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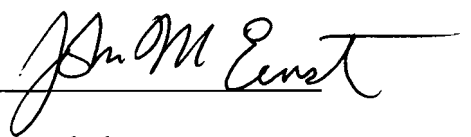
concept

Integrating Self-Concept Theory into a Model of Loneliness

Joy M. Tassin

Illinois Wesleyan University

Reading Committee:

    John M. Ernst, Ph.D.
    Doran French, Ph.D.
    Robert Hippensteele, Ph.D.
    Johnna Shapiro, Ph.D.

Approved _____

Psychology Department

Abstract

This study utilized the Brewer and Gardner (1996) theory of self-concept and related it to previous theories of loneliness. Seventy participants were cued by stories (primes) to put them in a mind-frame that focused on one level of self. The levels used were the interpersonal level and the collective level. In addition, a control group was used. The collective level of self is the way in which individuals think of themselves within a group. The interpersonal level is the way they think about themselves within an intimate relationship.

Loneliness was then measured using both the SELSA and the UCLA loneliness scale. Both scales are multi-dimensional and characterized aspects of self within a social relationship framework. It was predicted that the type of loneliness experienced, as measure by these scales, would vary as a function of the social relationship with which the participant was primed. For instance, if they received an interpersonal prime they were predicted to experience less intimate type loneliness. In addition, participants were given a depression inventory scale and a demographics form.

No significant difference was found between groups for either loneliness scale. Although not significant, observations of the data trends indicate that participants do report the lowest amounts of loneliness corresponding to their prime.

Integrating Self-Concept Theory into a Model of Loneliness

Loneliness is a complex emotion resulting from deficiencies in fulfilling intimate

or social needs. It is a widespread experience having afflicted 35 million Americans each

month by the early 1980s (Rubenstein & Shaver, 1982). Sociodemographic changes such

as marital patterns and the decreasing size of households are worsening this

circumstance. In addition, studies have shown that there is a relationship between social

support and both mental and physical health. (Ernst & Cacioppo, in press). The majority

of previous research has focused on factors that co-vary with loneliness such as self-

esteem or shyness rather than on the structure of loneliness. Therefore, due to both the

prevalence of loneliness and the health issues involved, it is useful to have a good

working model of loneliness in order to better understand loneliness and to determine

methods of treatment. The purpose of this study is to examine the possibility that self-

concept theory can be incorporated into a model for loneliness.

One of the few theories of loneliness that has been developed to explain

loneliness is that of Weiss (1975). It is based on his work with a group of women who

had joined a support group for single mothers called Parents without Partners. He found

that these women were less lonely overall than before they had joined the support group,

but they still were lonely because they lacked a romantic partner. Therefore, he theorized

that individuals with specific relationship deficiencies would experience very different

types of loneliness and that these could be categorized into two distinct groups: emotional

and social loneliness. Social loneliness is considered negative feelings due to an

unsatisfactory association with a desired group; emotional loneliness is considered

negative feelings due to an unsatisfactory association with an intimate relationship. A

recent study by Hawkley, Browne, Ernst and Cacioppo (manuscript in preparation)

found that loneliness consisted of three categories with the third factor relating to

isolation. Weiss's theory does not account for this third category.

Although loneliness researchers have done relatively little in terms of theory

development, Brewer and Gardner (1996) and other researchers have developed theories

on the concept of self (self-concept theory). Self-concept theory provides for an

explanation of the different sets of characteristics people assign to themselves depending

on social roles (see below). Importantly, this theory is reminiscent of Weiss's theory of

loneliness in that people see themselves differently within different types of social roles.

Therefore, if loneliness theory is multifaceted and requires further theoretical

development, and Brewer and others have developed a multifaceted view of self that has

striking overlap with loneliness concepts, then it follows that it would be appropriate to

formally examine the two together.

<div align="center">Self-Concept Theory</div>

Brewer and Gardner's (1996) self-concept theory is a model for understanding the

different ways in which individuals define their sense of self within a social context. This

theory distinguishes among the intrapersonal self, the interpersonal self, and the

collective self and their roles in determining self-perception (Brewer & Gardner, 1996;

Brewer & Weber, 1994; Simon & Hamilton, 1994; Turner, Oakes, Haslam, & McGarty,

1994). The intrapersonal self can be described as the "differentiated, individuated self-

concept most characteristic of the studies of self in Western psychology" (Brewer &

Gardner, 1996, p.84). For example, one expression of intrapersonal self-concept is the

identification of personal traits. The labeling of oneself as being more studious relative

to their peers would be an example of distinguishing the self. The interpersonal self is determined from intimate connections with significant others. For instance, these connections may include close family members, romantic partners, and intimate friends. Saying that someone is in a happy marriage describes an interpersonal relationship. The collective self is described as individuals' categorization of themselves within a larger social framework. For example, describing oneself as a college student would result in a framework of college student life and the identities that would be associated. In general, this theory predicts that if one of these three levels is made salient, an individual will focus on traits that are associated with that level of self-concept.

