

Loneliness and Disclosure Processes  
in Early Adolescence

by

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## Abstract

Research has shown that, in comparison to nonlonely adults, lonely adults show problems in self-disclosure intimacy with peers and the current study was designed to assess whether lonely adolescents exhibit these problems. In the study, 37 male and 47 female early adolescents were administered a loneliness questionnaire and later engaged in structured interactions with male and female peer confederate partners who provided either high or low intimate information. As expected, subjects demonstrated topic-intimacy continuity with partners by choosing topics and disclosing information higher in intimacy with the partners who provided high as opposed to low intimacy. In partial support of hypotheses, lonely boys chose topics low in intimacy in response to female peers. In contrast to other subjects, lonely boys showed a tendency to disclose less intimate information and, paradoxically, believed that their partners became more familiar with them. Findings were interpreted as indicating that the disclosure skill deficits of lonely boys disrupted the formation of opposite-sex relationships, but not necessarily chumships. It is assumed that lack of awareness regarding low levels of disclosure intimacy with peers is largely responsible for the social skill deficits of these lonely individuals.

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This work is dedicated to my parents, Bev and Bill Whitney.

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**Loneliness and Disclosure Processes  
in Early Adolescence**

Many authors have proposed that loneliness is a widespread problem in our society. For example, Peplau and Perlman (1982) argue that loneliness is a fact of life for millions of Americans and that it is linked to such serious problems as alcoholism, physical illness, and suicide. Most relevant to the current investigation is Brennan's assertion (1982) that the adolescent period is marked by intense and widespread loneliness. Perhaps partly due to a recognition of the extent and seriousness of loneliness, research into this phenomenon has rapidly expanded over the last two decades. In the context of this research, loneliness has been conceptualized as a state of self-perceived dissatisfaction with social relationships accompanied by a varying degree of negative affect (see Solano, Batten & Parish, 1982).

Several researchers in this field now propose, and have found support for, the notion that loneliness is associated with deficits in social skills such as self-disclosure (e.g. Horowitz & French, 1979; Chelune, Sultan & Williams, 1980; Jones, Hobbs & Hockenbury, 1982; Solano, Batten & Parish, 1982; Wheeler, Reis & Nezlek, 1983). For example, lonely adults have been found to have difficulty in appropriately revealing personal information

to others, particularly in initial acquaintanceship interpersonal interactions (Chelune, Sultan & Williams, 1980; Solano, Batten & Parish, 1982). Solano et al. (1982) suggest that "the self-disclosure style of the lonely person impairs the normal development of social relationships" (p. 524).

The bulk of research into this important association between loneliness and self-disclosure processes has been demonstrated with adults. It has yet to be empirically established whether such an association exists in early adolescence and the current study was designed to investigate this issue. The period of early adolescence was targeted for investigation for three reasons. First, as mentioned, loneliness is believed to be intense and widespread in this developmental period. Second, children of this age have reached a stage of development in which they form mutually intimate relationships with same-sex peers or what Sullivan (1949) called chumships. Sullivan argued that these early same-sex friendships are significant as building blocks for adult heterosexual relationships. It is possible that the disclosure skill deficits associated with loneliness disrupt the formation of chumships and, as a result, affect the formation of relationships later in adulthood. Finally, early adolescence is the period of development in which individuals just begin to engage in intimate



self-disclosures to opposite sex peers (Sharabany, Gershoni & Hofman, 1981); prior to this age children exhibit virtually same-sex patterns of friendship and intimacy - chumships (Rotenberg, 1984; 1986). Therefore, the study was designed to permit the examination of the association between loneliness and self-disclosure processes at the onset of intimate disclosure to opposite-sex peers.

### Loneliness and Disclosure Processes in Adults

The research on the association between loneliness and disclosure processes in adults provides a basis from which to consider that association in early adolescence. Research on adults has provided evidence that loneliness has less to do with overall levels of social activity than with the quality of social interactions (Chelune, Sultan & Williams, 1980; Jones, 1981; Wheeler, Reis & Nezlek, 1983). Wheeler et al. (1981) found that loneliness was related to the absence, in individuals, of sufficient meaningfulness in their contact with others. Quality or meaningfulness of relating in the above study was particularly evident in the measures of intimacy, self-disclosure, and other-disclosure.

The association between loneliness and self-disclosure has been found to vary as a function of the sex of the recipient or target of disclosures. Solano, Batten and Parish (1982) found that, in the first of two experiments,

loneliness in male and female college students, was significantly related to a self-perceived lack of intimate disclosure to opposite-sex friends. Females did, however, show this association for same-sex friends as well. In the second experiment, lonely and nonlonely college students were engaged in structured interactions with same-sex and opposite-sex peers. They were required to discuss topics varying in intimacy. It was found that the lonely adults were choosing topics differently from the nonlonely adults and that choices in intimacy of topic depended on the sex of the interaction partner. Nonlonely subjects typically began initial interactions with low intimate self-disclosure topics for same-sex partners and high intimate self-disclosure topics for opposite-sex partners. Lonely subjects in their study reversed this trend, however, and tended to begin by choosing high intimate self-disclosure topics for same-sex partners and low intimate self-disclosure topics with opposite-sex partners. Over the course of the interactions however, it was found in general that lonely adults chose less intimate topics for opposite-sex partners than did the nonlonely adults. After their initial interactions, the subjects and their partners rated their familiarity with one another. Partners reported becoming less familiar with lonely than with nonlonely subjects. One of the strengths of this second study was the use of a behavioral, rather than

self-report, measure of self-disclosures. Also, by examining initial interactions, the study permitted the examination of whether disclosure patterns disrupted the formation of intimate relationships. Both of these aspects will be incorporated into the current study.

One limitation with Solano et al.'s study is that it involved the assessment of the intimacy of topic choices, as opposed to the intimacy of disclosure content. The authors assume that the lonely and nonlonely individuals provide disclosures that are of equal intimacy to the topics they choose. This may be a reasonable assumption when assessing adults but it is not a reasonable assumption when assessing early adolescents. For example, an adolescent may choose to talk about a highly intimate topic but not disclose highly intimate information. The present study was designed to assess this issue.

The adult research contains further evidence that lonely individuals lack social skills. Lonely adults demonstrate a lack of mutuality with, and attention to, others in social interaction. Research findings support the conclusion that, in comparison to nonlonely adults, lonely adults demonstrate during initial interactions with others: (a) less awareness of their partners; (b) less concern for them; (c) a tendency to be more self-focused and self-absorbed; (d) inappropriateness of self-disclosure; and (e) less ability to make themselves

known (Jones, Hobbs & Hockenbury, 1982; Solano, Batten & Parish, 1982). Consistent with this approach, Jones et al. (1982) found that training lonely adults in the social skill of partner attention significantly reduced their loneliness. One implication of this research is that it is probable that lonely individuals will be less likely to: (a) respond to others with disclosure topics comparable in level of intimacy to that of their partners' and (b) show reciprocity of self-disclosure by actually disclosing information of equal intimacy to that of their partners. Broadly, lonely individuals should be less likely to demonstrate this topic-intimacy continuity pattern.

#### Loneliness and Disclosure Processes in Children

Loneliness and self-disclosure processes in children have received some attention in research. A loneliness scale for children has been developed by Asher, Hymel and Renshaw (1984) which assesses children's self-reported satisfaction with peer relationships. These authors found that on most of the items, over ten percent of the subjects reported feelings of loneliness and hence social dissatisfaction. Asher et al. (1984) found a significant overall relationship between loneliness and sociometric status (popularity), as determined by classroom peer ratings and nominations. However, the relationship between loneliness and sociometric status was not absolute. For

example, many unpopular children did not experience loneliness, and hence little difficulty in peer relationships, while five percent of the popular children were high in loneliness. This is consistent with research on adults (eg. Wheeler, Reis & Nezlek, 1983) suggesting that loneliness is primarily related to the quality (meaningfulness), rather than quantity, of social relationships.

