

Age Differences in Children's Judgements of
Reciprocal and Non Reciprocal Patterns
of Self-Disclosure

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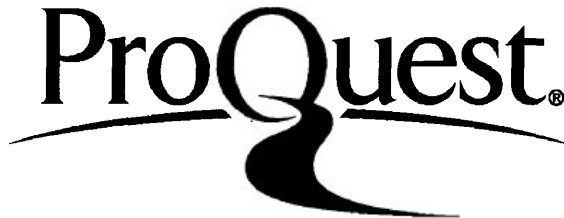
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Abstract

Research conducted supports the conclusion that adults have a well defined norm of reciprocity in self-disclosure.

The purpose of the present research was to determine whether and if so at what age the norm of reciprocity of self-disclosure prevails in children. In the present study, 30 children from each of kindergarten, second grade, fourth and sixth grade were presented videotapes of conversations between two children. The videotapes depicted high-high, low-low, high-low and low-high intimacy levels of self-disclosure in the stimulus person combinations. It should be noted that in some combinations, the intimacy level of the initial disclosure was reciprocated while in others, the respondent did not reciprocate the intimacy level of the initial disclosure. The stimulus materials for these videotapes were derived from 2 pilot studies. Following the viewing of the videotapes, subjects were requested to; (A) recall the exchange; (B) judge the respondent on the likability and friendship scales; (C) give explanations for their judgements.

The results implied that the sixth grade children provided evidence for the norm of reciprocity pattern by indicating more liking and greater desirability

for friendship with the High-High, Low-Low stimulus person combinations in which the respondent reciprocated the intimacy level of the initial disclosure. The explanations of judgements given by the sixth grade children also provided some support for the norm of reciprocity pattern. In contrast, the results indicated that the kindergarten children based their liking and friendship judgements on the content of communication.

Self-disclosure may be defined as "any information which person A communicates verbally or nonverbally to person B" (Cozby, 1973, pg.13). A number of authors propose that self-disclosure is a very important part of social relations (Worthy, Gary & Kahn, 1969; Altman & Tayler, 1973). According to these authors, the decisions people make regarding the amount, type and timing of self-disclosure will not only affect their social relations, but these decisions will also influence the degree of their own self-knowledge and awareness. Theorists have speculated that two types of situations may arise when an individual discloses information: 1) the respondent of the disclosure may perceive the information in a negative context and thus use the information against the individual; 2) if the respondent considers the disclosure to be appropriate, then numerous benefits may be granted to the initial discloser including: self-clarification, social validation, relationship development and social control (Derlega & Gezelak, 1979).

The focus of the present research is self-disclosure processes in children. Up to this date, little research has been conducted in this area. However, there is an extensive body of research and theory on self-disclosure processes in adults and this will be reviewed and utilized as a guide to the present research.

Initial Research on Reciprocity of Self-Disclosure

Numerous studies implied that reciprocity exists in self-disclosure among adults. Jourard (1959) established that the amount disclosed to a colleague correlated highly with the amount of disclosure received from that colleague in a group of female nursing college faculty members. This finding was later replicated in a group of nine male graduate students (Jourard and Landsman, 1960). Additional evidence for the reciprocity effect was acquired by Jourard and Richman (1963). They found a correlation between subjects' reports of disclosure output (the amount they disclosed) and disclosure input (the amount of disclosure they received from their mother, father, best male friend and best female friend).

Theories of Reciprocity of Self-Disclosure in Adults

A review of the literature suggests there is a norm of reciprocity which guides self-disclosure in adults. Three theories have been derived from the research of self-disclosure in adults:

1) Social Penetration Theory:

Social penetration theorists (Altman and Taylor, 1973) postulated that interpersonal relationships grow as a result of interpersonal reward/cost factors, personality characteristics, and situational determinants. These researchers suggest that the role and amount of movement from non-intimate to intimate areas of exchange including

verbal disclosures, types of activities engaged in, etc., are determined by reward/cost factors of the past, present and projected future exchanges.

Altman and Haythorn (1965) found evidence for a "wedge shaped" relationship between the extent and depth of the disclosure. In non-intimate topic areas, the individual discloses a substantially large amount of information in comparison to the decreased amounts of information disclosed in more intimate topic areas.

2) Social Attraction Position:

The Social Attraction position implies that being trusted with another's disclosure is considered to be a social reward by the respondent (Worthy, Gary & Kahn, 1969). In this particular case, the respondent often interprets the initial disclosure as a sign of liking and trust from the discloser. Thus, the respondent will often reciprocate the disclosure as a sign of mutual liking and it provides a reward for the initial discloser.

Derlega, Harris, and Chaikin (1973) proposed that liking the initial discloser does not always account for disclosure reciprocity. The same effect also occurred in conditions where the initial discloser was not liked. Another study conducted by Cozby (1972) yielded similar results rendering additional confidence in this conclusion. It is apparent from the research that reciprocity occurs even in the absence of liking for the initial discloser. Considering the implications from this research, it is

difficult to determine how else we can account for it.

1) Norm of Reciprocity:

Alvin Gouldner (1960, pg. 64) proposed that much of our social behaviour is guided by the norm of reciprocity. "In society, people feel obligated to return the services they have received from others whether they include money, favours, or disclosure, therefore, when an individual discloses information it is usually met by reciprocal disclosure from another person to restore equity in the relationship". Gouldner's research suggests that if there is no disclosure reciprocity in the early stages of a relationship, further development may not occur.

According to Levinger and Snoek (1972), friendships begin when one person risks the possibility of being rejected by disclosing some personal information. The second person reciprocates by sharing something equally intimate and thus the process may continue; however, the disclosure may not always be considered appropriate by the respondent and thus negative factors can cease the further development of the relationship.

Chaikin and Derlega (1974) conducted a study to investigate Gouldner's application of the norm of reciprocity of self-disclosure. They conducted a pilot

study to derive high and low intimacy ratings of information, in which subjects viewed a videotape of conversation between two female actors. One actor revealed information about herself which was considered to be a high intimacy disclosure and the other actor responded with a high or low intimacy disclosure. Four disclosure scripts were presented which varied in terms of high intimacy self-disclosure or low intimacy self-disclosures of both women. The subjects read the first actor's disclosure (low or high), and witnessed the second actor's disclosure on videotape.

Subsequently, the subjects rated the respondents on a nine point scale. The results indicated that when the intimacy level of self-disclosure was reciprocated by the respondent she was given higher liking ratings. When the respondent failed to reciprocate the intimacy level of the initial disclosure her liking ratings decreased. The results also revealed lower desirability for friendship ratings when the respondent replied with a low intimacy level of disclosure to an initial high intimacy level of disclosure.

A similar procedure was employed in the present study to determine if children possess the norm of reciprocity and if so at what age it develops.

Self-Disclosure in Children

There has been a limited amount of research conducted in this area to date. The research completed has been confined to relying on the use of self-report methods (Rivenbark, 1971), or observational methods (Gottman, 1983).

Rivenbark (1971) investigated self-disclosure in the late childhood and adolescent years by administering a modified form of Jourard's self-disclosure questionnaire to subjects in grades 4, 6, 8, 10 and 12. The results of his study indicated that girls disclosed more than boys and that disclosure to peer targets gradually increases with age.

Gottman (1979) conducted a study to investigate the role of self-disclosure in children's friendship formation. This research suggests that self-disclosure was correlated with the achievement of friendship in the dyad but only in the later stages of the relationship.