Brewer and Gardner (1996) used primes that focused on the three different levels of self. The purpose was to make salient the separate levels of self for different individuals. In this case, a prime referred to pronouns used as stimuli designed to elicit a manipulation of salience of a particular social level. The participants do not focus on a personal example of that type of relationship, but rather they focus on the rules of interaction within those relationships. For their primes Brewer and Gardner used relatively short stories that described social relationships. Primes varied in that different experimental groups had stories that differed in the type of pronoun used. One group received stories with the pronouns "we" or "us", while another group read "they" or "them." In so doing, associated sets of traits would also vary in relation to which type of relationship was primed. For example, when they wanted to prime the interpersonal level of self they provided the participants with short stories focusing on an intimate set of friends. Ideally, the participants would then be thinking about their own personal characteristics within an intimate friend setting. They used this method to examine how

priming of different social groups alters self-descriptions. They found that participants reported greater percentages of characteristics corresponding to the level of self with which they were primed. For example, participants that received a collective prime reported more collective type characteristics than those participants that received either an interpersonal or an intrapersonal prime. Although this model was used for distinguishing self-perceptions, they argue that the model can be used to describe other aspects of self-concept cognitive perceptions (e.g. they specified loneliness), as well.

Since loneliness is the result of dissatisfaction with a perception of social relationships, and it varies with the type of social relationship being considered, it was hypothesized that altering which level of self a person is focusing on would also alter their reports of how they are experiencing loneliness.

Loneliness

To better understand how loneliness may relate to self-concept theory, it is helpful to understand the theories on which the original models of loneliness are based. Although past research describes many different social factors related to loneliness (e.g. loneliness due to family, significant other, intimate friend needs, etc.), they can all be classified within two overarching groups—emotional and social loneliness. Recall that emotional loneliness results from a deficiency of a close, intimate relation in a one-on-one basis. Social loneliness results from a deficiency with a desired group (Ernst & Cacioppo, in press). Results from a study conducted by Weiss (1975) with Parents without Partners revealed that fulfilling the needs of one category does not satisfy the needs of the other, and that consideration of both types of needs is necessary to evaluate the degree to which an individual is experiencing loneliness. In this example, although

the parents received social support from the support group and made many friends, they still experienced significant loneliness due to lack of intimacy with a romantic partner. If loneliness is unidimensional (i.e., loneliness is a general, non-categorical feeling), then they should not have felt lonely since they did have social interactions.

Further evidence for a multidimensional model of loneliness comes from a study done by Hawkley, et al. (manuscript in preparation) involving over 2000 participants. They found that loneliness as measured by a UCLA Loneliness scale (see below) statistically factored into three categories; proposing an additional category to Weiss's theory. The three categories they found were isolation, connectedness and belongingness. Connectedness loneliness corresponds to emotional loneliness in that it is the result of lack of satisfaction from intimate relationships. Belonglingness loneliness corresponds to social loneliness in that it is the result of lack of satisfaction from group relationships. Isolation is the new category and could be described as loneliness due to lack of satisfaction with being alone (see Appendix 1b).

Support of this description of three rather than two categories also comes from a study by Rook (1984) which describes the effectiveness of different treatments for loneliness. The underlying purpose of the study was to demonstrate that although loneliness lacks a concrete definition, there are numerous effective treatments available for people who experience loneliness. For example, facilitating social bonding is designed to teach lonely people appropriate social skills; the lack of which may have been the initial cause for their loneliness. In addition, the study found that these people also have skills that inhibit them from social interaction. These skills include lack of trust in strangers, lack of personal self-disclosure, and approaching social encounters with

predictions of a negative outcome. This inhibition often prevents these individuals from seeking out social contacts and results in isolation from others. This lack of social skills would coincide with Weiss's theory that loneliness is due to deficiencies in social contact from various sources.

Some treatments of loneliness have focused more on helping lonely people feel comfortable with being alone by teaching them to cope using aloneness solitary skills. The main goal of this research is to discern the effects of teaching them "rewarding solitary activities" (Rook, 1984, p. 1397). This treatment was especially effective for individuals who were lonely due to physical restraints such as location or physical limitations. Treatment resulted in individuals feeling an increased sense of control due to less dependence on others for satisfaction. Rook described that an increase in pleasurable activities helped alleviate depression, and that these skills may have lead to improved morale for lonely and depressed individuals. Since improvement of solitary activities and the thoughts associated with being alone decrease feelings of loneliness, this could correspond to isolation loneliness. If so, isolation loneliness resulted from dissatisfaction with what an individual does while alone; thus, having more positive thoughts about alone activities should result in lower amounts of isolation loneliness.