The importance of the link between loneliness and the quality of childrens' relationships is supported by Marcoen and Brumagne's (1985) research. In their research, fifth, seventh and ninth grade boys and girls were administered a loneliness scale and were rated by their classmates on their perceived social sensitivity. This latter measure is an assessment of the quality of social interaction and it included classmates' ratings of the individuals as sources of comfort, support, and sympathy to others in distress. It was found that loneliness was correlated with social sensitivity in which individuals low in loneliness were higher in social sensitivity. This finding persisted even if these individuals received relatively less support than they offered in their interactions.

The research on children has provided evidence of both sex differences and similarities in loneliness and self-disclosure. Although research indicates that boys

experience greater feelings of loneliness than girls in their relationships with parents (Marceon & Brumagne, 1985), the sexes do not differ in peer-related loneliness (Asher, Hymel & Renshaw, 1984; Marceon & Brumagne, 1985). However, some sex differences have been found in peer-related intimacy and disclosure. Cohn and Strassberg (1983) found that in preadolescence, girls engage in more intimate as well as more total disclosure than boys. In later childhood and early adolescence, girls seek intimate disclosure in friendship at younger ages than boys (Buhrmester & Furman, 1987) and they report significantly higher intimacy with their same-sex friends than do boys (Sharabany, Gershoni & Hofman, 1981). As described earlier, researchers have found same-sex patterns of intimate self-disclosure for both sexes during early adolescence. Sharabany et al. (1981) found that early adolescents reported greater intimacy to same-sex than to opposite-sex peer friends. In a somewhat younger sample, Rotenberg (1986) found that children reported revealing more secrets to same-sex peers than to opposite-sex peers.

Research indicates that topic-intimacy continuity of self-disclosure is evident in later childhood and early adolescence. Specifically, in a study by Cohn and Strassberg (1983), third and sixth grade boys and girls were required to disclose to peers who provided high or low intimate disclosure. It was found that the children/early

adolescents provided more intimate disclosures to the peer who had provided high than low intimate disclosure. Research indicates that topic-intimacy continuity of self-disclosure in adolescence occurs largely in the context of peer interactions. Hunter (1985), for example, found that there was more mutuality in adolescents' discussions with their peers than with their parents. As in adults, it might be expected that loneliness may be related to the topic-intimacy continuity of self-disclosure in adolescents. If lonely adolescents are similar to lonely adults, in that they are less aware and concerned with others than normal, then they may also be less inclined to demonstrate the topic-intimacy continuity of self-disclosure than nonlonely individuals.

### Hypotheses and Expectations in the Current Study

In the current investigation early adolescents were studied during structured initial interactions with a same-sex and an opposite-sex peer who disclosed either high or low intimate information. Each interaction involved two exchanges between subjects and their partners, with subjects assigned to proceed first. Afterwards, subjects rated both how well they now knew their partners and how well they thought their partners now knew them. Based on research with children, it was expected that early adolescents would choose topics higher in intimacy and

disclose more intimate information to same-sex than to opposite-sex peers. It was also expected that subjects generally would choose higher intimate topics and provide more intimate disclosures to the partner who had disclosed the high, rather than low, intimate information. The major hypothesis of the study was that there would be differences between lonely and nonlonely early adolescents in self-disclosure behavior with peers. The research on loneliness and self-disclosure processes in adults led to the following tentative hypotheses about those differences. First, regarding differences due to the sex of the partner (target), it was expected that, in initiating the interactions, the lonely individuals would choose topics and provide disclosures higher in intimacy than the nonlonely to same-sex peers, and lower in intimacy than the nonlonely to opposite-sex peers. It was also expected during the second disclosure opportunity that lonely subjects would choose topics and provide disclosures lower in intimacy than the nonlonely subjects to opposite-sex peers (see the adult research by Solano, et al., 1982). Second, it was expected that the topic-intimacy continuity of self-disclosure would be less evident in lonely than in nonlonely individuals. This expectation, as previously mentioned, stems from findings that lonely compared to nonlonely individuals are less aware of and concerned with others in interactions. A final



tentative expectation regarding subject familiarity ratings also bears on awareness during the interactive process. Solano et al. (1982) found that interaction partners rated less familiarity with lonely than with nonlonely adult peers. Therefore, it was expected that lonely compared to nonlonely adolescents would report that their peer partners became less familiar with them as a result of their acquaintanceship interaction.

## Method

### Pilot Study

A pilot study was conducted with grade six children with two objectives in mind. The first was to choose standardized disclosures for the actor/partners with whom subjects would interact. It was important to choose partner disclosures which grade six children would themselves rate as either high or low in intimacy. The second purpose was to select topic choices for the study which children perceive to vary consistently along a continuum of low through high intimacy.

Sixteen sixth grade children (8 boys and 8 girls) were tested. The children were obtained from public school. They were verbally presented twenty-two statements representing a sample of children's description of themselves and others (Mohr, 1978; Montemayor & Eisen, 1977; Peevers & Secord, 1973; Rotenberg, 1982). After each

statement, the subjects were asked "If you said these things (statements) to whom would you say them to ?" and indicate their answer by checking (1) only a couple of good friends, (2) a couple of good friends and other children, and (3) anyone. This 3-point scale was illustrated, respectively, by drawings of two children, two children with outlines of other children, and outlines of people. This measure of intimacy was chosen because the measure was consistent with the treatment of intimate information in the research on adolescents (Berndt, 1982) and adults (Strassburg & Anchor, 1975) as that which is restricted to friends.

Based on similarity of intimacy ratings, some statements were paired and chosen to depict high and low intimate disclosures. The following pairs were chosen: (a) for low intimate disclosure, "I live in a white house / I have my own bedroom.", (b) for high intimate disclosure, "I broke my mother's lamp / I think my feet are too big."

The intimacy ratings of the disclosures were averaged across the statements in each pair and subjected to a 2 (Sex of rater) X 2 (Targeted Level of Intimacy) analysis of variance with repeated measures on the latter variable. (Note that the field of the scale was reversed throughout the analyses such that higher numbers correspond to higher intimacy). This yielded an effect of targeted level of intimacy  $F(1,14) = 68.68$   $p < .001$ . The children assigned

higher intimacy ratings to the high intimate disclosures (M = 2.31) than to the low intimate disclosures (M = 1.28).

Rotenberg and Sliz (1988) identified five categories or topics of personal information: (a) description of the environment; (b) description of activities and people; (c) personal preferences; (d) positive personal; and (e) negative personal. They found that kindergarten, second and fourth grade children disclosed more of the high personal categories than of the low personal categories to friends than to nonfriends. The categories would, therefore, appear to reflect variations in intimate information. The pilot research was used to assess whether the topics varied in intimacy for somewhat older children. This was achieved by clustering the statements used in the above study, and now rated by the sixth graders, into the five categories or topics. Four statements were included in each category. Reliability of the classification system was assessed by two adult coders who were naive to the nature of the research. Each of the two raters coded the statements using the classification system and they were in agreement 100%, 88%, 88%, 100% and 100% on the above categories, respectively.

The intimacy ratings across the four statements were averaged and these were subjected to a 2 (Sex) X 5 (Category) analysis of variance. This yielded a main

effect of category,  $F(4,56) = 41.03, p < .001$ . The mean ratings for the five categories were: (a) description of the environment, 1.27; (b) description of people and activities, 1.33; (c) personal preferences, 1.75; (d) positive personal, 2.33; and (e) negative personal, 2.50. The categories or topics did vary in intimacy and are viable for use with this age group.

### Subjects

Eighty-four children (47 females and 37 males), tested at either the end of the sixth grade or beginning of the seventh grade school year, served as subjects. These early adolescents ranged in age from 11 years, 7 months to 13 years and 4 months, with a mean age of 12 years and 3 months. They were solicited through the Thunder Bay public school system by the parental consent form (Appendix A).