Youniss (1981) conducted research investigating children's possession of the norm of reciprocity in social interactions. Much of his research was guided by Piaget's earlier research. Piaget (1965) states "that during the earlier stages of development, egocentrism directs the child's behaviour towards subjective satisfaction". The egocentric play continues through the 'early gropings of the motor stage; however, during the later stages of development (9-11 years), the child's

behaviour and relationships with peers are more dominated by cooperation, mutual respect and reciprocity. Guided by Piaget's research (1965), Youniss (1981) suggested that during the early part of middle childhood (5 to 8 years), children's peer friendships appear to be based on reciprocal "tit for tat" behaviour. When the child enters the later period of middle childhood (9 to 12 years and older), the children's peer friendships seem to have a greater emphasis on reciprocally co-operative behaviour. These findings imply that the reciprocity norm would be more evident in fourth grade children and older.

Overview of the Present Research

As was indicated earlier, researchers have not yet assessed the norm of reciprocity of self-disclosure in children. The present study which was guided by Chaikin and Derlega's (1974) research was designed to investigate this issue.

Pilot Study:

A pilot study was designed to derive the stimuli necessary for the experiment. A model for the procedure was provided, in part, by Chaikin and Derlega (1974) who carried out a check on the manipulation of the intimacy level of the disclosures that were depicted in the videotaped conversations. In their study, a separate group of college students were required to rate

each of the self-disclosures on a nine point scale of intimacy. As expected, the subjects rated the high intimate self-disclosures and the low intimate self-disclosures as high and low in intimacy, respectively. A similar task was undertaken in the present research and this was to determine what disclosures children of different ages view as high in intimacy and low in intimacy. Unlike Chaikin and Derlega's (1974) study, however, there was no research on childhood intimacy or common experience from which to select self-disclosures that were very likely high or low in intimacy for children. Also, it was considered that it was not likely that young children understand the term "intimacy".

Two strategies were adopted in the pilot study in order to overcome the research problems. First, following the direction of the research on intimacy in adolescents (Berndt, 1982) and adults (Altman & Taylor, 1973), intimacy of self-disclosure was operationalized as the social information that children would restrict in disclosure to friends rather than to others. Second, the children judged social statements on restrictions of disclosure and specifically, these statements were derived from research on children's descriptions of themselves and others (Peevers & Second, 1973; Mohr, 1978; Montemayor & Eisen, 1977; Rotenberg, 1982). It was expected that the descriptions were both child-appropriate and contained high and low intimate self-disclosures.

One objective of the pilot study was to derive three sets of disclosures equally high in intimacy and three sets of disclosure equally low in intimacy for children from each of kindergarten, second and fourth grades.

One other objective was to derive the likeableness attribute of the high and low intimate disclosures with the goal of obtaining disclosures that were equally liked and were so by the children from each of the three grades.

In the pilot study, sixteen children (8 boys and 8 girls) from each of kindergarten, second and fourth grades were administered a questionnaire composed of a series of 22 social statements (shown in Appendix A). The subjects were drawn from the same schools as those who were used in the subsequent, primary study. The questionnaire was administered to the kindergarten subjects individually and to the second and fourth grade subjects in groups but in all cases the social statements and questions were verbally presented by the experimenter. The subjects were asked, "If you said these things (statements) who would you say them to?", and to indicate their answer on the three point study, 1-- only a couple of good friends, 2 - only a couple of good friends and other children, and 3 - anyone (the intimacy ratings). The three point scale was depicted by drawings of two children, drawings of two children with outlines of other children and outlines of people, respectively. The

subjects were then asked, "If another child said these things (statements), how much would you like him/her?" and to indicate their answer on a 6-point scale ranging from 1 - dislike him/her very much to 6 - like him/her very much. This scale was depicted by a series of frowning and smiling faces. Based on the intimacy ratings, three pairs (sets) of statements were selected for high intimacy disclosures and three pairs (sets) of statements were selected for the different grades and sexes. The second grade boys showed an atypical pattern of intimacy ratings that warranted the selection of two different sets of statements for high intimacy (The sets of statements chosen are described in the primary study).

The intimacy ratings were averaged across the pairs of statements for each set and these were subjected to a 3 (Grade) X 2 (Sex) X 2 (Targeted Levels of Intimacy) X 3 (sets) Analysis of Variance with repeated measures on the latter two variables. The analysis, shown in Appendix B, yielded only an effect of targeted level of intimacy $F(1, 42) = 70.22, p < .001$ in which, as expected, higher intimacy ratings were given to the disclosures targeted as high in intimacy ($M = 2.36$) than those targeted as low in intimacy ($M = 1.81$). (Note that the direction of the intimacy scale was reversed in direction such that higher numbers correspond to higher intimacy).

None of the other effects or interactions were significant, and in particular, the grade by targeted intimacy by set interaction was minimal $F(4, 84) < 1$. Table 1 shows the mean intimacy ratings for the three sets of disclosures at the two levels of targeted intimacy, by grade.

Tukey a posteriori comparisons indicated that at all three grades each of the three sets of the statements targeted for high intimacy were assigned higher intimacy ratings than each of the three sets of the statements targeted for low intimacy (all p s $< .05$). Furthermore there were no significant mean differences between the sets of statements with each targeted level of intimacy for the three grades and comparable means were observed. The study was successful in deriving three sets of disclosures equally high in intimacy and three sets of disclosures equally low in intimacy for the children from the three grades.

The average liking ratings across the pairs of statements were subjected to a similar $3 \times 2 \times 2 \times 3$ analysis of variance (shown in Appendix C). The analysis yielded an effect of the targeted level of intimacy $F(1, 42) = 9.57, p < .005$ in which lower liking ratings were given to the sets of statements targeted for high intimacy ($M = 4.32$) than those targeted for low intimacy ($M = 4.36$). However, this main effect was qualified by a targeted level of intimacy by set interaction $F(8, 84) = 4.64, p < .02$. The means for this interaction

Table 1

Mean Intimacy Ratings for Each of the Three Sets of Disclosures from the Two Targeted Levels of Intimacy by Grade

| Grade (Set) | Targeted Level of Intimacy | | | | | |
|-------------|----------------------------|------|------|---------------|------|------|
| | Low Intimacy | | | High Intimacy | | |
| | A | B | C | A | B | C |
| KD | 1.87 | 1.90 | 1.78 | 2.37 | 2.52 | 2.28 |
| 2nd | 1.84 | 1.75 | 1.72 | 2.17 | 2.28 | 2.31 |
| 4th | 1.97 | 1.62 | 1.84 | 2.34 | 2.56 | 2.37 |

Note: The higher numbers correspond to greater ratings of intimacy.

are shown in Table 2. Tukey a posteriori comparisons indicated that the liking ratings assigned to all three sets (A, B and C) targeted for high intimacy were lower than the ratings assigned to sets B and C targeted for low intimacy. Furthermore, lower liking ratings were assigned, to set C than to set A of the sets targeted for high intimacy and, to set C targeted for high intimacy than set A targeted for low intimacy (all ps < .05).

Despite the various differences in the liking of the selected statements they were used in the primary study. This was followed for two reasons. First, the analyses of all statements in the pilot study indicated that high intimacy ratings were associated with low liking ratings. The lesser liking of the high intimacy statements appeared to be a reliable property of them. Second, there were few viable high intimacy statements for kindergarten children and the analyses of other possible combinations of statements did not yield less differential liking by sets than that found. It was decided to work around the observed inequalities in liking by set when constructing the materials for the primary study. For example, set A of the set targeted for low intimacy was used as the initial disclosure in the study and was not directly judged by the subjects.