If it is possible to decrease loneliness through increasing aloneness solitary skills as Rook suggested, then Weiss's theory that loneliness is the result of social contact would seem to be incomplete. Indeed Rook found that "loneliness does not covary directly with the amount of social contact," but rather "that cognitive processes determine whether or not the individual feels lonely" (Rook, 1984, p. 1390). Therefore, a more complete model than the one Weiss proposed would need to include an explanation for

the three categories from the UCLA scale; and this third category would need to explain

the influence of how individuals perceive themselves (e.g. roles and social skills) within

relationships since frequency of social contact is not sufficient to explain the experience

of loneliness.

<p align="center">Integrating the Two Theories</p>

Incorporating Weiss's theory of loneliness into the Brewer and Gardner model

provides a model for loneliness that includes an explanation for isolation loneliness, as

well as provides an explanation for why altering an individual's social role results in a

different experience of loneliness.

The Brewer and Gardner model allows one to predict that priming of different

levels of self-concept should result in making salient to the person their different sets of

characteristics focusing on specific levels of social relationships. In application, if

individuals were to be primed to think about one of their three levels of self-concept then

the type of loneliness that they experience will vary with the level primed. Ideally, the

prime would bring to the mind of a person being primed the type of corresponding

relationship that is at the same level as the prime. Then, since they are thinking about

social interactions at that level of self, they should experience less loneliness

corresponding to that social level. For example, if they received an interpersonal prime

we predicted that they would think about intimate relationships and experience less

connectedness loneliness.

<u>Measuring Loneliness</u>

Measures designed to describe and predict loneliness include the Revised UCLA

Loneliness scale (Russell, Curtrona, Rose & Yurko, 1984) (Appendix 1a and 1b) and the

Social and Emotional Loneliness Scale for Adults (DiTomasso & Spinner, 1993)

(SELSA—Appendix 2a and 2b). Much research has been done to justify the use of tese

scales as measures of loneliness (DiTommaso & Spinner, 1992; Hartshorne, 1993;

Mahon, Yarcheski & Yarcheski, 1995; McWhirter, 1990). A great deal of research thus

far has supported the idea that loneliness is multidimensional (e.g., Rook, 1987; Russell,

Cutrona, Rose & Yurko, 1984; Schut, 1996; Shaver, Furman & Buhrmester, ; Weiss,

1975).

UCLA. The Revised UCLA Loneliness scale (Russell et al., 1984) is a twenty

item questionnaire designed to measure the presence or absence of loneliness on a

unidimensional scale (Hartshorne, 1993), but research has shown that it can also be used

as a multidimensional measure of loneliness (McWhirter, 1990). Evidence from a study

by Hawkley, et al. (manuscript in preparation) found that the R-UCLA factored into three

categories which they termed: isolation, connectedness, and belongingness (see

Appendix 3b). The isolation category was determined from items on the questionnaire

dealing with, as the name implies, how isolated the participant felt without specifying a

relationship framework. An example of an isolation statement is, "I lack

companionship." The connectedness category was derived from questions that asked the

participants questions relating to a more intimate level of relationships, focusing on if the

participant felt as though they have someone that they can rely on. An example of a

connectedness item would be, "There are people I feel close to." The belongingness

category focuses on a larger, less intimate relationship such as a group of friends. An

example of a belongingness item is, "I feel part of a group of friends." It was predicted

that these categories would correspond to the levels of the above self-concept theory

where isolation items would correspond with priming for the intrapersonal self, connectedness items would correspond to priming for the interpersonal self, and belongingness items would correspond to priming for the collective level of self-concept.

SELSA. The SELSA on the other hand is designed specifically to measure the differences between social and emotional loneliness. A study by DiTommaso and Spinner (1992) showed that it supported Weiss's conception that "emotional and social loneliness are distinct states" (p. 127). They developed this scale by administering 75 questions on loneliness and eliminating those items that did not group into factors. They then tested a new group of participants and compared results to the UCLA. The scale is divided into two parts; part one focuses on measuring social loneliness and part two is designed to measure emotional loneliness. This scale does not include a category that corresponds to the intrapersonal level of self, but we predicted that priming of the interpersonal or collective self would result in different measures of emotional and social loneliness, respectively.