### Measures and Apparatus

The subjects' level of loneliness was assessed by Asher et al.'s (1984) loneliness questionnaire (see Appendix B). The 24-item scale contains 16 primary items used to determine the total score and 8 filler items focused on hobbies and activities. Factor analysis by Asher et al. resulted in a primary factor which included the 16 primary (loneliness) items but on which none of the 8 filler items loaded significantly. On the scored 16-item

scale, the authors found internal consistency (Cronbach's alpha = .90) and internal reliability (split-half correlation = .83; Spearman Brown reliability coefficient = .91; Guttman split-half reliability coefficient = .91). Each item on the questionnaire is to be rated using a five-point scale (i.e.; always true, true most of the time, true sometimes, hardly ever true, not true at all), providing a total possible score (on the 16 loneliness items) of 16 to 80. On the questionnaire, higher scores indicated a greater degree of loneliness.

Five categories of disclosure intimacy, derived from the pilot testing and from Rotenberg and Sliz (1988) were found viable and were employed as the subject topic choices in the study. The following topics, with the Rotenberg and Sliz descriptions, are presented in increasing order of intimacy:

1) Descriptions of the Environment - "things such as where you live or what your house looks like, whether you have any pets, things like that."

2) Descriptions of People and Activities - "things such as how you get to school, if you have any brothers or sisters, or what you look like."

3) Personal Preferences - "things such as the foods you like or don't like, the games you like or don't like, or things you like or don't like to do in school."

4) Positive Personal - "things you think are good

about yourself such as your good behavior, your good feelings like when you are really happy or sad, and things you feel are good about your looks."

5) Negative Personal = "things you think are bad about yourself such as your bad behavior like when you get into trouble, some of your bad feelings when you are mad, and things you think are bad about your looks."

Two statement pairs of high and of low intimacy were derived from pilot testing. These were integrated into the high and low, respectively, partner disclosures (scripts) used in the acquaintanceship interactions (see Appendix C).

The subjects' conversations were recorded using cassette tape players. In order to assess the intimacy level of the content of subjects' actual disclosures, the Intimacy Rating Scale (I.R.S.: Strassberg & Anchor, 1975;) was used (see Appendix D). This rating system enables the assignment of values corresponding to the intimacy level of self-disclosures such that; 1 represents low intimate, 2 represents moderate intimate, and 3 represents high intimate disclosures. The I.R.S. has been used in a similar manner by Cohn & Strassberg (1983) to rate the intimacy level of childrens' and early adolescents' self-disclosures. The I.R.S. is somewhat comparable as a measure of intimacy to the topic classifications used in the study, although it contains a large number of content

areas with which to rate a variety of specific disclosures. The subjects' recorded conversations were transcribed verbatim and broken up into utterances, or units of speech, which were coded for level of intimacy. The ratings for the utterances were summed and divided by the number of utterances to provide a mean intimacy rating for each subject disclosure opportunity. An utterance was defined as a unit of speech (generally a single or combination statement or phrase) separated from other speech by either a pause or by a change of subject or train of thought. Two adults, naive to the conditions of the study, each rated half of the utterances. Before actual ratings of all the conversations were conducted, reliability between raters was tested and confirmed by an 87.3 % agreement in ratings, based on a sample of 25 subjects.

### Procedure

Subjects were tested in two sessions. In the first session all subjects were administered the loneliness scale in small groups in accordance with Asher et al.'s (1984) instructions. The second session was conducted up to two weeks later and included the assessment of peer interactions. Subjects were now individually escorted into the testing room and introduced to a boy and girl of approximately the same age as the subject. The boy and girl

were actors hired as interaction partners to provide either a high or low level of disclosure. Both the sex and the disclosure intimacy level of partners were counterbalanced across the range of subject loneliness scores. The session followed these four steps.

First, the subject was told that he or she would have the opportunity to engage in discussions with the two children separately (first the boy and then the girl, or visa-versa). The experimenter announced that there was a possibility that some of the participants would engage in similar but extended interactions with the same individuals in the future. The subject was read and given a list of the Rotenberg and Sliz (1988) topics and descriptions. He/she was to choose one from any of the topics and speak about that topic, as little or as much as desired. The subject was told that all conversation (disclosures) would be kept a secret by the other boy and girl as well as by the experimenter.

Second, after the subject discussed the topics, the other boy or girl (the partner) responded with either: (a) low personal disclosure or (b) high personal disclosure.

Third, after the other boy or girl provided his or her conversation, the subject was asked to talk about the topics again. Following that, the boy and girl responded once more. The first partner that the subject encountered replied with a medium intimate disclosure ("I like going



camping but I don't like the bugs and stuff"). The second partner for each subject simply stated that "he or she had experienced almost the same things (as the subject) and he or she enjoyed their discussion".

Fourth, after the two separate conversations were completed, the subject was asked to rate on a scale of 1 to 5: (a) how much the other boy and girl knew him or her (the subject); and (b) how much he or she knew the other boy and girl. The following scale of ratings and descriptions, from low to high, was presented: 1) not at all; 2) a little bit; 3) kind of; 4) very much; 5) very, very much.

## Results

### Loneliness

Loneliness scores in the present study ranged from 19 to 60 (from a possible 16 to 80) with a mean of 32.73 and a standard deviation of 9.58. In Asher et al.'s (1984) study the mean loneliness score was 32.51 and the standard deviation was 11.82, and these are comparable to those in the present investigation. There was, however, a greater range of scores, 16 to 79, and that likely reflects their much larger sample size. An initial analysis of variance indicated that there was no significant difference in loneliness between boys and girls ( $F(1,82) = 1.16$ ) in the present study. The mean score and standard deviation for the boys were 31.46 and 8.93, and for the girls were 33.72

and 10.04. This absence of sex differences in loneliness permitted the consideration of boys and girls within the same analysis.

Previous researchers studying the link between loneliness and social behaviour in adults have examined the responding of groups consisting of lonely individuals versus groups of nonlonely individuals (eg. Horowitz & French, 1979; Solano et al., 1982). The importance of this is to classify or categorize, as a group, those who identify themselves as particularly lonely as opposed to nonlonely. The category groups created in the current study to assess differences between lonely and nonlonely adolescents were based on the upper and lower quartiles respectively of the loneliness scores. The lonely group contained 7 boys and 15 girls and had a mean score of 45.95 which was approximately one and a half standard deviations above the mean for the total sample of subjects. The nonlonely group contained 10 boys and 11 girls and had a mean score of 22.43, approximately one standard deviation below the mean of the total sample. The two groups were compared and found to be significantly different in loneliness,  $t(24) = 17.63, p < .001$ .

In addition, the study offered the opportunity to examine processes more common to all early adolescents. This was accomplished by also performing analyses with all subjects, and subjecting the loneliness scores to a median

split. Thus two loneliness level groups were created with 16 boys and 26 girls in the high-lonely group and with 21 boys and 21 girls in the low-lonely group.

Analyses were carried out on each of the four basic aspects of the study. First to be examined were the subjects' initial intimacy levels of self-disclosure, including the sex of the target of disclosures as a variable. Subject responses to partners, for both intimacy of topic choice and of disclosure content, were then analysed to assess the topic-intimacy continuity of disclosures as a function of the partner's level of intimacy. Subject responses were also examined as a function of the sex of the target. Finally, analyses were conducted on the subjects' familiarity ratings. These were examined first for subject ratings of their familiarity with partners and again for subject perceptions of how familiar the partners were with them (the subjects). Note that there is partial data for one subject because the partner made a mistake when providing the required disclosure. This subject's responses were excluded from the corresponding analyses.

#### Initial Disclosures

A 2(sex of subject) X 2(loneliness level) X 2(sex of target) analysis of variance, with repeated measures on the last variable, was carried out separately for the intimacy level of topic choices and of the actual disclosure

content. In the study, the subjects' topic choices were numbered 1 through 5 in accordance with the low through high intimacy ratings of the topics as assessed in pilot testing and by Rotenberg and Sliz (1988). The above analyses were conducted first for the loneliness category groups and then again for all subjects with a median split (see Appendix E for the ANOVA Tables, listed in order of appearance of analyses in the text).

