_\_\_\_

Phone # \_\_\_\_\_

## DIRECTIONS

Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one— the *major* cause if this event happened to you. Please write this cause in the blank provided after each event. Next we want you to answer some questions about the cause and a final question about the situation. To summarize, we want you to:

- 1) Read each situation and vividly imagine it happening to you.
- 2) Decide what you feel would be the *major* cause of the situation if it happened to you.
- 3) Write one cause in the blank provided.
- 4) Answer three questions about the *cause*.
- 5) Answer one question about the *situation*.
- 6) Go on to the next situation.

**YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE.**

1) Write down the one major cause \_\_\_\_\_

2) Is the cause of your friend's compliment due to something about you or something about the other person or circumstances? (Circle one number)

Totally due to the other person or circumstances	1	2	3	4	5	6	7	Totally due to me
---	---	---	---	---	---	---	---	----------------------

3) In the future when you are with your friends, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

4) Is the cause something that just affects interacting with friends or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

5) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

**YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME.**

6) Write down one major cause \_\_\_\_\_

7) Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

8) In the future when looking for a job, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

9) Is the cause something that just influences looking for a job or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

10) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------



## YOU BECOME VERY RICH.

11) Write down the *one* major cause \_\_\_\_\_

12) Is the cause of your becoming rich due to something about you or something about other people or circumstances?

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

13) In your financial future, will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

14) Is the cause something that just affects obtaining money or does it also influence other areas of your life?

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

15) How important would this situation be if it happened to you?

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP THEM.

16) Write down the *one* major cause \_\_\_\_\_

17) Is the cause of your not helping your friend due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

18) In the future when a friend comes to you with a problem, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

19) Is the cause something that just affects what happens when a friend comes to you with a problem or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

20) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

**YOU GIVE AN IMPORTANT TALK IN FRONT OF A GROUP AND THE AUDIENCE REACTS NEGATIVELY.**

21) Write down the *one* major cause \_\_\_\_\_

22) Is the cause of the audience reacting negatively due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

23) In the future when giving talks, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

24) Is this cause something that just influences giving talks or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

25) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

**YOU DO A PROJECT WHICH IS HIGHLY PRAISED.**

26) Write down the *one* major cause \_\_\_\_\_

27) Is the cause of being praised due to something about you or something about the other people or circumstances?

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

28) In the future when doing a project, will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

29) Is this cause something that just affects doing projects or does it also influence other areas of your life?

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

30) How important would this situation be if it happened to you?

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## YOU MEET A FRIEND WHO ACTS HOSTILELY TOWARD YOU

31) Write down the *one* major cause \_\_\_\_\_

32) Is the cause of your friend acting hostile due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

33) In the future when interacting with friends, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

34) Is the cause something that just influences interacting with friends or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

35) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## YOU CAN'T GET ALL THE WORK DONE THAT OTHERS EXPECT OF YOU.

36) Write down the *one* major cause \_\_\_\_\_

37) Is the cause of your not getting the work done due to something about you or something about the other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

38) In the future when doing the work that others expect, will this cause be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

39) Is the cause something that just affects doing work that others expect of you or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

40) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## YOUR SPOUSE (BOYFRIEND/GIRLFRIEND) HAS BEEN TREATING YOU MORE LOVINGLY.

41) Write down the one major cause \_\_\_\_\_

42) Is the cause of your spouse (boyfriend/girlfriend) treating you more lovingly due to something about you or something about other people or circumstances?

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

43) In future interactions with your spouse (boyfriend/girlfriend) will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

44) Is this cause something that just affects how your spouse (boyfriend/girlfriend) treats you or does it also influence other areas of your life?

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

45) How important would this situation be if it happened to you?

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## YOU APPLY FOR A POSITION THAT YOU WANT VERY BADLY (e.g., IMPORTANT JOB, GRADUATE SCHOOL ADMISSION, etc.) AND YOU GET IT.

46) Write down one major cause \_\_\_\_\_

47) Is the cause of your getting the position due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

48) In the future when applying for a position, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

49) Is the cause something that just influences applying for a position or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

50) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## YOU GO OUT ON A DATE AND IT GOES BADLY.