Hypotheses

The following predictions compare the results of our different measures as they vary by assigned experimental group. We predicted our main results would be composed of a strong relationship between the type of prime a group received and their overall responses on the three subscales of the R-UCLA. If they received the interpersonal prime, then they would report less loneliness (lower scores) on the connectedness items on the R-UCLA relative to the neutral and the collective groups. If the participant received the collective prime, then they would report less loneliness on the belongingness

subscale of the R-UCLA. The neutral priming group was designed as a comparison

measure as a group for which they received no relationship prime.

The results of the SELSA, like those of the R-UCLA were also predicted to vary

with the prime the group receives. Participants who received the interpersonal prime

were predicted to report less emotional loneliness (lower scores on subscale I) than either

the collective or neutral priming groups. Participants who received the collective prime

were predicted to report less social loneliness (lower scores on subscale II) than either the

neutral or interpersonal priming groups.

Methods

Participants

Participants were college students from Illinois Wesleyan University who signed

up for the study as part of their general psychology research experience requirement.

Illinois Wesleyan University is a small, private mid-western university. Participants

(N=70) were male (N=20) and female (N=50) students taking general psychology at

IWU. Ages of participants ranged from 18-22.

Description of Procedures

The tests were given in either a departmental laboratory or a classroom at Illinois

Wesleyan University. Upon arrival, each participant met individually or in small groups

of two to four with the experimenter for approximately forty minutes. Participants were

informed that they would be taking a series of tests designed to measure the association

of cognitive ability with word tasks and personality. Although this is not the true purpose

of the study, we felt that this passive form of deception was appropriate in order to

prevent participants from altering their responses to match the study. They were then provided with a consent form (see Appendix 3).

The first instrument consisted of a basic anagram task. The participants were asked to write down as many words as possible using only the letters from the given word. They had five minutes per word and they were given one word at a time. The two words that they were given were 'crustaceans' and 'librarian'. The purpose of this instrument was to distract them from the true purpose of the priming.

The second instrument was our priming manipulation (Gardner, personal communication). The primes consisted of a one page story that used unfamiliar names and places in order to make the reading difficult enough to require significant attention. The participants were then asked to make a judgment about the main character after reading one of three primes. The primes were essentially the same story, but the relationships of the main character and the person he chose for the task vary. The story either primed for the interpersonal self-concept, the social self-concept or an 'it' condition which served as our control prime. The control prime consisted of a character making a decision to assign a task to another character independent of any personal relationship; this is our control condition. The interpersonal prime consisted of the same story, but now the decision involves assigning the task to a best friend, thus priming for the interpersonal self-concept. The collective prime again consisted of the same story, but now the decision involved assigning the task based on community goals, hence priming for the collective level of self-concept (see Appendix 8a-c).

SELSA. The third instrument was the Social and Emotional Loneliness Scale for Adults (DiTomasso & Spinner, 1993). It is designed as a multidimensional measure of

loneliness designed to measure emotional and social loneliness separately. The participants were asked to rank themselves on a scale from 1 (disagree strongly) to 7 (agree strongly) as to how much they felt a statement described them. The test consisted of thirty-seven statements. Twenty-three items are designed to measure emotional loneliness and fourteen are designed to measure social loneliness (see Appendix 2a and 2b).

UCLA. The fourth instrument was the Revised UCLA Loneliness scale (Russel et al., 1984). The scale consisted of twenty items. For each item the participant marked how frequently each statement applied to them. They had four choices consisting of never, rarely, sometimes and often. Previous research (Hawkley, et al.) has shown that this scale factors into three levels of loneliness (see Appendix 1a and 1b).

CES-D. The fifth instrument was the CES-D (Lewinsky, Hoberman & Rosenbaum, 1988) scale designed as a measure to predict depression. This scale consisted of twenty items in which the participant indicated how often a statement applied to them. Their four choices were rarely or none of the time, some or a little of the time, occasionally or a moderate amount of the time, and most or all of the time. Because depression and loneliness frequently co-occur for individuals (Shaver & Brennan, 1991) we were measuring depression as a covariant of loneliness. If the participants' depression scores were strongly correlated to their loneliness scores it would indicate that our results may have been due to depression rather than loneliness.

Following the CES-D, participants filled out a demographics form which included information about their campus activities and social relationships. Previous research (DiTommaso & Spinner, 1992) has found that loneliness varies with frequency and type

of social contact. It is therefore possible that the participants in this study may experience loneliness differently based on their social relationships.

Participants were then debriefed as to the purpose of the study. At this time they were free to ask any questions concerning the purpose of the study. In addition, they were asked to not discuss the purpose of the study with other students.

Results

Preliminary analysis, using the SPSS GLM procedure, revealed no main effect for gender nor did it reveal a significant interaction for gender by priming condition ($\underline{F}(10,116)=0.59$, $\underline{p}>0.05$). Therefore, the rest of the analyses were collapsed across gender and compared across priming groups.