For the loneliness category groups, the ANOVA for the intimacy of subjects' topic choices yielded only a significant main effect of loneliness category,  $F(1,39) = 4.96$ ,  $p < .05$  (see Table 1, Appendix E). The lonely subjects chose higher intimate topics ( $M = 2.67$ ) than the nonlonely subjects ( $M = 2.05$ ) in their initial disclosures. The analysis for the intimacy of disclosure content did not yield significance (see Table 2, Appendix E). This indicated that the preference of lonely compared to nonlonely subjects for topics higher in intimacy was not reflected in differences in their intimacy of actual self-disclosure to their partners. The hypothesis that lonely subjects would differ from nonlonely subjects in initial level of intimacy was confirmed but in the limited sense that lonely subjects chose to be more intimate, but performed no differently, than nonlonely subjects. The expected effect of target sex on initial subject disclosures was not found.

The analyses for the median split on both measures of initial intimacy of self-disclosure did not yield significance (see Tables 3 and 4, Appendix E).

#### Topic<Intimacy Continuity

A 2(sex of subject) X 2(loneliness level) X 2(level of partner intimacy) analysis of variance, with repeated measures on the last variable, was conducted for both intimacy of topic choices and of disclosure content of subjects' responses to partners. This was carried out to assess the continuity of subjects' levels of topic<intimacy with that initially provided by their partner. The analyses for the loneliness category groups yielded no significance (see Tables 5 and 6, Appendix E). Therefore the expectation that lonely subjects would differ from nonlonely subjects in intimacy of responding to partners, based on the partner's level of intimacy, was not confirmed.

It was expected that subjects overall would respond with topic<intimacy continuity to their partner's intimacy level of disclosure. The expectation was confirmed in the intimacy of topic choices by a trend,  $F(1,79) = 2.79, p < .10$ , of the main effect of partner intimacy level (see Table 7, Appendix E). As expected, subjects chose higher intimacy topics in responding to the high intimacy partner ( $M = 2.64$ ) than to the low intimacy partner ( $M = 2.36$ ). The expectation was also confirmed by a significant main

effect of partner intimacy level for the ratings of intimacy of disclosure content,  $F(1,79) = 5.33$ ,  $p < .05$  (see Table 8, Appendix E). As expected, subjects responded by providing higher intimate disclosures to the high intimacy partner ( $M = 1.80$ ) than to the low intimacy partner ( $M = 1.61$ ). There were no other significant main effects or interactions in the analyses assessing topic-intimacy continuity.

#### Target Effect

A 2(sex of subject) X 2(loneliness level) X 2(sex of target) analysis of variance, with repeated measures on the last variable, was carried out on the intimacy level of both topic choices and disclosure content of subjects' responses to partners. For the loneliness category groups, the ANOVA on the intimacy of topic choices yielded a marginally significant (see Table 9, Appendix E) three way interaction between subject sex, loneliness level and partner sex,  $F(1,38) = 3.98$ ,  $p = .05$  (for the cell means refer to Table 1 in Appendix F, containing tables of cell means for the two and three way interactions). Analyses of simple effects yielded a significant interaction of sex of subject and loneliness category in response to the female target,  $F(1,38) = 5.46$ ,  $p < .05$ . Tukey, a posteriori analyses revealed that lonely boys chose significantly lower intimacy topics ( $M = 1.57$ ) in response to females than did either nonlonely boys ( $M = 3.20$ ) or lonely girls

( $M = 3.07$ ). Analysis involving the actual disclosure content revealed a trend in the interaction of subject sex and loneliness category,  $F(1,38) = 3.57$ ,  $p = .07$  (see Table 10, Appendix E). Scrutiny of the means in Table 2 (see Appendix F) reveals a tendency in the lonely boys to provide less intimate disclosures ( $M = 1.35$ ) in response to partners than either the lonely girls ( $M = 1.88$ ) or the nonlonely boys ( $M = 1.79$ ) and girls ( $M = 1.76$ ).

The median split analysis of the intimacy of topic choices yielded first, an expected significant two way interaction of subject sex and partner sex,  $F(1,79) = 4.50$ ,  $p < .05$  (see Table 3 for cell means). An expected same-sex pattern emerged as boys chose higher intimacy topics in response to male partners ( $M = 2.70$ ) than to female partners ( $M = 2.34$ ), while girls chose higher intimacy topics in response to female partners ( $M = 2.67$ ) than to male partners ( $M = 2.23$ ). The mean comparisons did not produce significance, however, this interaction was qualified by a significant three way interaction of sex of subject, loneliness level and sex of target,  $F(1,79) = 4.42$ ,  $p < .05$  (see Table 4 for cell means). This parallels the three way interaction seen in the loneliness category groups. Simple effect analyses of the interaction yields, as in the category groups, a significant interaction between sex of subject and loneliness level in subject responses to the female target,  $F(1,79) = 5.77$ ,  $p < .05$ .

Tukey, a posteriori analyses reveals a replication of the pattern in the loneliness category groups in which high=lonely boys chose significantly less intimate topics in response to females than did either the low=lonely boys or the high=lonely girls. In addition, simple effect analyses revealed a significant interaction between sex of subject and sex of target for the high=lonely subjects,  $F(2,79) = 4.49, p < .05$ . Tukey, a posteriori comparisons revealed a same=sex pattern among the high=lonely subjects in which these subjects chose significantly higher intimacy topics in response to same=sex partners than to opposite=sex partners. There were no other significant main effects or interactions in analyses of either the topics choices or disclosure content (see Tables 11 and 12, Appendix E).

### Familiarity Ratings

#### a.) Subject familiarity with partners:

The subjects' familiarity ratings were subjected to a 2(sex of subject) X 2(loneliness level) X 2(sex of target) analysis of variance with repeated measures on the last variable.

Analysis of the loneliness category groups yielded no significance which indicated that, as with adults, the lonely early adolescents were not differentiated from the nonlonely in rating their familiarity of peers (see Table 13, Appendix E).



The median split analysis yielded only a significant two way interaction between sex of subject and sex of target,  $F(1,79) = 5.69$ ,  $p < .05$  (see Table 14, Appendix E). A same-sex pattern emerged in the subject familiarity ratings of partners. Examination of the means in Table 5 indicated that subjects reported becoming more familiar with same-sex partners than with opposite-sex partners. However, Tukey, a posteriori analyses did not yield significant mean differences.

b.) Subject perceived partner familiarity with subjects:

The subjects' ratings of how familiar they perceived that partners became with them (the subjects) were subjected to a  $2(\text{sex of subject}) \times 2(\text{loneliness level}) \times 2(\text{sex of target})$  analysis of variance, with repeated measures on the last variable. Analysis of the loneliness category groups (see Table 15, Appendix E) yielded first, a significant two way interaction of sex of subject and loneliness category,  $F(1,38) = 4.45$ ,  $p < .05$  (see Table 7 for cell means). Tukey, a posteriori analyses revealed, counter to expectation, that lonely boys ( $M = 2.93$ ) compared to nonlonely boys ( $M = 2.25$ ) perceived that their partners became more familiar with them. The same analysis yielded a second significant two way interaction, this time between sex of subject and sex of target,  $F(1,38) = 11.52$ ,  $p < .01$  (see Table 6 for cell means). A posteriori comparisons revealed a same-sex pattern in which boys

perceived that male partners became significantly more familiar with them ( $M = 2.82$ ) than did female partners ( $M = 2.36$ ) and girls perceived that female partners became significantly more familiar with them ( $M = 2.85$ ) than did male partners ( $M = 2.53$ ). Also revealed was that subjects perceived that female partners became significantly more familiar with female subjects than with male subjects.

For all subjects, the same interaction as that in the category groups between sex of subject and sex of target yielded significance in the median split,  $F(1,79) = 25.43$ ,  $p < .001$  (see Table 8 for cell means). The same-sex pattern revealed in the loneliness category groups was replicated here, for all subjects. There were no other significant main effects or interactions in the analyses of partner familiarity with subjects (see Table 16, Appendix E).