Table 2

Mean Liking Ratings for Each of the Three Sets of
Disclosures from the Two Targeted Levels of Intimacy,
by Grade

| Grade (Set) | Targeted Levels of Intimacy | | | | | |
|-------------|-----------------------------|------|------|---------------|------|------|
| | Low Intimacy | | | High Intimacy | | |
| | A | B | C | A | B | C |
| Kd | 4.28 | 5.06 | 5.18 | 4.81 | 4.90 | 3.66 |
| 2nd | 5.03 | 4.93 | 5.03 | 4.50 | 4.31 | 3.94 |
| 4th | 4.41 | 5.12 | 4.81 | 4.34 | 4.03 | 4.41 |

Note: The higher numbers correspond to greater ratings of liking.

Since the study was extended to include sixth grade children, a second pilot study was conducted to derive sixth grade children's intimacy and liking ratings of the 22 social statements.

The analysis of variance of the intimacy ratings for sixth grade children which is shown in Appendix D yielded an effect of level of intimacy $F(1, 14) = 152.65$, $p < .001$. There was also an interaction of Intimacy by Set, $F(2, 28) = 4.94$, $p < .01$. This A, B and C of the low intimacy sets were rated as significantly lower in intimacy in comparison to Set A, B and C of the high intimacy sets.

Set A of the high intimacy statements was rated as particularly high in intimacy in comparison to Set A of the low intimacy. It was also rated as higher than Sets B and C of the high intimacy sets using $p < .01$.

The analysis of the liking ratings which is shown in Appendix E yielded an effect of level of intimacy $F(1, 14) = 5.99$, $p < .02$. There was also an interaction of intimacy by set, $F(2, 28) = 3.75$, $p < .02$. Tukey a posteriori comparisons using all $p < .05$ of the intimacy by set interaction indicated that set A of the high intimacy sets was significantly less liked than set A of the low intimacy sets. The means for this interaction were shown in Table 3. However, there was a

Table 3

Means for Liking Ratings

| | Targeted Level of Intimacy | |
|-----|----------------------------|---------------|
| Set | Low Intimacy | High Intimacy |
| A | 5.56 | 4.50 |
| B | 5.18 | 4.81 |
| C | 5.25 | 4.88 |

tendency for all the high intimacy items to be liked less than the low intimacy items. Even though the intimacy and liking ratings were not identical across all four grades, there was a consistent pattern repeated in which low intimacy items were rated as lower in intimacy and high intimacy items were rated as higher in intimacy. The means of the intimacy ratings for each grade are shown in Table 4.

There were some important implications of the present findings for the primary study. Part of the evidence for the norm of the reciprocity of self-disclosure was the greater liking and desire of friendship of the individual (respondent) who responds by low intimacy to the low intimacy initiator than the individual who responds by high intimacy to the same initiator. The problem encountered here was that, on the basis of the present findings, the children could make this same judgement from their liking of the respondents' statements alone. The test of the presence of the norm of the reciprocity of self-disclosure, therefore rested on the remaining differences in judgement which, in fact, could not be accounted for by the observed differential liking of the high and low intimacy statements. In particular, the norm of the reciprocity of self-disclosure was hypothetically shown by the greater liking and desire of friendship of the respondent who responds by high intimacy to the

Table 4

Means for the Liking Ratings

| Grades | Targeted Level of Intimacy | |
|--------|----------------------------|---------------|
| | Low Intimacy | High Intimacy |
| KD | 2.14 | 1.70 |
| Gr. 2 | 2.23 | 1.74 |
| Gr. 4 | 2.19 | 1.57 |
| Gr. 6 | 2.64 | 1.57 |

Note: Lower ratings indicate higher intimacy.

high intimacy initiator than the respondent who responds by low intimacy to the same initiator. The opposite difference in judgement would be expected on the basis of the observed differential liking of the high and low intimacy statements per se.

Hypothesis Guiding the Research

Guided by Piaget's research (1965) and Younisses' theory (1981) it was expected that:

(a) The norm of reciprocity of self-disclosure would most likely be shown in the fourth grade children and older. It was also expected that these children would show evidence for the norm of reciprocity by indicating that they liked and desired as a friend those respondents who reciprocated as opposed to those who did not reciprocate the intimacy of self-disclosure.

Method

Subjects

Thirty participants (15 boys and 15 girls) from four different age groups of two elementary schools in Thunder Bay participated in the study. The mean ages of the four groups were as follows:

- 1) Kindergarten (\bar{x} age = 5 years, 2 months)
- 2) Grade 2 (\bar{x} age = 7 years, 3 months)
- 3) Grade 4 (\bar{x} age = 9 years, 6 months)
- 4) Grade 6 (\bar{x} age = 11 years, 7 months).

Stimuli

The pilot study described earlier was conducted to derive the stimuli for the present study. From the pilot study, the children's intimacy ratings were used to derive six statements which were considered to be high in intimacy and six statements which were considered to be low in intimacy. The six high intimacy statements were grouped into three sets of two statements each (labelled Set A, Set B and Set C), and the six low intimacy statements were also grouped into three sets of two statements each labelled Set A, Set B and Set C.

The levels of intimate communication derived from the statements were integrated into a videotaped conversation between two children (child X, the initiator of disclosure, and child Y, the respondent of the

disclosure). Four combinations of exchange of intimate communication were constructed. Both reciprocal and non-reciprocal patterns were shown on the videotaped exchanges. A reciprocal pattern of disclosure resulted when child Y (the respondent of the disclosure) responded with the same level of intimacy disclosure to the initial disclosure from child X, as was demonstrated in the high-high and low-low exchanges. A non-reciprocal pattern of self-disclosure resulted when child Y did not respond with the same level of intimacy disclosure to the initial disclosure from child X as was exhibited in the high-low and low-high exchanges. In practice, four sets of videotaped communication were constructed, the first one depicting girls and the second depicting boys, the third one included the special statements which had to be incorporated for the grade two boys. The fourth one was a practice tape of a conversation between 2 girls, which was presented to all of the subjects after the instructions were given. Refer to Table 5 to see the actual statements used in the combinations.

In the videotapes, the same girl presented the statements for all the stimulus presentations of Set A of the High and Low Intimate Disclosures and two different girls presented each of the response sets B and C. In the videotape presentation, both the stimulus child (initiator) and the response child (respondent) were in view on the screen

Table 5

Disclosure Combinations Used in the Videotapes

| Set and Intimacy Level of Disclosure | Set and Intimacy Level of Response |
|---|---|
| <u>Set A High Intimate Disclosure</u> | <u>Set B High Intimate Response</u> |
| Sometimes I get really afraid. | I like reading in school. |
| I told someone a lie. | I am too fat. |
| <u>Set A (for grade 2 boys)- High Intimate Disclosure</u> | <u>Set B (for grade 2 boys)- High Intimate Response</u> |
| I do not like liver. | I do not like to watch the news. |
| I am too fat. | I told someone a lie. |
| <u>Set A High Intimate Disclosure</u> | <u>Set C Low Intimate Response</u> |
| Sometimes I get really afraid. | I live in Thunder Bay. |
| I told someone a lie. | I can run pretty fast. |
| <u>Set A Low Intimate Disclosure</u> | <u>Set C High Intimate Response</u> |
| My teacher is a woman. | I do not like to swim. |
| I have one brother and one sister. | Yesterday, I broke my mother's lamp. |
| <u>Set A Low Intimate Disclosure</u> | <u>Set B Low Intimate Response</u> |
| My teacher is a woman. | I have a dog at home. |
| I have one brother and one sister. | I take the bus to school. |

simultaneously. The same procedure was replicated to construct the videotapes for the boys however, a boy presented the initial disclosure sets and two different boys presented the response sets B and C.