R-UCLA

In order to investigate the hypothesis that priming would affect level of loneliness, a multivariate analysis was performed with loneliness across three subscales as the dependent variable consisting of means for isolation, connectedness and belongingness items (see Table 1). The independent variable was the priming condition consisting of the condition prime, the collective prime, and the interpersonal prime. At an alpha level of $\underline{p}<0.05$, no significant differences across priming conditions were found ($\underline{F}(6, 130)=0.610$; $\underline{p}=0.722$; $\underline{\eta}^2=0.027$).

This was followed up with univariate tests for each individual dependent measure to examine the possibility that there might be a difference between the groups for individual types of loneliness although there was no significant difference over all. However, none of these were significant (all had $\underline{p}>0.26$). Observed power for these

comparisons was low (all <0.29). A post-hoc Scheffe test was done to confirm that there was no significant difference between pairs of groups (all $p > 0.05$).

SELSA

As a second test of the hypothesis that priming level of self would affect level of loneliness, a multivariate ANOVA test was conducted to determine if their existed a difference across priming conditions (independent variable) for the dependent variable consisting of emotional and social loneliness as measured by the SELSA (see Table 1). The analysis indicates that there was no significant difference across priming conditions ($F_{(4, 128)} = 0.116$; $p = 0.977$; $\eta^2 = 0.004$).

This test was followed by a univariate test between-subjects to determine if there were was a significant difference for individual dependent variables. With alpha at $p < 0.05$, no significant results were found (all have $p > 0.84$). Observed power for these comparisons was low; the greatest power being no larger than 0.08. A post-hoc Scheffe test confirmed that there were no significant differences between pairs of groups (all $p > 0.05$).

Discussion

It was predicted that the type of loneliness that the participants reported would vary according to the prime that they received. However, none of the findings of this study were significant. Hence, it may be that there is no relationship between loneliness and self-concept. Development of more powerful primes may, however, result in detecting effects for loneliness and levels of self should they exist. The idea that self-concept theory can be used as a model for loneliness raises a number of questions that are just beginning to be addressed by current research.

Self-Concept as a Model For Loneliness

Although none of the results were significant, it is interesting to note some of the patterns that emerged from the data analyses. Analysis of the UCLA subscales did not reveal that groups primed with the interpersonal prime had lower scores than did the collective group for connectedness items. Although not significant, the data did follow the predicted pattern in that the participants primed with a particular level of self reported the lowest amounts of corresponding loneliness. If these results had been significant it would have shown that participants who were focused on their traits within intimate social roles were less likely to experience the type of loneliness associated with dissatisfaction from intimate relationships. The collective group had lower scores for belongingness items relative to the interpersonal group. This indicated that participants who were focused on their social group characteristics were less likely to experience dissatisfaction with social relationships.

A similar pattern emerges from analysis of the SELSA, although none of the results were significant. Therefore, the primes did not lead to the predicted change in the type of loneliness reported. Once again, the patterns of the data were in the predicted direction. The group that received the interpersonal prime scored lower than both the collective and control groups for emotional loneliness items. The group that received the collective prime reported the lowest loneliness scores for social loneliness items. Again, it should be emphasized that there were no differences between groups, thus the above patterns of the SELSA and the UCLA corresponding to our predictions is speculative.

Increasing Power

Further research exploring the differences in responses would be necessary to sort out this pattern of results. It is obvious from the very low power of this study that some procedural are in order to enhance any of the effects of priming on both self-concept and loneliness. For example, use of confederates to create the different social relationships rather than using stories may result in a more salient manipulation of social level.

Other procedural alterations would include the conditions under which the participants were tested. For this study, participants were tested in groups consisting of one to four participants. It is possible that the other people in the room had an effect on the participants' answers, particularly because participants had a tendency to sign up for the study at the same time as their friends. Hence, the setting may made it difficult to manipulate the social level by using the stories as the priming technique.

In addition, it is important to note that this study only compared groups across two of the levels of self-concept theory. In order to complete this model, it would be useful to compare groups across all three levels by developing an isolation condition as well as explaining the relation of the control to the interpersonal and collective primes.

Summary

Since this is a first-time effort in attempting to combine these two theories, it was encouraging that the trends were in the predicted direction. The patterns of results, although not significant, indicated that the social level primed may have an influence on the type of loneliness reported by participants. In addition, much more is known about the limitations of the primes in manipulating levels of self and we suggested possible

differences in the procedure aimed at increasing power, explaining the comparison of the

control to the interpersonal and collective primes, and developing an isolation condition.

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Author's Note

Indicate how often you feel the way described in each of the following statements. Fill in one circle for each.

Never   Rarely   Sometimes   Often

O———— O———— O ———— O   1. I feel in tune with the people around me.