### Discussion

One expectation in the study was that early adolescents in general would self-disclose more intimately to same-sex than to opposite-sex peers. Consistent with this hypothesis, there was evidence that subjects chose higher intimate disclosure topics for same-sex than for opposite-sex peers in responding to partners. The same-sex pattern of topic choice intimacy was qualified, however, by the loneliness level of the subjects. Also, no evidence

was found to confirm the expectation of a same-sex pattern of intimacy in either, the topic choices during initial subject disclosures, or in the subjects' actual disclosure content throughout the interactions.

Also regarding general processes in early adolescents, it was expected that adolescents would demonstrate topic-intimacy continuity with their peer partners during the interactive (response) phase of the acquaintanceship procedure. Evidence supporting this expectation was found for continuity of the partners' level of intimacy in both the subjects' intimacy of topic choice and intimacy of disclosure content. This is consistent with the research of Cohn and Strassberg (1983) who found reciprocity of self-disclosure in children and early adolescents.

The primary hypotheses in the current study were concerned with self-disclosure processes in lonely compared to nonlonely early adolescents. The expectation regarding topic-intimacy continuity with peers was that lonely compared to nonlonely early adolescents would be less inclined to demonstrate this intimacy continuity process with partners which involves attention to, and concern for, the intimacy level of partners' disclosures. No evidence was found to indicate that the lonely early adolescents differed from the nonlonely in this regard. Therefore, contrary to expectation, lonely adolescents were sensitive to their partners' intimacy level and were willing to

respond in kind.

Another expectation concerned the relationship between the intimacy of subject disclosures and the sex of the target of disclosures. It was expected that lonely compared to nonlonely early adolescents would disclose with lower intimacy to opposite-sex peers and with higher intimacy to same-sex peers. Initially, the lonely adolescents did choose topics higher in intimacy than the nonlonely but this was not qualified by the sex of the target. Also, this choice of higher intimacy topics was not evident in their disclosure content. These findings may be interpreted as indicating that lonely early adolescents were, initially at least, eager or motivated to develop an intimate relationship.

Consistent with the above hypothesis, however, there was evidence of a target effect for lonely boys in the second set of disclosures (response phase of the interaction), which suggests that factors regarding target sex came into play only after an interaction with the partner had occurred. It was found that, in contrast to nonlonely boys, lonely boys chose topics lower in intimacy with female peers. Also, lonely boys tended to disclose less intimate information than did other subject groups. In this respect, lonely boys showed patterns similar to those observed in adults (see Solano et al., 1982). Unlike adults, though, these patterns were not shown

by females. Also, the tendency for lonely individuals to disclose higher intimacy to same-sex peers than do the nonlonely was not shown by either sex. This latter pattern was shown to some extent, however, in the analysis of the total sample in which loneliness was treated as a median split. A same-sex pattern emerged, in which both male and female high-lonely adolescents chose higher intimacy topics for same-sex than for opposite-sex partners.

Unlike the research on adults (Solano et al., 1982), sex differences were found in the association between loneliness and deficits in disclosure skills in early adolescence. The lonely girls did not show the expected deficits. By contrast, the lonely boys did demonstrate some of the expected deficits in disclosure skills in their interactions with peers, particularly with opposite-sex peers. A probable cause for the sex differences in the study regarding disclosure intimacy is that boys of this age are less developmentally advanced than girls in self-disclosure skills. Boys begin intimate disclosures with friends later (Buhrmester & Furman, 1987) and engage in less intimate disclosures generally (Cohn & Strassberg, 1983) than do girls. Therefore, boys, specifically lonely boys may be distinctly at risk in their disclosure skills and development of intimate relationships. The tendency for lonely boys to show these patterns distinctly to opposite sex peers may reflect the fact that intimacy to opposite

sex peers is just emerging at this period in development. The lonely boys may most likely reveal their deficits in disclosure skills in these newly emerging relationships. In contrast, girls with their background and experience with intimate disclosure, may be able to negotiate the necessary intimate relationships with opposite-sex and same-sex peers, even lonely girls.

One particularly interesting finding emerged: lonely boys perceived that their partners became more familiar with them as a result of their conversations, than did the other groups of subjects. This is surprising because lonely boys chose less intimate topics to respond to females, and tended to respond to partners overall with low intimate information. Solano et al. (1982) have suggested that lonely adults in their study may not have perceived their actual lower levels of disclosure intimacy and were therefore not aware of their loss of involvement with their partners. This lack of awareness during acquaintanceship interactions seems to apply equally to lonely male early adolescents in the present study: they appeared to be unaware that they had chose to, or did, disclose low intimate information.

Some findings of same-sex patterns of familiarity emerged in the study. For example, the early adolescents rated higher familiarity with same-sex than with opposite-sex peers even though the peers were providing

personal information (scripts) at an equal level of intimacy. This suggests that this same-sex pattern is the result of a psychological process. The adolescents also assumed that their same-sex partners became more familiar with them than did their opposite-sex partners. This occurred in spite of the fact that, except for lonely boys' topic choices, subjects did not provide unequal levels of personal information based on their partners' sex. Again, the same-sex pattern is suggestive of a psychological process.

Generally, as in adults, lonely adolescents showed some deficits in disclosure skills. Lonely boys in particular demonstrated deficiencies in opposite-sex peer interactions. Findings are interpreted as indicating that clinical intervention regarding disclosure skill deficits in these early adolescents should focus on perceptual deficits or awareness regarding the intimacy level of personal disclosures. Specifically, cognitive training in realistically rating the intimacy level of one's disclosures is suggested. In hand with this should be education aimed at increasing awareness of the association between the level of intimacy disclosed to others and the level of familiarity gained by recipients of disclosures as a result of the intimacy of the information provided to them. Finally, social skill training or practice is recommended. This may be accomplished through role play,

facilitated interaction exercises with a clinician, or by means of structured exercises with peers. This will allow practice with new behaviors and also provide feedback to clients, enabling them to better gauge the social appropriateness or effect of their personal disclosure style.



## References

- Asher, S., Hymel, S. & Renshaw, P. , (1984). Loneliness in children. Child Development, 55, 1456-1464.
- Berndt, T. J., (1982). The features and effects of friendship in early adolescence. Child Development, 53, 1447-1460.
- Brennan, T. , (1982). Loneliness at adolescence. In Peplau & Perlman (Eds.), Loneliness: A Sourcebook of Current Theory, Research and Therapy (pp. 269-290). N.Y.: Wiley-Interscience.
- Buhrmester, D. & Furman, W. , (1987). The development of companionship and intimacy. Child Development, 58, 1101-1113.
- Chelune, G., Sultan, F. & Williams, C. , (1980). Loneliness, self-disclosure, and interpersonal effectiveness. Journal of Counseling Psychology, 27, 462-468.
- Cohn, N. & Strassberg, D., (1983). Self-disclosure reciprocity among preadolescents. Personality and Social Psychology Bulletin, 9, 97-102.
- Horowitz, L., & French, R. , (1979). Interpersonal problems of people who describe themselves as lonely. Journal of Consulting and Clinical Psychology, 47, 762-764.

- Hunter, F.T., (1985). Adolescents' perception of discussions with parents and friends. Developmental Psychology, 21, 433-440.
- Jones, W. , (1981). Loneliness and social contact. The Journal of Social Psychology, 113, 295-296.
- Jones, W., Hobbs, S. & Hockenbury, D. , (1982). Loneliness and social skill deficits. Journal of Personality and Social Psychology, 42, 682-689.
- Marcoen, A. & Brumagne M., (1985). Loneliness among children and young adolescents. Developmental Psychology, 21, 1025-1031.
- Mohr, D.M., (1978). Development of attributes of personal identity. Developmental Psychology, 14, 427-428.
- Montemayor, R. & Eisen, M., (1977). The development of self-conceptions from childhood to adolescence. Developmental Psychology, 13, 314-319.
- Peevers, B.H. & Secord, P.E., (1973). Developmental changes in attribution of descriptive concepts to persons. Journal of Personality and Social Psychology, 27, 120-128.
- Peplau, L. & Perlman, D., (1982). Perspectives on loneliness. In Peplau & Perlman (Eds.), Loneliness; A Sourcebook of Current Theory, Research and Therapy

(pp. 1-18). N.Y.: Wiley-Interscience.