Apparatus

The apparatus used in the study consisted of the following:

(1) a six point liking scale consisting of 3 smiling faces and 3 frowning faces which were labelled as varying in degrees of liking from a rating of 1 - disliking the respondent very much to a rating of 6 - liking the respondent very much. The liking scale which is displayed in Appendix F, was used for all the subjects to indicate how much they liked or disliked the respondent of the disclosure;

(2) a five point friendship scale consisting of a picture of 5 columns shaded in with varying amounts was used for the subjects to indicate the degree of desirability for friendship with the respondent. The 5 columns were all labelled varying from a label of 1 - not desiring the respondent for a friend at all to a label of 5 - desiring the respondent as a friend very much. The friendship scale is shown in Appendix C.

Procedure

All subjects were tested individually. Initially, each subject was trained on how to use the liking and friendship scales. Instructions given to the

subjects were as follows:

I would like for you to pick out the labelled face on the liking scale which indicates how much you liked the respondent on the videotape.

Number 1 on the liking scale indicates that you dislike the respondent very much.

Number 2 indicates that you disliked the respondent kind of.

Number 3 indicates that you disliked the respondent just a little bit.

Number 4 indicates that you liked the respondent just a little bit.

Number 5 indicates that you liked the respondent kind of.

Number 6 indicates that you liked the respondent very much.

The same procedure was applied in teaching the subjects to use the friendship scale. After each subject was trained on using both scales he/she was told that they would view a practice videotape which presented a conversation between two children. The subject was told the name of each child on the tape, and then the subject was asked to recall what each child said and identify them by name. The practice videotape was presented repeatedly until the subject was able to recall the complete conversation. Each subject was then asked to indicate on the six point liking scale how much they liked or disliked child Y (the respondent) and to state why they liked or disliked the respondent. Each subject was also asked to indicate on the five point friendship scale how much they would like to have the respondent as a friend and to give an explanation for

their judgement. After this procedure was explained to the child he/she was asked to make the liking and friendship judgements on the practice tape. Subsequently, they were presented with the remaining tapes and after viewing each tape, they were asked to indicate how much they liked the respondent on the tape and how much they would like to have the respondent as a friend.

Results

Liking and Friendship Judgements

The subjects' judgements on the liking scale were numbered 1 - 6 and the subjects' friendship judgements on the friendship scale were numbered 1 - 5, with greater numbers corresponding to greater values of liking or friendship. The liking and friendship judgements were each subjected to a 2 (sex of subject) X 4 (age group) X 2 (intimacy level of the initiator's disclosure) X 2 (intimacy level of the respondent's disclosure) analysis of variance with repeated measures on the latter two variables.

The analysis of the liking judgements is shown in Appendix I. The analysis yielded significant effects of both the intimacy of disclosure $F(1, 112) = 8.96, p < .01$ and the intimacy of the response $F(1, 112) = 31.51, p < .01$.

The main effects and two way interactions were qualified by a three way interaction between grade, intimacy level of the disclosure and intimacy level of the response $F(1, 112) = 27.17, p < .01$. The means for the liking judgements are exhibited in Table 6.

Table 6

Means for the Liking Judgements

| Stimulus Person | | Grade | | | |
|-----------------|--|-------|------|------|------|
| Combinations | | Kd | 2nd | 4th | 6th |
| IND X INR | | | | | |
| High - High | | 3.62 | 4.57 | 4.63 | 5.66 |
| High - Low | | 4.90 | 5.17 | 4.90 | 3.40 |
| Low - High | | 3.30 | 3.53 | 4.43 | 2.96 |
| Low - Low | | 4.87 | 4.89 | 4.67 | 5.57 |

* IND = Intimacy of Disclosure

* INR = Intimacy of Response

Tukey a posteriori comparisons were used to assess the interactions using $p < .01$. The first set of comparisons were of the four types of stimulus person combinations for each grade.

Comparisons of the means of the liking judgements given by the kindergarten children indicated the following: the mean liking ratings were higher for the high-low, low-low combinations than the high-high, low-high combinations in the kindergarten children. The high-low, low-low combination mean liking ratings were not significantly different from each other.

Comparison of the means from the second grade children indicated that the mean liking ratings were lower for the low-high combinations in comparison to the other three combinations which were not significantly different from each other on the mean liking ratings. These children demonstrated part of the pattern shown by the kindergarten children. There were no statistically significant differences between the stimulus person combinations for the fourth grade children.

The sixth grade children's mean liking ratings were higher for the high-high, low-low combinations than for the high-low, low-high combinations. The comparison of the means revealed no significant differences between the means of the high-high, low-low combinations. There

were also no significant differences noted between the means of the high-low, low-high combinations. This result also supports the norm of reciprocity pattern, the sixth grade children gave higher mean liking ratings to the respondents who reciprocated in the initial level of intimacy of the disclosure.

The next set of Tukey a posteriori comparisons using p 's $< .01$, of the means were completed to assess children's liking judgements of the different combinations across the four age groups.

The comparisons of the means indicated that the mean liking ratings were lower in the kindergarten group for the high-high combination than the other three grades. In this particular combination, the mean liking ratings tended to increase with age.

Further comparisons of the means indicated that the mean liking ratings given by the sixth grade children for the high-low combination were lower than the ratings given by the other 3 grades. This suggests that the sixth grade children disliked the respondent who did not reciprocate the initial level of disclosure more than the younger children from the other grades.

The mean liking ratings of the fourth grade children for the low-high combination were higher than the kindergarten and sixth grade children.

The mean liking ratings of the sixth grade children for the low-low combination were significantly greater than the fourth grade children.

All of the liking judgements made by the sixth grade children render support for the reciprocity norm of self-disclosure.

Friendship Judgements

The analysis of the friendship judgements is shown in Appendix J. There was a significant effect of intimacy of the disclosure $F(1, 112) = 37.89, p < .01$. There was also an effect of grade and INR, $F(1, 112) = 6.69, p < .01$. The main effects and two-way interactions were qualified by a three-way interaction of grade by intimacy of disclosure by intimacy of response $F(1, 112) = 9.64, p < .01$. The means are displayed in Table 7.

Tukey a posteriori comparisons were used to assess the interactions using $p < .01$. The first set of comparisons were of the friendship ratings of the four types of stimulus person combinations for each grade.

The comparisons of the means for the kindergarten children indicated that there were higher mean ratings of desirability for friendship for the high-low, low-low stimulus person combinations. The comparison of the mean ratings also denoted no significant differences between the mean ratings of the high-low, low-low stimulus person combinations. There were also no significant differences between the

Table 7

Means for Friendship Judgements

| Stimulus Person | | | | |
|-----------------|-------|------|------|------|
| Combinations | Grade | | | |
| IND X INR | Kd | 2nd | 4th | 6th |
| High - High | 2.73 | 3.47 | 3.43 | 3.83 |
| High - Low | 4.00 | 3.80 | 3.90 | 2.60 |
| Low - High | 2.63 | 2.60 | 3.13 | 2.57 |
| Low - Low | 4.00 | 3.66 | 3.47 | 3.97 |

* IND = Intimacy of Disclosure

* INR = Intimacy of Response

mean ratings of the high-high, low-high stimulus person combinations.

The comparison of the means for the second grade children indicated that they had lower mean ratings of desirability for friendship with the low-high stimulus person combination in comparison to the other three combinations, the comparisons likewise indicated no significant differences in the means of the other three combinations.

There were no significant differences in the mean ratings of desirability for friendship revealed by the comparison of the means for the fourth grade children on any of the four stimulus person combinations.

The comparisons of the means for the sixth grade children noted higher mean ratings of desirability for friendship with the high-high, low-low stimulus person combinations. The comparisons likewise indicated that the mean ratings of the high-low, low-high combinations were also not significantly different from each other. This result also corresponds to the evidence showing the norm of reciprocity.