O———— O———— O ———— O   2. I lack companionship.

O———— O———— O ———— O   3. There is no one I can turn to.

O———— O———— O ———— O   4. I feel alone.

O———— O———— O ———— O   5. I feel part of a group of friends.

O———— O———— O ———— O   6. I have a lot in common with the people around me.

O———— O———— O ———— O   7. I am no longer close to anyone.

O———— O———— O ———— O   8. My interests and ideas are not shared by those around me.

O———— O———— O ———— O   9. I am an outgoing person.

O———— O———— O ———— O   10. There are people I feel close to.

O———— O———— O ———— O   11. I feel left out.

O———— O———— O ———— O   12. My social relationships are superficial.

O———— O———— O ———— O   13. No one really knows me well.

O———— O———— O ———— O   14. I feel isolated from others.

O———— O———— O ———— O   15. I can find companionship when I want it.

O———— O———— O ———— O   16. There are people who really understand me.

O———— O———— O ———— O   17. I am unhappy being so withdrawn.

O———— O———— O ———— O   18. People are around me but not with me.

O———— O———— O ———— O   19. There are people I can talk to.

O———— O———— O ———— O   20. There are people I can turn to.

R-UCLA subscales: items that measure isolation, connectedness and belongingness loneliness.

Isolation	Connectedness	Belongingness
2. I lack companionship.	10. There are people I feel close to.	1. I feel in tune with the people around me.
11. I feel left out.	16. There are people who really understand me.	5. I feel a part of a group of friends.
14. I feel isolated from others.	19. There are people I can talk to.	6. I have a lot in common with the people around me.
17. I am unhappy being so withdrawn.	20. There are people I can turn to.	9. I am an outgoing person.

SELSA (PART I)

On the pages that follow you will find a number of statements that an individual might make about his/her social relationships. Please read these statements carefully and indicate the extent to which you agree or disagree with each one. If you DISAGREE STRONGLY with a statement, circle the number "1" beside the statement. If you AGREE STRONGLY with a statement, circle the number "7" beside the statement. If your attitude or view is somewhere in between these two extremes, circle the number ("2","3","4","5","6") that best describes your agreement or disagreement with the statement.

Please circle the number that best describes the degree to which each of the following statements is descriptive of you. Please try to respond to each statement.

		Disagree Strongly						Agree Strongly
1.	I am an important part of someone else's life.	1	2	3	4	5	6	7
2.	I feel alone when I'm with my family.	1	2	3	4	5	6	7
3.	No one in my family really cares about me.	1	2	3	4	5	6	7
4.	I have a romantic partner with whom I share my most intimate thoughts and feelings.	1	2	3	4	5	6	7
5.	There is no one in my family I can depend upon for support and encouragement, but I wish there were.	1	2	3	4	5	6	7
6.	I really care about my family.	1	2	3	4	5	6	7
7.	There is someone who wants to share their life with me.	1	2	3	4	5	6	7
8.	I have a romantic or marital partner who gives me the support and encouragement I need.	1	2	3	4	5	6	7
9.	I really belong in my family.	1	2	3	4	5	6	7
10.	I have an unmet need for a close romantic relationship.	1	2	3	4	5	6	7
11.	I wish I could tell someone who I am in love with, that I love them.	1	2	3	4	5	6	7
12.	I find myself wishing for someone with whom to share my life.	1	2	3	4	5	6	7
13.	I wish my family was more concerned about my welfare.	1	2	3	4	5	6	7
14.	I'm in love with someone who is in love with me.	1	2	3	4	5	6	7
15.	I wish I had a more satisfying romantic relationship.	1	2	3	4	5	6	7
16.	I have someone who fulfils my needs for intimacy.	1	2	3	4	5	6	7
17.	I feel a part of my family.	1	2	3	4	5	6	7
18.	I have someone who fulfils my emotional needs.	1	2	3	4	5	6	7
19.	My family really cares about me.	1	2	3	4	5	6	7
20.	There is no one in my family I feel close to, but I wish there were.	1	2	3	4	5	6	7
21.	I have a romantic partner to whose happiness I contribute.	1	2	3	4	5	6	7
22.	My family is important to me.	1	2	3	4	5	6	7
23.	I feel close to my family.	1	2	3	4	5	6	7

SELSA (PART II)

Please circle the number that best describes the degree to which each of the following statements is descriptive of you. Please try to respond to each statement.