Rotenberg, K.J., (1982). Development of character constancy of self and other. Child Development, 53, 505-515.

Rotenberg, K.J., (1984). Sex differences in children's trust in peers. Sex Roles, 11, 953-957.

Rotenberg, K.J. , (1986). Same-sex patterns and sex differences in the trust value basis of children's friendship. Sex Roles, 15, 613-626.

Rotenberg, K.J. & Mann, L. (1986). The development of the norm of reciprocity of self-disclosure and its function in children's attraction to peers. Child Development, 57, 1349-1357.

Rotenberg, K.J. & Sliz, D. (1988). Children's restrictive disclosure to friends. Merrill-Palmer Quarterly, 34, 203-215.

Sharabany, R. Gershoni, R. & Hofman, J. , (1981). Girlfriend, boyfriend: Age and sex differences in intimate friendship. Developmental Psychology, 17, 809-815.

Solano, C.H., Batten, P.G. & Parish, E.A. , (1982). Loneliness and patterns of self-disclosure. Journal of Personality and Social Psychology, 43, 524-531.

Strassburg, D.S. & Anchor, K.N., (1975). Rating intimacy of self-disclosure. Psychological Reports, 37, 562.

Sullivan, H.S., (1949). The Collected Works of Harry Stack Sullivan. New York: Norton.

Wheeler, L., Reis, H. & Nezlek, J., (1983). Loneliness, social interaction, and sex roles. Journal of Personality and Social Psychology, 45, 943-953.

## Appendices

Parental Consent Form

# Lakehead University

Thunder Bay, Ontario, Canada Postal Code P7B 5E1

Department of Psychology

Telephone 343-8441 Area Code 807

Dear Parent:

I would like to request your permission to have your child participate in a study that I am conducting. The purpose of the study is to gather basic information about how children's tendency to monitor others' reactions and experience of loneliness affects their willingness to talk about personal information to peers. In the study, the children will be administered two standardized tests, one on self-monitoring and the other on the experience of loneliness. These tests will be available for your scrutiny in the principal's office. Later, the children will be given the opportunity to talk to a boy and a girl on topics varying in personal content. The children will be asked to talk about these as much or as little as they want and they will be given the opportunity to withdraw from the study at any time. The total study will take about 1 hour for each child and it will be conducted in the school.

It should be emphasized that the present study is concerned with the patterns evident in children in general. Each child's answers and discussion will be kept confidential and the findings will be reported in terms of groups of children only. The present study has been approved by the ethics committee of Lakehead University.

Please fill out the attached form, indicating whether or not you are willing to let your child participate in the study, and return it to your child's school. Should you have any questions about the study, I would be pleased to answer them. I can be reached at 343-8694.

Yours sincerely,

*Ken Rotenberg*

Name of child: \_\_\_\_\_

Birth date of child: \_\_\_\_\_

Sex of the child:

Male

Female

(Circle the appropriate one)

I want my child to participate / not participate  
in the study (circle your choice).

Signed: \_\_\_\_\_  
Signature of Parent or Guardian

Please return this form to school.

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

Appendix B

Loneliness Scale For Children

1. It's easy for me to make new friends at school.
2. I like to read.
3. I have nobody to talk to.
4. I'm good at working with other children.
5. I watch TV a lot.
6. It's hard for me to make friends.
7. I like school.
8. I have lots of friends.
9. I feel alone.
10. I can find a friend when I need one.
11. I play sports a lot.
12. It's hard to get other kids to like me.
13. I like science.
14. I don't have anyone to play with.
15. I like music.
16. I get along with other kids.
17. I feel left out of things.
18. There's nobody I can go to when I need help.
19. I like to paint and draw.
20. I don't get along with other children.
21. I'm lonely.
22. I am well-liked by the kids in my class.
23. I like playing board games a lot.
24. I don't have any friends.



## Appendix C

### Actor's Scripts

#### Low Intimate Script:

"Let me see, I live in a white house and it is about five blocks from school. Also, I have my own bedroom."

#### High Intimate Script:

"Well, the other day I was walking around the house. I tripped over my younger brother's toys and I knocked over my mother's lamp. It was broken pretty bad. You know, sometimes I think my feet are just too big."

Intimacy Rating Scale

## General guidelines for use

1. Before selecting a rating for an item, review all categories.
  2. Use a separate category (0) when no response at all is provided to an item.
  3. Rate explicit content; avoid making interpretations or assumptions about the intention or motivation underlying a response.
  4. The term "significant others" is meant to include family members, friends and associates with whom one is intimate.
5. If a response encompasses content subsumed by both categories I and II, give it a I rating; if both categories II and III are relevant, employ a category III rating.

## I. Low Content Self-Disclosure

- A. Demographic Public Information (Name, age, religion, occupation, address, height, weight, marital status, etc.)
- B. Daily Habits and Preferences (e.g., smoking)
- C. Schooling
- D. Interests (television, sports)
- E. Hobbies and other leisure time activities
- F. Fashion (i.e., preferences)
  - 1. Make-up
- G. Personal hygiene, health and maintenance
- H. Physical characteristics
- I. Vocational preferences
- J. Borrowing and lending behavior
- K. Political/economic attitudes
- L. Description of events without affect
- M. Aesthetics
- N. Geography (e.g., travel plans; location description)

## II. Moderately Intimate Self-Disclosure

- A. Personal ideology (with relation to how one conducts his/her life)
  - 1. Religious preferences
  - 2. Moral perspective and evaluations (e.g., euthanasia and killing in time of war)
  - 3. Feelings about the future as it relates to oneself and significant others (e.g., aging and dying)
  - 4. Superstitions
  - 5. Dreams and non-sexual fantasy
  - 6. Annoyances
- B. Life plans
  - 1. Ambitions
  - 2. Aspirations
  - 3. Goals
- C. Earlier Life Events (not directly related to one's immediate life situation)
  - 1. School grades and performance
  - 2. Worries, disappointments
  - 3. Successes and accomplishments
  - 4. Rejections and losses
  - 5. Episodes of ridicule
  - 6. Lies told to, by, or about oneself
- D. Life style
  - 1. Financial status
  - 2. Discussion of certain sex-related topics
    - a. Dating, kissing and fondling
    - b. Swearing or being the subject of profanity from others
    - c. Sex-related humor
- E. Illegal or immoral activity of significant others
- F. Child Management

- G. Names and personality descriptions of self or significant others (e.g., lovers and boyfriends)
- H. Admission of minor illegal or anti-social acts
  - 1. Traffic ticket
  - 2. Mistreatment of animals
  - 3. Experimentation with minor drugs (e.g., marijuana) and alcohol
- I. Minor psychological or physical concerns
  - 1. Non-debilitating fears
  - 2. Weight problem and height
  - 3. Failure to take responsibility for oneself
  - 4. Personality characteristics such as trust, immaturity, spontaneity, impulsivity, honesty, defensiveness and warmth
- J. Mild emotional states
  - 1. General likes and dislikes
- K. Narration of events and experiences that include oneself with affect

III. Highly Intimate Self-Disclosure (tends to be self-referential in nature)

- A. Sexual habits and preferences (real or imaginary)
  - 1. Sexual dreams
- B. Major disappointments or regrets
  - 1. Discussion of crises in one's life (past or present)
  - 2. Description of counseling or therapy experience (real or contemplated)
  - 3. Shame
- C. Admission of serious difficulties (past or present in the expression or control of behavior)
  - 1. Addictions (e.g., excessive use of drugs or alcohol; discussion of habitual use)
  - 2. Physical aggression (given or received)
  - 3. Abortion
- D. Important and/or detailed anomalies (physical or psychological)
  - 1. Discussion of previous psychiatric disorder or respondent or significant others
  - 2. False limbs, glass eyes, toupees, etc.
  - 3. Serious diseases (current)
- E. Important feelings and behaviors (positive and negative) relating to:
  - 1. Marriage and family (parents, children, brothers and sisters and significant others--e.g., lovers)
  - 2. Reasons for marriage or divorce
  - 3. Extra-marital sexual relations or desire for same (actual or intended)
  - 4. Discussion of parents' marriage
  - 5. Confidential material told to or initiated by respondent
- F. Discussion of specific instances of intense emotion (directed toward self or others; in personal terms)
  - 1. Feelings of depression