51) Write down the *one* major cause \_\_\_\_\_

52) Is the cause of the date going badly due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

53) In the future when dating, will this cause again be present? (Circle one number)

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

54) Is the cause something that just influences dating or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

55) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

## YOU GET A RAISE.

56) Write down the *one* major cause \_\_\_\_\_

57) Is the cause of your getting a raise due to something about you or something about other people or circumstances?

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

58) In the future on your job, will this cause again be present?

Will never again be present	1	2	3	4	5	6	7	Will always be present
-----------------------------------	---	---	---	---	---	---	---	---------------------------

59) Is this cause something that just affects getting a raise or does it also influence other areas of your life?

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
--	---	---	---	---	---	---	---	--

60) How important would this situation be if it happened to you?

Not at all important	1	2	3	4	5	6	7	Extremely important
-------------------------	---	---	---	---	---	---	---	------------------------

# CHECK LIST

DACL FORM A

By Bernard Lubin

Name NO NAME Age \_\_\_\_\_ Sex \_\_\_\_\_  
 Date \_\_\_\_\_ Highest grade completed in school \_\_\_\_\_

DIRECTIONS: Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now - - Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Wilted            | 17. <input type="checkbox"/> Strong          |
| 2. <input type="checkbox"/> Safe              | 18. <input type="checkbox"/> Tortured        |
| 3. <input type="checkbox"/> Miserable         | 19. <input type="checkbox"/> Listless        |
| 4. <input type="checkbox"/> Gloomy            | 20. <input type="checkbox"/> Sunny           |
| 5. <input type="checkbox"/> Dull              | 21. <input type="checkbox"/> Destroyed       |
| 6. <input type="checkbox"/> Gay               | 22. <input type="checkbox"/> Wretched        |
| 7. <input type="checkbox"/> Low - spirited    | 23. <input type="checkbox"/> Broken          |
| 8. <input type="checkbox"/> Sad               | 24. <input type="checkbox"/> Light - hearted |
| 9. <input type="checkbox"/> Unwanted          | 25. <input type="checkbox"/> Criticized      |
| 10. <input type="checkbox"/> Fine             | 26. <input type="checkbox"/> Grieved         |
| 11. <input type="checkbox"/> Broken - hearted | 27. <input type="checkbox"/> Dreamy          |
| 12. <input type="checkbox"/> Down - cast      | 28. <input type="checkbox"/> Hopeless        |
| 13. <input type="checkbox"/> Enthusiastic     | 29. <input type="checkbox"/> Oppressed       |
| 14. <input type="checkbox"/> Failure          | 30. <input type="checkbox"/> Joyous          |
| 15. <input type="checkbox"/> Afflicted        | 31. <input type="checkbox"/> Weary           |
| 16. <input type="checkbox"/> Active           | 32. <input type="checkbox"/> Droopy          |

Like Me	Unlike Me	
<input type="checkbox"/>	<input type="checkbox"/>	1. Things usually don't bother me.
<input type="checkbox"/>	<input type="checkbox"/>	2. I find it very hard to talk in front of a group.
<input type="checkbox"/>	<input type="checkbox"/>	3. There are lots of things about myself I'd change if I could.
<input type="checkbox"/>	<input type="checkbox"/>	4. I can make up my mind without too much trouble.
<input type="checkbox"/>	<input type="checkbox"/>	5. I'm a lot of fun to be with.
<input type="checkbox"/>	<input type="checkbox"/>	6. I get upset easily at home.
<input type="checkbox"/>	<input type="checkbox"/>	7. It takes me a long time to get used to anything new.
<input type="checkbox"/>	<input type="checkbox"/>	8. I'm popular with persons my own age.
<input type="checkbox"/>	<input type="checkbox"/>	9. My family usually considers my feelings.
<input type="checkbox"/>	<input type="checkbox"/>	10. I give in very easily.
<input type="checkbox"/>	<input type="checkbox"/>	11. My family expects too much of me.
<input type="checkbox"/>	<input type="checkbox"/>	12. It's pretty tough to be me.
<input type="checkbox"/>	<input type="checkbox"/>	13. Things are all mixed up in my life.
<input type="checkbox"/>	<input type="checkbox"/>	14. People usually follow my ideas.
<input type="checkbox"/>	<input type="checkbox"/>	15. I have a low opinion of myself.
<input type="checkbox"/>	<input type="checkbox"/>	16. There are many times when I would like to leave home.
<input type="checkbox"/>	<input type="checkbox"/>	17. I often feel upset with my work.
<input type="checkbox"/>	<input type="checkbox"/>	18. I'm not as nice looking as most people.
<input type="checkbox"/>	<input type="checkbox"/>	19. If I have something to say, I usually say it.
<input type="checkbox"/>	<input type="checkbox"/>	20. My family understands me.
<input type="checkbox"/>	<input type="checkbox"/>	21. Most people are better liked than I am.
<input type="checkbox"/>	<input type="checkbox"/>	22. I usually feel as if my family is pushing me.
<input type="checkbox"/>	<input type="checkbox"/>	23. I often get discouraged with what I am doing.
<input type="checkbox"/>	<input type="checkbox"/>	24. I often wish I were someone else.
<input type="checkbox"/>	<input type="checkbox"/>	25. I can't be depended on.