		Disagree Strongly						Agree Strongly
1.	What's important to me doesn't seem important to the people I know.	1	2	3	4	5	6	7
2.	I don't have a friend(s) who shares my views, but I wish I did.	1	2	3	4	5	6	7
3.	I feel part of a group of friends.	1	2	3	4	5	6	7
4.	My friends understand my motives and reasoning.	1	2	3	4	5	6	7
5.	I feel "in tune" with others.	1	2	3	4	5	6	7
6.	I have a lot in common with others.	1	2	3	4	5	6	7
7.	I have friends that I can turn to for information.	1	2	3	4	5	6	7
8.	I like the people I hang out with.	1	2	3	4	5	6	7
9.	I can depend on my friends for help.	1	2	3	4	5	6	7
10.	I have friends to whom I can talk about the pressures in my life.	1	2	3	4	5	6	7
11.	I don't have a friend(s) who understands me, but I wish I did.	1	2	3	4	5	6	7
12.	I do not feel satisfied with the friends that I have.	1	2	3	4	5	6	7
13.	I have a friend(s) with whom I can share my views.	1	2	3	4	5	6	7
14.	I'm not part of a group of friends and I wish I were.	1	2	3	4	5	6	7

Informed Consent

We are requesting that you participate in a research study conducted by Joy M. Tassin, an undergraduate psychology student at Illinois Wesleyan University under the supervision of Dr. John M. Ernst. The purpose of this project is to evaluate word problem-solving skills in relation to personality characteristics, mood, and relationships. You may receive credit towards course requirements if you are enrolled in general psychology.

You will be taking a total of four brief tests lasting for approximately thirty minutes. The tests will consist of two word problem-solving tasks and two personality questionnaires. You may find some of the questions to be personal or they may ask you about feelings that you are not comfortable with. You are free to withdraw from the session at any time, and are free to answer or to not answer any of the questions. There will be no penalty for withdrawing or for omission of answers.

The specific information that you provide will be strictly confidential and never at any time be associated with your name. Your responses will be classified and stored by a participant ID number only.

If you have any questions regarding this project, please feel free to contact Joy Tassin at (309) 556-2052 or the supervising faculty member Dr. John M. Ernst at (309) 556-3907. If you have any concerns regarding this project, please feel free to contact Dr. Doran French, a member of IWU's independent review board for ethics in experimentation, at (309) 556-3662.

I have read the above information pertaining to the word solving-problem and personality research.

___ I agree to participate in this research. I understand that I may stop participating at any time or to not answer any of the questions without penalty.

___ I do not agree to participate in this research.

_____   _____

Participant Signature   Date

_____   _____

Interviewer Signature   Date

Written Debriefing

The purpose of this study was to further develop our understanding of loneliness. Previous research has indicated that loneliness consists of emotional and social loneliness. Emotional loneliness is the result of feeling unsatisfied with one-on-one relationships whereas social loneliness is the result of feeling unsatisfied with one's social group. The third and the fourth tests that you took were standardized tests for measuring loneliness. Evidence has indicated, however, that if a person enjoys time spent alone, this may also result in decreased loneliness. Current research does not account for this aspect of loneliness. Hence, we need a better understanding of feelings about time alone as well as emotional and social feelings of loneliness.

Our approach describes a person's self-concept (beliefs about who one is) as being a combined measure of three ways in which individuals view themselves. This consists of how individuals describe themselves as an individual, how they describe themselves in one-on-one or intimate relationships, and how they describe themselves within larger social groups. Included in each individual's view of himself or herself is a set of characteristics unique to each type of relationship, including the different ways in which one experiences loneliness in each relationship. Therefore, if a person is thinking about a particular relationship, they will only experience the feelings of belonging or loneliness associated with that particular type of relationship.

The word task was a distracter test included in this study to make the purpose of the study less obvious. Most participants do not know the purpose of the study, and it would be normal for you to have not predicted the purpose of the study.

Also, the last test was a questionnaire designed to measure loneliness. It has been found in previous research that how depressed a person is feeling can have an effect on how they experience loneliness.

Do you have any Questions?

If you have any questions in the future, please contact us at the telephone number listed on the consent form that you received a copy of earlier. In addition, if you feel that you would like to further discuss any feelings you may have experienced as a result of this study, please feel free to contact the primary investigator, Professor John Ernst (309-556-3907) or contact the counseling services (their services are free) at Illinois Wesleyan at 309-556-3052.

If you are interested in this study and would like further information, the following are recommended readings used in this study:

Brewer, Marilynn B., & Gardner, Wendi. (1996). Who Is This "We"? Levels of Collective Identity and Self Representations. Journal of Personality and Social Psychology, 71 (1), 83-93.

Russell, Dan, Cultrona, Carolyn E., Rose, Jayne, and Yurko, Karen. (1984). Social and Emotional Loneliness: An Examination of Weiss's Typology of Loneliness. Journal of Personality and Social Psychology, 46 (6), 1313-1321.

Thank you again for your participation. Your help is of great service to us as we try to develop a more accurate model for loneliness.