2. Love (if discussed specifically--otherwise, if used in abstract sense, rate II)
  3. Hate, bitterness and resentment
  4. Anger
  5. Elation
  6. Fulfillment
  7. Extreme fears
  8. Very strong personal desires (e.g., to be better liked)
  9. Jealousy
- G. Discussion of important hurt, loss, or discomfort caused or received by respondent (actual or anticipated)
- H. Deep sense of personal worth or inadequacy which significantly affects self-concept
1. Include serious strengths and weaknesses in absolute or relative terms.
  2. Rejection by significant others
- I. Admission of significant illegal, immoral, or antisocial acts or impulses or self or significant others
1. Stealing
  2. Vandalism
  3. Important lies
- J. Details of important and meaningful relationships (i.e., why someone is your best friend; if significant other is discussed not in relation to oneself, use category I or II)

## Appendix E

### Analysis Tables

Table 1

Anova for the Initial Topic Choices  
of the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	42	69.34	9.80	
Sex of Subject (S.Sex)	1	.41	.41	.26
Category	1	7.77	7.77	4.96 *
S.Sex by Category	1	.05	.05	.03
Subjects Within Group	39	61.11	1.57	
Within Subjects	43	55.33	2.26	
Sex of Target (T.Sex)	1	.40	.40	.28
S.Sex by T.Sex	1	.40	.40	.28
Category by T.Sex	1	.03	.03	.02
S.Sex by Category and T.Sex	1	.03	.03	.02
T.Sex by within subjects	39	54.47	1.40	

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\* p < .05

Table 2

Anova for the Initial Disclosure Content  
of the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	42	13.86	.65	
Sex of Subject (S.Sex)	1	.01	.01	.02
Category	1	.25	.25	.72
S.Sex by Category	1	.04	.04	.10
Subjects Within Group	39	13.56	.35	
Within Subjects	43	10.42	.70	
Sex of Target (T.Sex)	1	.16	.16	.62
S.Sex by T.Sex	1	.01	.01	.03
Category by T.Sex	1	.03	.03	.11
S.Sex by Category and T.Sex	1	.24	.24	.93
T.Sex by within subjects	39	9.98	.26	

---



Table 3

Anova for the Initial Topic Choices  
of the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	83	119.97	4.35	
Sex of Subject (S.Sex)	1	.77	.77	.52
Level	1	1.35	1.35	.92
S.Sex by Level	1	.77	.77	.52
Subjects Within Group	80	117.08	1.46	
Within Subjects	84	99.48	4.46	
Sex of Target (T.Sex)	1	1.43	1.43	1.19
S.Sex by T.Sex	1	.01	.01	.01
Level by T.Sex	1	.80	.80	.66
S.Sex by Level and T.Sex	1	1.02	1.02	.85
T.Sex by within subjects	80	96.22	1.20	

---

Table 4

Anova for the Initial Disclosure Content  
of the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Sex of Target)

Source	df	SS	MS	F
Between Subjects	83	27.92	.44	
Sex of Subject (S.Sex)	1	.03	.03	.07
Level	1	.01	.01	.12
S.Sex by Level	1	.05	.05	.14
Subjects Within Group	80	27.83	.35	
Within Subjects	84	19.88	1.05	
Sex of Target (T.Sex)	1	.21	.21	.87
S.Sex by T.Sex	1	.01	.01	.03
Level by T.Sex	1	.14	.14	.57
S.Sex by Level and T.Sex	1	.45	.45	1.90
T.Sex by within subjects	80	19.07	.24	

Table 5

Anova for the Topic Continuity Choices  
of the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Partner Intimacy)

---

Source	df	SS	MS	F
Between Subjects	41	92.37	15.69	
Sex of Subject (S.Sex)	1	1.16	1.16	.56
Category	1	7.69	7.69	3.71
S.Sex by Category	1	4.77	4.77	2.30
Subjects Within Group	38	78.75	2.07	
Within Subjects	42	65.02	4.68	
Partner Intimacy (P.I.)	1	1.74	1.74	1.07
S.Sex by P.I.	1	.35	.35	.22
Category by P.I.	1	.05	.05	.03
S.Sex by Category and P.I.	1	.91	.91	.56
P.I. by within subjects	38	61.97	1.63	

---

Table 6

Anova for the Disclosure Content Continuity  
of the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Partner Intimacy)

---

Source	df	SS	MS	F
Between Subjects	41	19.93	3.70	
Sex of Subject (S.Sex)	1	1.17	1.17	2.67
Category	1	.52	.52	1.18
S.Sex by Category	1	1.57	1.57	3.57
Subjects Within Group	38	16.67	.44	
Within Subjects	42	14.18	.85	
Partner Intimacy (P.I.)	1	.25	.25	.69
S.Sex by P.I.	1	.00	.00	.01
Category by P.I.	1	.16	.16	.43
S.Sex by Category and P.I.	1	.08	.08	.21
P.I. by within subjects	38	13.69	.36	

---

Table 7

Anova for the Topic Continuity Choices  
of the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Partner Intimacy)

---

Source	df	SS	MS	F
Between Subjects	82	147.34	7.80	
Sex of Subject (S. Sex)	1	.17	.17	.10
Level	1	2.32	2.32	1.30
S. Sex by Level	1	3.52	3.52	1.97
Subjects Within Group	79	141.33	1.79	
Within Subjects	83	130.06	11.62	
Partner Intimacy (P. I.)	1	4.24	4.24	2.79
S. Sex by P. I.	1	.07	.07	.05
Level by P. I.	1	1.18	1.18	.77
S. Sex by Level and P. I.	1	4.61	4.61	3.03
P. I. by within subjects	79	119.96	1.52	

---

Table 8

Anova for the Disclosure Content Continuity  
of the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Partner Intimacy)

---

Source	df	SS	MS	F
Between Subjects	82	37.47	1.51	
Sex of Subject (S.Sex)	1	.02	.02	.05
Level	1	.01	.01	.02
S.Sex by Level	1	1.02	1.02	2.20
Subjects Within Group	79	36.42	.46	
Within Subjects	83	31.45	4.09	
Partner Intimacy (P.I.)	1	1.87	1.87	5.33 *
S.Sex by P.I.	1	.40	.40	1.13
Level by P.I.	1	.66	.66	1.89
S.Sex by Level and P.I.	1	.81	.81	2.30
P.I. by within subjects	79	27.71	.35	

---

\* p < .05

Table 9

Anova for the Topic Choice Responses  
of the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	41	92.37	15.69	
Sex of Subject (S.Sex)	1	1.16	1.16	.56
Category	1	7.69	7.69	3.71
S.Sex by Category	1	4.77	4.77	2.30
Subjects Within Group	38	78.75	2.07	
Within Subjects	42	64.00	8.34	
Sex of Target (T.Sex)	1	.00	.00	.00
S.Sex by T.Sex	1	.81	.81	.54
Category by T.Sex	1	.04	.04	.03
S.Sex by Category and T.Sex	1	5.99	5.99	3.98 *
T.Sex by within subjects	38	57.16	1.50	

---

\* p = .05

Table 10

Anova for the Disclosure Content Responses  
of the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Sex of Target)