A second set of Tukey a posteriori comparisons of the means using p 's $< .01$ were completed to assess children's mean ratings of desirability for friendship across the four age groups. The comparisons of the means indicated the following:

A) Kindergarten children had lower mean ratings of

desirability for friendship with the high-high stimulus person combination in comparison to the other three grades.

B) The sixth grade children had lower mean ratings of desirability for friendship with the high-low stimulus person combination.

Explanations for the Liking and Friendship Judgements

The subjects' explanations for the liking and friendship judgements were categorized into the following categories:

1) Content: Any explanation referring to the likeability of the content of communication from the combinations (i.e. I like him because he said, "He plays a lot of sports").

2) Physical Attributes:

Explanations referring to any physical characteristics (i.e. I liked her because she has long hair).

3) Personality Characteristics:

Explanations referring to any characteristics about personal attributes (i.e. I like him because he is friendly).

4) Sharing & Openness: Any explanation referring to the sharing of feelings and openness about personal feelings (i.e. I like her because she shared her feelings with the other girl).

Two naive individuals unfamiliar with the study coded eight of the subjects' total explanations from each age group for the friendship and liking judgements. Interrater reliability ratings were determined for each of the categories by calculating the number of agreements divided by the total number of agreements and disagreements. The interrater reliability ratings for the liking ratings were as follows: 83% for content of communication, 80% for physical attributes, 84% for personality characteristics, and 100% for sharing and openness.

The explanations were also subjected to a 4 (grade) X 4 (stimulus person) X 4 (category) log linear analysis (Knoke and Burke, 1980). The frequencies for the liking judgements are exhibited in Table 8.

The analysis of the explanations for the liking judgements, which is shown in Appendix K, yielded an effect of grade $\chi^2(9) = 85.38$, $p < .001$, and also an effect of category $\chi^2(3) = 131.59$, $p < .001$. Table 9, which presents the frequencies of each category by grade reveals that the younger children's explanations for most of their judgements were based on category 1 (Content of the conversation). Some of their explanations were also based on category 2 (Physical characteristics). In contrast, the explanations granted by the older children were more frequent in category 3 (Personality characteristics) and sixth grade was the only group which had any

Table 8

Frequencies of Liking Judgement Explanations

| Grade | Stimulus | Category | | | |
|--------------|----------|----------|----|----|----|
| | | 1 | 2 | 3 | 4 |
| Kindergarten | 1 | 2 | 19 | 0 | 0 |
| | 2 | 15 | 8 | 0 | 0 |
| | 3 | 16 | 6 | 2 | 0 |
| | 4 | 19 | 7 | 1 | 0 |
| Second Grade | 1 | 7 | 4 | | 0 |
| | 2 | 20 | 0 | 4 | 0 |
| | 3 | 19 | 1 | 5 | 0 |
| | 4 | 19 | 0 | 2 | 0 |
| Fourth Grade | 1 | 11 | 4 | 3 | 1 |
| | 2 | 18 | 2 | 4 | 0 |
| | 3 | 19 | 2 | 4 | 0 |
| | 4 | 14 | 1 | 0 | 1 |
| Sixth Grade | 1 | 4 | 0 | 7 | 14 |
| | 2 | 7 | 1 | 19 | 0 |
| | 3 | 18 | 1 | 11 | 0 |
| | 4 | 7 | 0 | 14 | 2 |

Note: Stimulus 1 = High-High Stimulus Person Combination

Stimulus 2 = High-Low Stimulus Person Combination

Stimulus 3 = Low-High Stimulus Person Combination

Stimulus 4 = Low-Low Stimulus Person Combination

explanations in category 4 (Sharing and Openness) to explain some of their judgements for the high-high stimulus person combination.

The frequencies of the explanations for the friendship judgements are shown in Table 10. The analysis of the friendship explanations which is shown in Appendix yielded an effect of category $\chi^2(3) = 159.00$, $p < .001$ and also an effect of grade $\chi^2(9) = 46.00$, $p < .001$.

The frequencies of explanations for each category by grade shown in Table 11 indicate that the explanations given by the younger children were more frequent in category 1 (Content of communication). The explanations given by the older children were also frequent in category 1 but there were also some explanations which occurred in category 3 (Personality characteristics). The sixth grade was the only group which gave any explanations in category 4 (Sharing and openness). This result was particularly evident for the high-high stimulus person combination.

Table 9

Frequencies of Each Category by Grade for Liking
Judgements

| Grade | Categories of Explanation | | | |
|--------------|---------------------------|----|----|----------------|
| | 1 | 2 | 3 | 4 ⁻ |
| Kindergarten | 52 | 40 | 3 | 0 |
| Second Grade | 65 | 5 | 18 | 0 |
| Fourth Grade | 62 | 9 | 11 | 0 |
| Sixth Grade | 36 | 2 | 51 | 16 |

Table 10

Frequencies of Friendship Judgements Explanations

| Grade | Stimulus | Category | | | |
|--------------|----------|----------|---|---|---|
| | | 1 | 2 | 3 | 4 |
| Kindergarten | 1 | 7 | 5 | 1 | 0 |
| Kindergarten | 2 | 17 | 4 | 1 | 0 |
| Kindergarten | 3 | 9 | 4 | 0 | 0 |
| Kindergarten | 4 | 19 | 1 | 1 | 0 |
| Second Grade | | | 2 | | 0 |
| Second Grade | 2 | 19 | 2 | | 1 |
| Second Grade | 3 | 11 | 2 | | 0 |
| Second Grade | 4 | 21 | 0 | | 0 |
| Fourth Grade | | 10 | 4 | | 0 |
| Fourth Grade | | 19 | 2 | | 0 |
| Fourth Grade | 1 | 14 | 0 | 1 | 1 |
| Fourth Grade | 4 | 14 | 3 | 0 | |
| Sixth Grade | | 3 | 0 | 9 | 8 |
| Sixth Grade | | 13 | 0 | 7 | 0 |
| Sixth Grade | 1 | 9 | 1 | 9 | 0 |
| Sixth Grade | 4 | 6 | 0 | 6 | |

Table 11

Frequencies of Each Category by Grade for Friendship
Judgements

| Grade | Categories of Explanation | | | |
|--------------|---------------------------|----|----|---|
| | 1 | 2 | 3 | 4 |
| Kindergarten | 52 | 14 | 3 | 0 |
| Second Grade | 58 | 6 | 8 | 1 |
| Fourth Grade | 37 | 9 | 5 | 2 |
| Sixth Grade | 31 | 1 | 31 | 9 |

Discussion

The pattern indicating the norm of reciprocity was shown in the 6th grade children (approximately 12 years of age). The sixth grade children liked and indicated greater desirability of friendship for the respondent who reciprocated the intimacy level of the initial disclosure regardless of what the initial level of intimacy was. More specifically, they liked and had greater desirability for friendship with high-high and low-low stimulus person combinations in comparison to the high-low, low-high stimulus person combinations. The norm of reciprocity pattern was also shown in the explanations given by the sixth grade children for the liking and friendship judgements. For example, these children reported that they liked and had greater desirability for friendship with the high-high stimulus person combination because the respondent was "open and shared his/her feelings" with the other person. Such reasoning implies that the sixth grade children considered the reciprocal relationship between the disclosure of the initiator and the disclosure of the respondent.

In contrast, the kindergarten children (approximately 5 years of age) based their liking and friendship judgements on the intimacy value of the content used in the communication. They liked and

indicated greater desirability for friendship with the high-low and low-low stimulus person combinations in comparison to the high-high and low-high stimulus person combinations. The explanations which were given for their judgements also indicated that they were making judgements on the basis of the content of communication. This pattern was consistent with the findings of the pilot study which indicated that the younger, as well as older children, liked the high intimacy statements less than the low intimacy statements.