COPING INVENTORY

**Instructions:** Please read the following list of coping behaviors. Indicate to the right of each item the frequency with which you use each behavior to cope with loneliness. If you are not currently feeling lonely, then please think about a time when you have been lonely, and indicate the frequency that you used these particular coping behaviors.

Strategy	Never	Seldom	Sometimes	Often
1. Go for a drive	_____	_____	_____	_____
2. Talk with a counselor or therapist about ways to overcome loneliness	_____	_____	_____	_____
3. *Try harder to be friendly to other people (like making a greater effort to talk with students in classes)	_____	_____	_____	_____
4. **Told yourself that your loneliness would not last forever, that things would get better	_____	_____	_____	_____
5. **Tell yourself that it's not so important to be popular or to have a boyfriend/girlfriend	_____	_____	_____	_____
6. Talk to a friend or relative about ways to overcome your loneliness	_____	_____	_____	_____
7. Take your mind off feeling lonely by using drugs or alcohol	_____	_____	_____	_____
8. Go shopping to buy things or spend money.	_____	_____	_____	_____
9. **Remind yourself that you actually do have good relationships with other people.	_____	_____	_____	_____
10. Pray to God by yourself	_____	_____	_____	_____
11. *Try to find new ways to meet people (such as joining a club moving into a dorm, going to dances, etc.)	_____	_____	_____	_____
12. Take your mind off feeling lonely through some sports activity	_____	_____	_____	_____
13. **Think about possible benefits of being lonely (like thinking that you are learning to be more self reliant or growing from the experience)	_____	_____	_____	_____



Strategy	Never	Seldom	Sometimes	Often
14. Take naps or sleep longer at night to get away from the feelings of loneliness	_____	_____	_____	_____
15. Go to a play or movie	_____	_____	_____	_____
16. Go for a walk by yourself	_____	_____	_____	_____
17. Eat more than usual (such as snacking frequently or eating more at mealtime)	_____	_____	_____	_____
18.**Try to figure out why you are lonely	_____	_____	_____	_____
19.**Read the Bible or some other religious/spiritual literature	_____	_____	_____	_____
20. Go out to the bars	_____	_____	_____	_____
21. Spend time with a close friend just to be together	_____	_____	_____	_____
22. Do something helpful for someone else (such as helping a classmate with homework, doing volunteer work, etc.)	_____	_____	_____	_____
23.**Think about things you do extremely well (such as schoolwork, athletics, artwork, cooking, etc.)	_____	_____	_____	_____
24.**Thought about good qualities that you possess (intelligence, sensitivity, self-sufficiency, warmth, etc.)	_____	_____	_____	_____
25. Distract yourself from feeling lonely with a quiet activity such as reading a book, listening to music, or watching TV	_____	_____	_____	_____
26.**Think about things you can do to overcome your loneliness	_____	_____	_____	_____
27.**Tell yourself that you are over-reacting, that you shouldn't be so upset	_____	_____	_____	_____