Source	df	SS	MS	F
Between Subjects	41	19.93	3.70	
Sex of Subject (S.Sex)	1	1.17	1.17	2.67
Category	1	.52	.52	1.18
S.Sex by Category	1	1.57	1.57	3.57
Subjects Within Group	38	16.67	.44	
Within Subjects	42	13.94	1.31	
Sex of Target (T.Sex)	1	.00	.00	.01
S.Sex by T.Sex	1	.02	.02	.04
Category by T.Sex	1	.02	.02	.06
S.Sex by Category and T.Sex	1	.93	.93	2.73
T.Sex by within subjects	38	12.97	.34	



Table 11

Anova for the Topic Choice Responses  
of the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	82	147.34	7.80	
Sex of Subject (S.Sex)	1	.17	.17	.10
Level	1	2.32	2.32	1.30
S.Sex by Level	1	3.52	3.52	1.97
Subjects Within Group	79	141.33	1.79	
Within Subjects	83	128.51	14.98	
Sex of Target (T.Sex)	1	.06	.06	.04
S.Sex by T.Sex	1	6.55	6.55	4.50 *
Level by T.Sex	1	.48	.48	.33
S.Sex by Level and T.Sex	1	6.43	6.43	4.42 *
T.Sex by within subjects	79	114.99	1.46	

---

\* p < .05

Table 12

Anova for the Disclosure Content Responses  
of the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	82	37.47	1.51	
Sex of Subject (S.Sex)	1	.02	.02	.05
Level	1	.01	.01	.02
S.Sex by Level	1	1.02	1.02	2.20
Subjects Within Group	79	36.42	.46	
Within Subjects	83	30.78	2.08	
Sex of Target (T.Sex)	1	.03	.03	.07
S.Sex by T.Sex	1	.68	.68	1.85
Level by T.Sex	1	.00	.00	.00
S.Sex by Level and T.Sex	1	1.00	1.00	2.70
T.Sex by within subjects	79	29.07	.37	

---

Table 13

Anova for the Ratings of Subject Familiarity with Partners  
by the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	41	28.66	2.93	
Sex of Subject (S.Sex)	1	.12	.12	.18
Category	1	.68	.68	.98
S.Sex by Category	1	1.43	1.43	2.05
Subjects Within Group	38	26.43	.70	
Within Subjects	42	14.44	1.08	
Sex of Target (T.Sex)	1	.07	.07	.18
S.Sex by T.Sex	1	.49	.49	1.36
Category by T.Sex	1	.00	.00	.00
S.Sex by Category and T.Sex	1	.16	.16	.45
T.Sex by within subjects	38	13.72	.36	

---

Table 14

Anova for the Ratings of Subject Familiarity with Partners  
by the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Sex of Target)

---

Source	df	SS	MS	F
Between Subjects	82	68.87	1.95	
Sex of Subject (S.Sex)	1	.02	.02	.02
Level	1	.14	.14	.17
S.Sex by Level	1	.93	.93	1.08
Subjects Within Group	79	67.78	.86	
Within Subjects	83	29.63	2.97	
Sex of Target (T.Sex)	1	.00	.00	.00
S.Sex by T.Sex	1	1.95	1.95	5.69 *
Level by T.Sex	1	.45	.45	1.31
S.Sex by Level and T.Sex	1	.23	.23	.67
T.Sex by within subjects	79	27.00	.34	

---

\* p < .05

Table 15

Anova for the Ratings of Partner Familiarity with Subjects  
by the Loneliness Category Groups

2(Sex of Subject) X 2(Loneliness Category) X 2(Sex of Target)

---

Source	df	SS	MS	F	
Between Subjects	41	31.23	5.52		
Sex of Subject (S.Sex)	1	.20	.20	.29	
Category	1	1.54	1.54	2.22	
S.Sex by Category	1	3.09	3.09	4.45	*
Subjects Within Group	38	26.40	.69		
Within Subjects	42	12.92	3.36		
Sex of Target (T.Sex)	1	.11	.11	.41	
S.Sex by T.Sex	1	2.98	2.98	11.52	**
Category by T.Sex	1	.01	.01	.05	
S.Sex by Category and T.Sex	1	.00	.00	.01	
T.Sex by within subjects	38	9.82	.26		

---

\*\* p < .01

\* p < .05

Table 16

Anova for the Ratings of Partner Familiarity with Subjects  
by the Loneliness Level Groups

2(Sex of Subject) X 2(Loneliness Level) X 2(Sex of Target)

---

Source	df	SS	MS	F	
Between Subjects	82	58.91	3.00		
Sex of Subject (S.Sex)	1	.42	.42	.59	
Level	1	.42	.42	.59	
S.Sex by Level	1	1.44	1.44	2.01	
Subjects Within Group	79	56.63	.72		
Within Subjects	83	24.69	6.40		
Sex of Target (T.Sex)	1	.13	.13	.54	
S.Sex by T.Sex	1	5.96	5.96	25.43	***
Level by T.Sex	1	.07	.07	.28	
S.Sex by Level and T.Sex	1	.01	.01	.06	
T.Sex by within subjects	79	18.52	.23		

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\*\*\* p < .001

Appendix F

Tables of Cell Means for the Two  
and Three Way Interactions

List of Tables:

- Table 1 Mean Intimacy Topic Choices as a Function of Sex of Subject, Sex of Target and Loneliness Category
- Table 2 Mean Intimacy of Disclosure Content as a Function of Sex of Subject and Loneliness Category
- Table 3 Mean Intimacy of Topic Choices as a Function of Sex of Subject and Sex of Target
- Table 4 Mean Intimacy Topic Choices as a Function of Sex of Subject, Sex of Target and Loneliness Level
- Table 5 Subject Ratings of Familiarity with Partners as a Function of Sex of Subject and Sex of Target
- Table 6 Category Group Ratings of Partner Familiarity with Subjects as a Function of Sex of Subject and Sex of Target
- Table 7 Ratings of Partner Familiarity with Subjects as a Function of Sex of Subject and Loneliness Category
- Table 8 Ratings of Partner Familiarity with Subjects as a Function of Sex of Subject and Sex of Target

TABLE 1

Mean Intimacy Topic Choices as a Function of Sex  
of Subject, Sex of Target and Loneliness Category

Sex of Subject	Sex of Target	Loneliness Category	
		Lonely	Nonlonely
Male	Male	2.29	2.90
	Female	1.57	3.20
Female	Male	2.27	3.00
	Female	3.07	2.60



TABLE 2

Mean Intimacy of Disclosure Content as a Function  
of Sex of Subject and Loneliness Category

---

Sex of Subject	Loneliness Category	
	Lonely	Nonlonely
Male	1.35	1.79
Female	1.88	1.76

---

TABLE 3

Mean Intimacy of Topic Choices as a Function  
of Sex of Subject and Sex of Target

Sex of Subject	Sex of Target	
	Male	Female
Male	2.70	2.34
Female	2.23	2.67

TABLE 4

Mean Intimacy Topic Choices as a Function of Sex  
of Subject, Sex of Target and Loneliness Level

Sex of Subject	Sex of Target	Loneliness Level	
		High Lonely	Low Lonely
Male	Male	2.69	2.71
	Female	1.81	2.86
Female	Male	2.12	2.35
	Female	2.85	2.50

TABLE 5

Subject Ratings of Familiarity with Partners as a  
Function of Sex of Subject and Sex of Target

Sex of Subject	Sex of Target	
	Male	Female
Male	2.69	2.47
Female	2.49	2.71

TABLE 6

Category Group Ratings of Partner Familiarity with Subjects  
as a Function of Sex of Subject and Sex of Target

Sex of Subject	Sex of Target	
	Male	Female
Male	2.82	2.36
Female	2.53	2.85

TABLE 7

Ratings of Partner Familiarity with Subjects as a  
Function of Sex of Subject and Loneliness Category

Sex of Subject	Loneliness Category	
	Lonely	Nonlonely
Male	2.93	2.25
Female	2.63	2.75

TABLE 8

Ratings of Partner Familiarity with Subjects as a  
Function of Sex of Subject and Sex of Target

Sex of Subject	Sex of Target	
	Male	Female
Male	2.70	2.26
Female	2.42	2.75