The second and fourth grade children, ranging in age from 7 years 3 months to 9 years 6 months, seemed to show a pattern of transition from basing their judgements on the intimacy level and the content of communication to basing their judgements on the norm of reciprocity pattern of self disclosure. It is difficult to determine the precise nature of this transition.

The issue of the likeability of the intimacy of disclosures has been tested in adults and there has been some controversy in the literature concerning this issue. For example, research by Worthy, Gary and Kahn (1969) indicated that an individual who discloses intimate information to a subject is liked more than if he discloses superficial information. Derlega, Walmer and Furman (1973) and Graerien (1971) found no relation between intimacy of the disclosure and liking for the

discloser. Cozby (1972) reported a curvilinear relationship between intimacy of the disclosure and subjects' liking for the discloser. As can be seen from the controversy in the literature, it is difficult to assess the exact relationship between the level of disclosure and the evaluation of the discloser in adults.

The results from the pilot research of the present study indicated that children liked low intimacy disclosures more than high intimacy disclosure.

The results of the analysis of the explanations indicated that the younger children's explanations for their judgements were most frequently in the Content of Communication category. In contrast, the older children's explanations were most frequently in the Personal Attributes category. These results are consistent with earlier findings from research conducted by (Barenboim, 1977, 1981; Livesley and Bromley, 1973; Peevers & Secord, 1973; Yarrow & Campbell, 1963). Their findings suggest that at the age of 9 years and older children begin to apply trait attributes to other people.

It is important to address the question of why the "norm of reciprocity" pattern was found only in the sixth grade children and not in the younger children, particularly the fourth grade children.

Perhaps one explanation which might account

for these results is that children do not form intimate friendships until the emergence into adolescence. Research by Selman and Selman (1979), which investigated children's ideas about friendships suggests that children's friendships develop in stages. According to these researchers, Stage 3 (the Stage of Intimate, Mutually Shared Relationships) only occurs in children between the ages of 10 and 15. They suggest that before they progress to this stage, children do not form intimate relationships in which they share personal feelings and help each other resolve personal and interpersonal conflicts. Considering this evidence, it seems reasonable that the norm of reciprocity pattern was not evident until the sixth grade children. This is also in agreement with Piaget's view of reciprocity. Piaget (1965) suggests that egocentrism dominates the child's behaviour during the early stages of development (3 to 8 years) but the later stage of development in 9 to 12 year olds is characterized by more reciprocally cooperative behaviour.

A second explanation which is possible might be that children of fourth grade age and younger do not possess the cognitive abilities to exhibit and acquire the norm of reciprocity of self-disclosure. The child must be able to abstract the level of intimacy from the content of communication of each person in the conversation and compare those intimacy levels.

This task may require some types of thinking which Piaget has identified as formal operational thought. According to Piaget (1970) it is only during the stage of formal operations (age 12 to 15 years) that children acquire the ability to reason abstractly at the level required to consider the relationship among multiple variables in a conversation.

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Appendix A
Questionnaire

What you or
another child
said ...

Who would you
say this to?

If another child
told you that,
how much would
you like him/her?

How often would
you hear another
child tell you
that?

1. only a
couple of good
friends.

1. dislike him/
her very much.

1. very often,
it happens a lot

2. a couple of
good friends and
some other
children.

2. dislike him/
her "kind of".

2. somewhat
often, it
happens
sometimes.

3. Anyone who
asked.

3. Dislike him/
her just a little
bit.

3. Not very
often, it does
not happen
much at all.

Circle the
number that
best describes
your answer to
the question.

4. Like him/her
just a little bit.

Circle the
number that best
describes your
answer to the
question.

5. Like him/her
"kind of".

6. Like him/her
very much.

Circle the number
that best describes
your answer to the
question.

Appendix A

| | | | |
|---|-------|-------------|-------|
| I do not like liver. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have a dog or cat. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I do not like to swim. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| At times, I feel very happy about myself. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have brown hair. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| Yesterday I broke my mother's lamp. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have a white house. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I do not like to watch the News on TV. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| Sometimes I get really afraid. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I can run pretty fast. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I am a Boy Scout/ Girl Guide. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have a good friend in my class. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I am too fat. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I like reading in school. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have one brother and one sister. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I think I am as smart as most people. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I live in Thunder Bay. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have my own bedroom. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| My teacher is a woman. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| My feet are too big. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |

Appendix A

| | | | |
|--|-------|-------------|-------|
| I take the bus to school. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I told someone a lie. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have four or five very good toys. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I like cookies. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I am not very good at most sports. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I have my own bedroom. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I really like one of the girls/boys in my class. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I am a boy/girl. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I did not do well on my last test. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| There are a lot of children in my class at school. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| Sometimes I get really angry or mad at other people. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I live in Toronto. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I like playing videogames. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| Most days I like school but some days I don't. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I am good looking or cute. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I do not like playing with the toys I have. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I am too short. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| My father is tall and has brown hair. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |
| I like to watch "Happy Days" on TV. | 1 2 3 | 1 2 3 4 5 6 | 1 2 3 |

Appendix B
 Analysis of Variance on Intimacy Ratings From
 the Pilot Study

Tests of Significance of Intimacy
 Ratings

| Source of Variation | Sum of Squares | df | Mean Square | F | Sig of F |
|-------------------------------------|----------------|----|-------------|----------|-------------|
| Within Cells | 23.21354 | 42 | .55270 | | |
| Grade | .52778 | 2 | .26389 | .47745 | .624 |
| Sex | .0087 | 1 | .0087 | .00157 | .969 |
| Grade by Sex | 1.59028 | 2 | .79514 | 1.43864 | .249 |
| Intim | 19.27170 | 1 | 19.27170 | 70.22450 | 0.0 |
| Grade and Intim | .36111 | 2 | 1.8056 | .65793 | .523 |
| Sex and Intim | .0087 | 1 | .0087 | .00316 | .955 |
| Grade by Sex and Intim | .63194 | | .31597 | 1.15138 | .326 |
| Intim by Set | | | | | |
| Sex and Set | .63715 | | .31858 | 1.09133 | .340 |
| Grade by Sex and Set | 2.68576 | 4 | .67144 | 2.30013 | .065 |
| Grade and Set | 1.49826 | 4 | .37457 | 1.28314 | .283 |
| Grade and Intim by Set | 1.20660 | | .30165 | 1.18427 | .324 |
| Sex and Intim by Set | .97049 | | .48524 | 1.90506 | .155 |
| Grade by Sex and Intim by Set | 2.18576 | | .54644 | 2.14533 | .082 |

Appendix C

Analysis of Variance on Liking Ratings

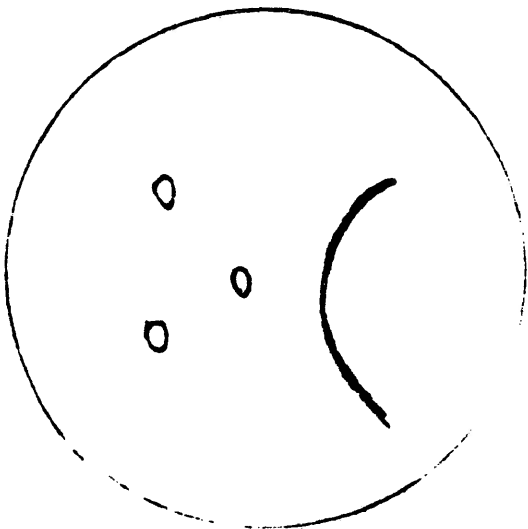
| Source of Variation | Sum of Squares | df | Mean Square | F | Sig of F |
|-------------------------|----------------|----|-------------|---------|----------|
| Within Cells | 196.32292 | 42 | 4.67436 | | |
| Sex | .12500 | 1 | .12500 | .02674 | .871 |
| Grade | .77083 | 2 | .38542 | .08245 | .921 |
| Sex by Grade | .08333 | 2 | .04167 | .00891 | .991 |
| Within Cells | 92.71875 | 12 | 2.20759 | | |
| Intim | 21.12500 | 1 | 21.12500 | 9.56916 | .004 |
| Sex and Intim | 7.67014 | 1 | 7.67014 | 3.47444 | .069 |
| Grade and Intim | 1.89583 | 2 | .94792 | .42939 | .654 |
| Sex and Grade and Intim | 2.59028 | | 1.29514 | .58688 | .561 |