Strategy	Never	Seldom	Sometimes	Often
28. *Do something to improve your social skills (learning to dance, learning to be more assertive, improving conversational skills, etc.)	_____	_____	_____	_____
29. Do something to make yourself more physically attractive	_____	_____	_____	_____
30. Become sexually involved with someone	_____	_____	_____	_____
31. *Get a job or get more involved in a current job	_____	_____	_____	_____
32. *Work extra hard to succeed at some activity (such as studying extra hard for an exam, putting extra effort into practicing an instrument	_____	_____	_____	_____
33. **Tell yourself that most other people are lonely at one time or another	_____	_____	_____	_____
34. **Take your mind off feeling lonely by deliberately thinking about other things (anything other than your loneliness)	_____	_____	_____	_____
35. *Get more involved in your studies	_____	_____	_____	_____

---

\* Problem-focused Subscale items

\*\* Emotion-focused Subscale items

## GRANT ATTRIBUTION SCALES - 1984

Please tell me how much you agree or disagree with the following statements about your loneliness. Please circle one number under each statement between "1" and "8" - with "1" representing strong disagreement and "8" representing strong agreement.

- |      |  |   |   |   |   |   |   |          |
|------|--|---|---|---|---|---|---|----------|
| 1.   | I feel I can deal successfully with my lonely feelings.                                    |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 2.   | When I feel lonely, it is because I am in the wrong place at the wrong time.               |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 3.** | Loneliness cannot be cured, you have to learn to live with it.                             |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 4.   | I feel lonely because of things that are outside of my control.                            |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 5.** | Loneliness always goes away.   |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 6.   | I feel confident about my ability to handle my lonely feelings.                            |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 7.   | If a person is lonely, it's because he or she hasn't made enough of an effort to fight it. |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 8.** | Once lonely, always lonely.  |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |
| 9.   | Sometimes I feel unable to cope with my lonely feelings.                                   |   |   |   |   |   |   |          |
|      | Strongly   |   |   |   |   |   |   | Strongly |
|      | Disagree   |   |   |   |   |   |   | Agree    |
|      | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8        |

10. \*\*I believe my loneliness will pass.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

11. I am a lonely kind of person.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

12. \*\*I often feel that loneliness is here to stay.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

13. \*If I try hard enough, I can always avoid feeling lonely.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

14. I only feel lonely now and again.

Strongly  
Disagree

Strongly  
Agree

15. \*Loneliness is usually caused by unfavorable circumstances.

Strongly  
Disagree

Strongly  
Agree

16. I am able to control by lonely feelings.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

17. \*\*Even when I feel lonely, I know that sooner or later this will change.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

18. \*If I feel lonely, it is usually because of the situation I am in.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

19. \*\*No matter what I do, I'll always feel lonely.

Strongly  
Disagree

1 2 3 4 5 6 7

Strongly  
Agree

8

20. \*I am more likely to feel lonely than other people because of my personality.

Strongly  
Disagree

Strongly  
Agree

1

2

3

4

5

6

7

8

---

\* Items on Locus of Causality Subscale

\*\* Items on Locus of Stability Subscale

## **APPENDIX C**

### **CROSS-TABULATION INFORMATION ON LONELINESS MEASURES**

In response to the question, "Are you lonely?" 78 students checked "yes," and 14 students checked "don't know." In terms of the Likert scale for indicating degree of loneliness experienced (between        and 10), students endorsed numbers ranging from one to 10. The mean response of the 110 students who checked a Likert scale number was 3.7, and the standard deviation was 2.3. On the Revised UCLA Loneliness Scale, the mean score was 39.9, and the standard deviation was 9.7. This mean score is very similar to mean scores reported on general university aged samples that have been recruited nationally on other university campuses for loneliness research (Peplau and Perlman, 1982). (See Appendix C for presentation of the loneliness measures data.)

Cross tabulations of these three measures of loneliness provided some interesting results. Of the 78 students who checked "yes" to the direct question, "Are you lonely?" all of these students endorsed a response on the Likert scale asking for an indication of severity of loneliness. Of the 107 students who checked "no" to the question, 24 students gave responses ranging from 1 to 9 on the Likert scale, with ten students circling number 1 and five students circling number 2. (These subjects may have thought that indicating a number on the Likert scale was required, and thus indicated low numbers). However, there were still nine students who indicated that they were not lonely, who then gave responses for 3 or above on the 10-point Likert scale, including two scores above 6.