Please try to form as many words as possible out of the word "crustaceans." Words must be at least two letters long, and you cannot repeat words.

Table 1

Mean Responses for Loneliness Scales

Measurement	Condition								
	Interpersonal			Collective			Control		
	M	SD	N	M	SD	N	M	SD	N
UCLA									
Total Score	33.33	9.98	24	33.39	9.07	23	33.26	10.96	23
Isolation	8.33	2.62	24	7.78	2.17	23	7.17	2.34	23
Connectedness	4.88	1.68	24	5.00	2.00	23	4.78	1.44	23
Belongingness	6.00	2.17	24	5.78	1.86	23	5.74	1.63	23
SELSA									
Emotional	56.00	22.97	24	57.50	23.25	23	56.82	21.42	23
Social	27.25	16.37	24	25.13	9.31	23	26.30	10.66	23

Table 2

Mean Values for Loneliness Scales by Gender

Female (N=49) Measurement	Mean	Std. Deviation	Range
UCLA			
Total Score	34.0816	9.3582	46.00
Isolation	8.2449	2.3142	12.00
Connectedness	4.7347	1.4109	7.00
Belongingness	5.8776	1.7276	9.00
SELSA			
Emotional	58.4621	21.4869	81.00
Social	25.3469	11.9923	77.00

Male (N=20) Measurement	Mean	Std. Deviation	Range
UCLA			
Total Score	31.8000	11.2979	33.00
Isolation	6.7000	2.3418	8.00
Connectedness	5.3000	2.2734	8.00
Belongingness	5.8500	2.2542	8.00
SELSA			
Emotional	52.6500	24.0357	81.00
Social	28.2000	13.7251	41.00

Sostoras, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, he was rewarded with a small kingdom of his own to rule.

About 10 years later, Sargon I was conscripting warriors for a new war. Sostoras was obligated to send a detachment of soldiers to aid Sargon I. He had to decide who to put in command of the detachment. After thinking about it for a long time, Sostoras eventually decided on Tiglath who was a talented general. This appointment had several advantages. Sostoras was able to make an excellent general indebted to him. This would solidify Sostoras' hold on his own dominion. In addition, the very fact of having a general such as Tiglath as his personal representative would greatly increase Sostoras' prestige. Finally, sending his best general would be likely to make Sargon I grateful. Consequently, there was the possibility of getting rewarded by Sargon I.

Do you admire Sostoras?   Yes   No   Not Sure

Sostoras, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, he was rewarded with a small kingdom of his own to rule.

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Do you admire Sostoras?   Yes   No   Not Sure

Sostoras, a warrior in ancient Sumer, was largely responsible for the success of Sargon I in conquering all of Mesopotamia. As a result, he was rewarded with a small kingdom of his own to rule.

About ten years later, Sargon I was conscripting warriors for a new war. Sostoras was obligated to send a detachment of soldiers to aid Sargon I. He had to decide who to put in charge of the detachment. After thinking about it for a long time, Sostoras eventually decided on Tiglath who, while not an intimate of Sostoras, was an important member of his community. This appointment had several advantages. Sostoras was able to show loyalty to his community. He was able to cement their loyalty to him. In addition, having Tiglath as the commander increased the power and prestige of the community as a whole. Finally, if Tiglath preformed will, Sargon I would be indebted to the whole community.

Do you admire Sostoras?   Yes   No   Not Sure

CES-D

For the following statements, choose the letter for each statement which best describes how often your felt this way DURING THE PAST WEEK. Darken the corresponding circle on the score sheet.

	DURING THE PAST WEEK:	Rarely or none of the time	Some or a little of the time	Occasionally or a moderate amount of time	Most or all of the time
1.	I was bothered by things that usually don't bother me.	0	1	2	3
2.	I did not feel like eating; my appetite was poor.	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4.	I felt that I was just as good as other people.	0	1	2	3
5.	I had trouble keeping my mind on what I was doing.	0	1	2	3
6.	I felt depressed.	0	1	2	3
7.	I felt that everything I did was an effort.	0	1	2	3
8.	I felt hopeful about the future.	0	1	2	3
9.	I thought life had been a failure.	0	1	2	3
10.	I felt fearful.	0	1	2	3
11.	My sleep was restless.	0	1	2	3
12.	I was happy.	0	1	2	3
13.	I talked less than usual.	0	1	2	3
14.	I felt lonely.	0	1	2	3
15.	People were unfriendly.	0	1	2	3
16.	I enjoyed life.	0	1	2	3
17.	I had crying spells.	0	1	2	3
18.	I felt sad.	0	1	2	3
19.	I felt that people disliked me.	0	1	2	3
20.	I could not get "going."	0	1	2	3