Appendix D
 Analysis of Variance on Intimacy Ratings of
 Pilot Study for Grade 6 Children

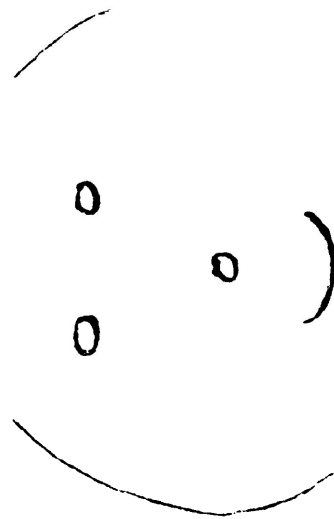
| Source of Variation | Sum of Squares | df | Mean Square | F | Sig of F |
|-------------------------|----------------|----|-------------|-----------|----------|
| Sex | .37500 | 1 | .37500 | .76829 | .396 |
| Intim | 28.16667 | 1 | 28.16667 | 152.64516 | 0.0 |
| Sex and Intim | .16667 | 1 | .16667 | .70323 | .358 |
| Sex and Set | .04687 | 1 | .02344 | .13607 | .873 |
| Sex and Intim by Set | .25521 | 1 | .12760 | .51891 | .606 |
| Intim by Set | 2.44271 | 1 | 1.22135 | 4.96672 | .014 |

Appendix E
 Analysis of Variance on Liking Ratings
 for Grade 6

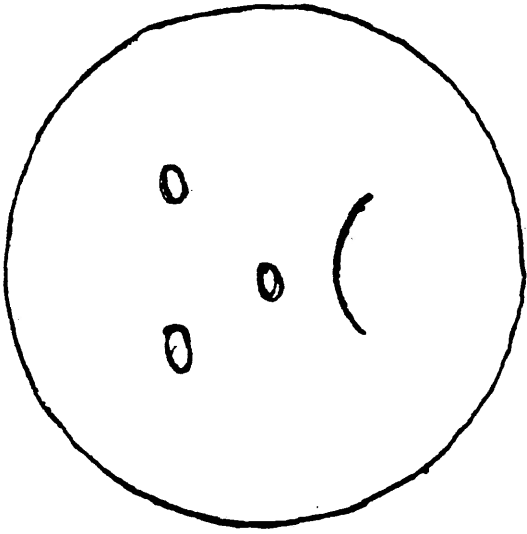
| Source of Variation | Sum of Squares | df | Mean Square | F | Sig of F |
|----------------------|----------------|----|-------------|---------|----------|
| Sex | 3.37500 | 1 | 3.37500 | 1.36503 | .262 |
| Intim | 8.76042 | 1 | 8.76042 | 5.98577 | .028 |
| Sex and Intim | 1.50000 | | 1.50000 | 1.02491 | .329 |
| Intim by Set | | | | 3.74779 | .036 |
| Sex and Set | .06250 | | .03125 | .05134 | .950 |
| Sex and Intim by Set | 1.56250 | | .78125 | 2.32301 | .117 |
| Intim by Set | 2.52083 | | 1.26042 | 3.74779 | .036 |



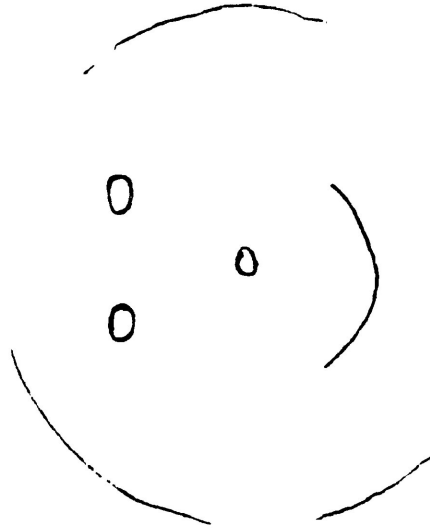
like him/her very much



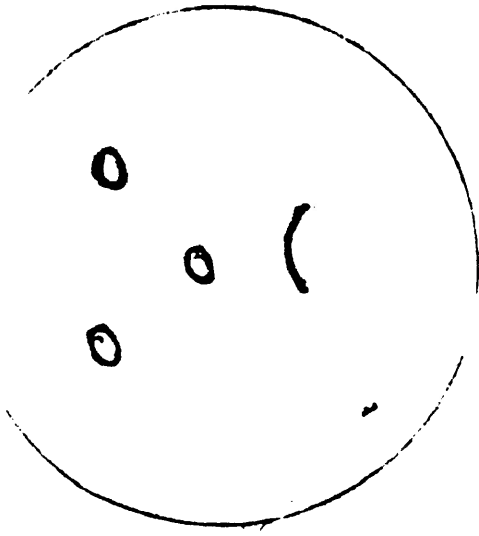
Like him/her just a little bit.