Of the 14 students who checked "don't know" to the question, "Are you lonely?" eight endorsed numbers on the Likert scale ranging from 1 to 4, with five students circling the number 3. There were no subjects in the "Don't know" category who responded at 6 or above on the Likert scale (one

standard deviation above the mean. Thus, responses of "Yes" to the question "Are you lonely?" correspond to expected responses on the Likert scale, whereas responses of "No" to the question did not result in endorsement of the Likert scale, as one would have expected.

Cross tabulations were also investigated between responses to "Are you lonely?" and scores on the UCLA Loneliness Scale. Of the 78 subjects who stated that they were lonely, 28 scored below the mean on the UCLA Scale and 51 scored above the mean. Of the group of 51 subjects, 27 were at least one standard deviation beyond the UCLA mean. The mean score for this group was 44.4.

Of the 107 subjects who identified themselves as not being lonely, 71 had expected scores below the mean on the UCLA Scale, but 31 subjects had scores that were above the UCLA mean, including eight scores that were beyond one standard deviation above the mean. The mean score for this group was 36.1.

Scores on the UCLA Scale for subjects identifying themselves as lonely ranged from 22-70 (out of a possible range of 20-80). Scores on the loneliness scale for the group of subjects identifying itself as not lonely ranged from 22 to 57.

Of the group of subjects that responded "Don't know" to the question "Are you lonely?" seven subjects scored above the mean on the UCLA Scale, including three scores beyond one standard deviation above the mean. The scores for this small group ranged from 27 to 54, with a mean score on the UCLA scale of 41.5. Thus, the group of subjects that identified themselves as not knowing whether or not they were lonely had a group mean score on the loneliness scale that was above the mean score for the general sample.

Clearly, it is seen that the question, "Are you lonely?" cannot suffice



alone as a measure of loneliness if one is interested in more than a merely subjective measure of loneliness. There were 38 students in all who scored above the mean on the UCLA Loneliness Scale that had stated that they were either not lonely or that they did not know whether or not they were lonely.

In looking at the cross tabulations between the Likert scale and the UCLA Loneliness Scale, one sees that there were a substantial number of students who scored at the Likert scale mean of 4 or below, who scored above the mean on the UCLA Scale. There were also students who identified themselves as feeling lonely according to the Likert Scale, who did not yield scores at or above the mean on the UCLA measure. There were 12 students in this latter category. Thus, there were students who scored low on the Likert scale and high on the UCLA Scale, and students who scored high on the Likert scale who had loneliness scores below the mean on the UCLA Loneliness Scale. There were eight students who scored one standard deviation above the mean on the Likert Scale who scored at or below one standard deviation below the mean on the UCLA measure. Thus, there is quite a spread of "reversal" between these two measures on loneliness. The Likert scale was able to identify some subjects who perceived themselves as lonely or very lonely that the UCLA scale did not identify as such. Likewise, the UCLA measure identified other subjects as lonely who had themselves not responded to such a degree to the question "Are you lonely?" or to the Likert scale on experienced loneliness. Given that a majority of the "yes" responses had corresponding indications of loneliness on one or both of the other two measures, and that "no" responses were represented by a wide variation on the other two measures, it was decided that the use of the UCLA scale and the Likert scale would provide for the best way of defining a subsample of lonely subjects. In other words, the "yes" subjects would be

"caught" by one of the other two measures if the person was experiencing a mild to substantial degree of loneliness, whereas "no" subjects or "don't know" subjects would also be identified by one of the other two measures as well.

A subsample of lonely subjects was arrived at by the criteria of having a score of 50 or greater on the UCLA Loneliness Scale or a score of 6 or more on the Likert scale. These are scores at one standard deviation or above the means for the respective scales. This subsample of lonely subjects resulted in 49 students. The mean score on the Likert scale for this group was 4.1 and the mean score on the UCLA Loneliness Scale was 51.7. This compares with a mean of 30.9 on the UCLA Scale for a group of nonlonely subjects. This subsample was arrived at by grouping subjects that had a score of 35 or less on the UCLA scale and a score of 5 or less on the Likert scale. Thus, among the lonely sample, the mean of 51.7 on the UCLA Loneliness Scale is almost 22 points higher than the mean on the scale for a nonlonely group.

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