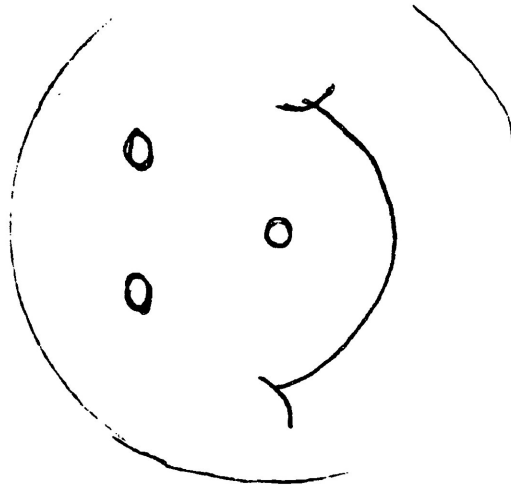
Dislike him/her, kind of



Like him/her Kind of

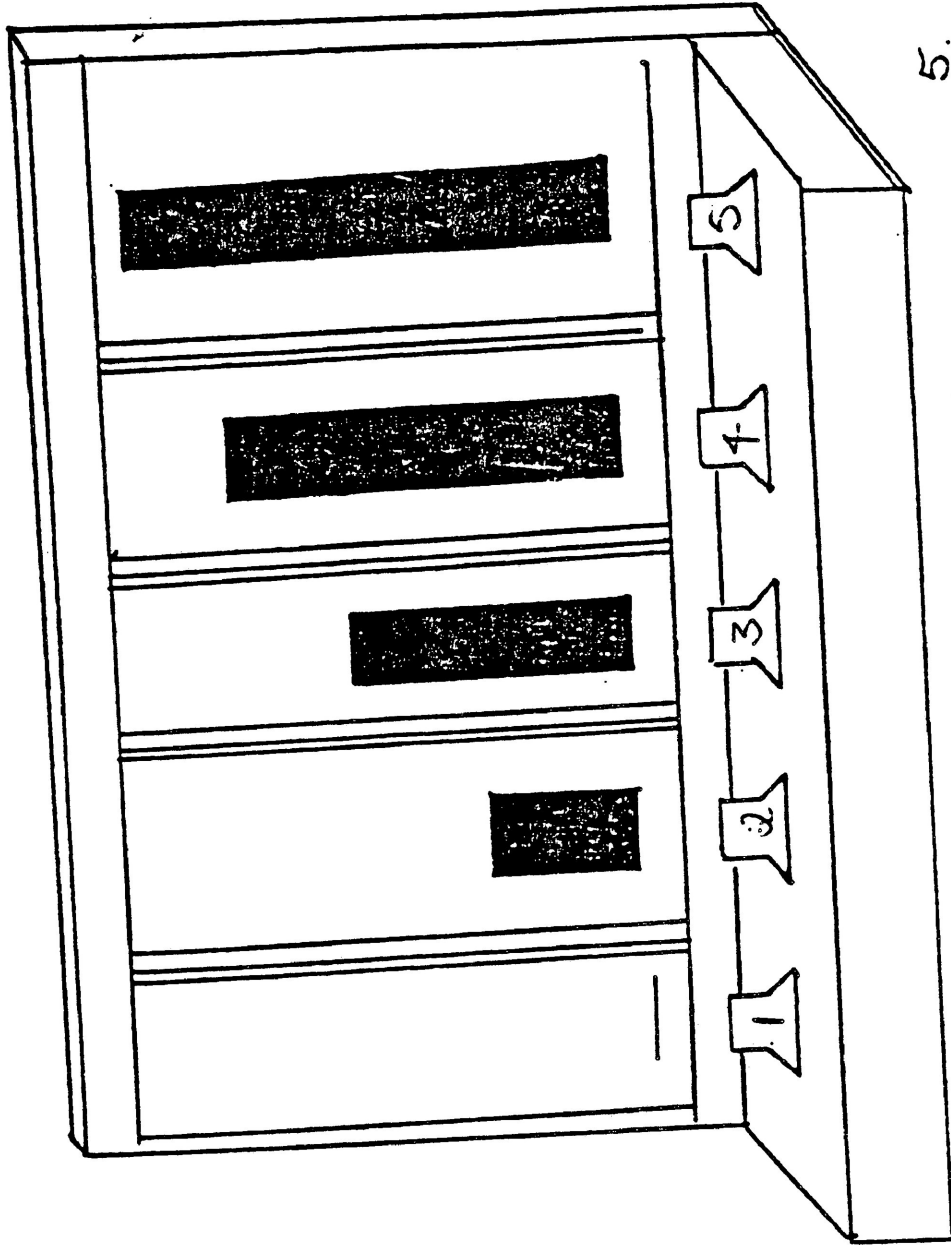


Dislike him/her just a little bit



Like him/her very much

Friendship Scale



1. Do not want
him/her as a
friend.

2. want him/
her as a
friend just
a little bit

3. want him/
her as a
friend kind
of

4. want him/
her as a
friend very
much

5. want him/her
as a friend
very much

Appendix I

Analysis of Variance of Liking Judgements

| Source of Variation | Sum of Squares | df | Mean Square | F | Sig of F |
|-----------------------------|----------------|-----|-------------|----------|----------|
| Within Cells | 320.33333 | 112 | 2.86012 | | |
| Sex | 2.00208 | 1 | 2.00208 | .70000 | .405 |
| Grade | 15.68958 | 3 | 5.22986 | 1.82855 | .146 |
| Sex by Grade | 4.97292 | 3 | 1.65764 | .57957 | .630 |
| Within Cells | 154.40000 | 112 | 1.37857 | | |
| IND | 12.35208 | 1 | 12.35208 | 8.96006 | .003 |
| Sex and IND | .01875 | 1 | .01875 | .01360 | .907 |
| Grade and IND | 4.48958 | 3 | 1.49653 | 1.08556 | .358 |
| Sex by Grade and IND | 3.48958 | 3 | 1.16319 | .84377 | .473 |
| Within Cells | 216.53333 | 112 | 1.93333 | | |
| INR | 60.91875 | 1 | 60.91875 | 31.50970 | 0.0 |
| Sex and INR | .16875 | 1 | .16875 | .08728 | .768 |
| Grade and INR | 32.68958 | 3 | 10.89653 | 5.63614 | .001 |
| Sex by Grade and INR | 2.43958 | 3 | .81319 | .42062 | .739 |
| Within Cells | 163.26667 | 142 | 1.45774 | | |
| IND by INR | 63.80208 | 1 | 63.80208 | 43.76786 | 0.0 |
| Sex and IND by INR | .16875 | | .16875 | .11576 | .734 |
| Grade and IND by INR | 118.80625 | | 39.60208 | 27.16680 | 0.0 |
| Sex by Grade and IND by INR | 3.70625 | | 1.23542 | .84749 | .471 |

* IND = Intimacy of Disclosure

* INR = Intimacy of Response

Appendix J

Analysis of Variance of Friendship Judgements

| Source of Variation | Sum of Squares | df | Mean Square | F | Sig of F |
|-----------------------------|----------------|-----|-------------|----------|----------|
| Within Cells | 224.96667 | 112 | 2.00863 | | |
| Sex | 2.40833 | 1 | 2.40833 | 1.19899 | .276 |
| Grade | 3.60833 | 3 | 1.20278 | .59880 | .617 |
| Sex by Grade | 13.44167 | 3 | 4.48056 | 2.23065 | .089 |
| Within Cells | 97.83333 | 112 | .87351 | | |
| IND | 5.63333 | 1 | 5.63333 | 6.44906 | .012 |
| Sex and IND | .30000 | 1 | .30000 | .34344 | .559 |
| Grade and IND | 6.05000 | 3 | 2.01667 | 2.30869 | .080 |
| Sex by Grade and IND | 2.68333 | ~ | .89444 | 1.02396 | .385 |
| Within Cells | 138.56667 | 112 | 1.23720 | | |
| INR | 46.87500 | 1 | 46.87500 | 37.88790 | 0.0 |
| Sex and INR | .40833 | 1 | .40833 | .33005 | .567 |
| Grade and INR | 24.84167 | 3 | 8.28056 | 6.69297 | .000 |
| Sex by Grade and INR | 2.80833 | ~ | .93611 | .75664 | .521 |
| Within Cells | 137.16667 | 112 | 1.22470 | | |
| IND by INR | 20.83333 | 1 | 20.83333 | 17.01094 | .000 |
| Sex and IND by INR | .53333 | | .53333 | .43548 | .511 |
| Grade and IND by INR | 35.41667 | | 11.80556 | 9.63953 | .000 |
| Sex by Grade and IND by INR | 2.55000 | | .85000 | .69405 | .558 |

* IND = Intimacy of Disclosure

* INR = Intimacy of Response

Appendix K

Log Linear Analysis of Liking Judgements

| Source | df | Chi-Square | Prob |
|------------------|----|------------|--------|
| Intercept | 3 | 131.59 | 0.0001 |
| Grade | 9 | 85.38 | 0.0001 |
| Stimulus | 9 | 19.13 | 0.0241 |
| Grade * Stimulus | 27 | 23.54 | 0.6559 |

* Intercept = Category

Appendix L
Log Linear Analysis of Friendship Judgements

| Source | df | Chi-Square | Prob |
|------------------|----|------------|--------|
| Intercept | 3 | 159.66 | 0.0001 |
| Grade | 9 | 46.00 | 0.0001 |
| Stimulus | 9 | 14.43 | 0.1077 |
| Grade * Stimulus | 27 | 16.07 | 0.9516 |

* Intercept = Category