

Development of a Scale to Assess Individual Differences
in Children's Trust-Value Basis of Friendship

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Table of Contents

Acknowledgements .	
Abstract . .	ii
Introduction . .	. 1
Method:	
Subjects .	10
Measures .	11
Procedure . .	. 13
Results . .	14
Discussion .	. 36
References . .	. 42
Appendices . .	. 47

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Abstract

Rotenberg (1986, 1991) has shown that children acquire a "trust-value" basis of friendship, whereby friendship is a function of how much a child believes a peer will keep secrets, promises and tell the truth. The purpose of the present study is to examine the notion advanced by Rotenberg (1991) that there may be individual differences in the importance children assign to the trust-value basis of friendship. This was accomplished by constructing a scale (Rotenberg-Morgan Trust-Value Friendship Questionnaire) for the measurement of individual differences for two related but distinct aspects of children's friendships: (a) friendship preferences and (b) actual friendships. The study was also designed to assess the reliability and validity of this scale. One hundred and thirty children (70 girls and 60 boys) from fifth and sixth grade were obtained through parental consent to participate in the study. The children were administered three questionnaires: (1) Rotenberg-Morgan Trust-Value Friendship Questionnaire, (2) Chumship Checklist, and (3) a Values of Friendship Scale. The latter two questionnaires served as validity measures for the scale developed. Approximately one month later, a subsample of children (103) were

given the Rotenberg-Morgan Trust-Value Friendship Questionnaire as a measure of test-retest reliability. Factor analysis of the Rotenberg-Morgan Trust-Value Friendship Questionnaire for the first testing yielded three factors for both friendship preferences and actual friendships: (a) trust confirming, (b) trust violating and (c) school trust. Analysis of the second testing yielded highly similar factors having acceptable test-retest reliability and internal consistency with the exception of school trust for friendship preferences. In support of the validity of the scale, school trust for friendship preferences and trust confirming for actual friendships correlated positively with the Chumship Checklist and trust confirming for actual friendships correlated positively with dependability.

Hartup (1983) has suggested that peer relationships serve three main functions in children's development. First, friendships may provide a context in which children acquire a variety of competencies (e.g., regulation of emotion, self comparison with equals and coordination of activities with another). Second, friendships may serve as resources for emotional support and security that enable the child to explore new physical and social environments and act as a buffer during stressful life events. Third, friendships may function as precursors for other relationships. That is, a child's previous and ongoing friendships may be utilized as important models for the formation of future friendships later in development.

Sullivan (1953) has suggested that friendships, especially preadolescent friendships, provide children with unique interactional experiences that facilitate the growth of various social competencies. According to this view, children develop a greater need for intimacy as they approach preadolescence (beginning around 9 years of age), and these feelings are often expressed within peer relationships. Preadolescent friendships are seen as qualitatively different from those of younger children in that they are characterized by intense closeness

and open, honest communication. Presumably, intimate interactions that occur in friendships not only validate the self but also increase the individual's sensitivity to the needs of the friend. Sensitivity that is acquired in this manner is thought to generalize to subsequent peer relationships (Price & Ladd, 1986).

A similar thesis, developed by Youniss (1980), integrates elements of Sullivan's theory with Piaget's. Youniss (1980) suggests that children's awareness of the unique interactions that occur with friends is an impetus for the elaboration of such concepts as cooperation, mutual respect and interpersonal sensitivity. Once learned, these concepts are then generalized to other peer interactions. So peers play a vital role in teaching children new modes of behavior, in imparting information to children about what forms of behavior are expected or appropriate under various circumstances, and in setting standards against which children assess and evaluate their own personalities and competencies (Perry & Bussy, 1984).

The purpose of this thesis is to investigate friendships in children, in particular the notion advanced by Rotenberg (1991) that there may be

individual differences in children's trust-value basis of friendships. By trust-value, Rotenberg means that in children's friendship preferences and in their actual peer friendships, children trust peers who keep secrets, promises and tell the truth. This will involve developing a scale to assess individual differences and assessing reliability and validity for this scale.

Developmental Changes in Children's Friendships

Some support for the above views can be found from research on the development of children's conceptions of friendship (Furman & Bierman, 1984) and on children's friendship expectations (Bigelow, 1977). From these studies, there is convergence in the developmental changes children go through in their perceptions of friends. Younger children (grades 1 to 2) describe a friend using behavioral characteristics such as someone who plays with them in a shared activity (Bigelow, 1977). Older children (grades 4 to 6) make distinctions based on personality traits, including loyalty, similarity of attitudes and values (Bigelow & LaGaipa, 1975) and understanding and trusting

(Furman & Bierman, 1984). It is only from older children, third, fourth and fifth graders, that descriptions of friends begin to include references to dispositional traits such as the sharing of feelings and trust.

Preferences versus Actual Friendships

An important distinction that should be made concerns the difference between children's preferences for friendships and their actual peer friendships. It may be that the qualities or values a child expects or prefers in a friend may not be what they have in their actual friendships. A similar distinction is made by Furman and Bierman (1984). They argue that the attributes children view as important for friendship are different for friendship expectations than for friendships.

Trust-Value Basis for Friendship Preferences

Distinguishing between behavioral intimacy and dispositional intimacy, Furman and Bierman (1984) yielded evidence for the role of secret sharing and trusting in children's perceptions of friendships. Those characteristics referring to concrete behaviors, (e.g., sharing

secrets) were labelled behavioral intimacy and those characteristics referring to underlying dispositions that encompass and transcend specific behaviors, (e.g., trusting) were labelled dispositional intimacy. They investigated the qualities that children expected for friendship and found that children from second, fourth and sixth grade expected secret sharing (termed behavioral intimacy) for friendship. Furthermore, it was found that children expected trusting (termed dispositional intimacy) for friendship, but that expectation increased with age.

Rotenberg (1991) also yielded evidence for children's friendship expectations and trust-value. He tested 40 children (20 boys and 20 girls) from fourth grade using four pairs of stories. One pair depicting the protagonist as varying in food desires which were used to depict a neutral dimension that was, theoretically, unrelated to friendship preferences. The second pair of stories was designed to depict play value and showed this in terms of play possessions. The third and fourth pairs of stories were designed to depict trust-value. One pair of stories showed sharing secrets and the other pair of stories showed promise behavior consistency. The subjects' judgements of desirability

of friendship and preferred company were made on 5 - point scales and the subjects judgements of the quality of friendship were made on a 7 - point scale. Rotenberg (1991) found that trust-value has substantial effects on friendship preferences. The children had higher friendship preferences for the protagonist who kept secrets than the one who broke secrets and for the protagonist who kept a promise than the one who broke a promise. Moreover, the children's explanations or attributes indicated that these effects were due to the secret or promise keeping versus breaking content and greater attributed trustworthiness to those who kept rather than broke secrets and promises.

Trust-Value Basis of Children's Actual Friendships

Although Furman and Bierman (1984) and Rotenberg (1991) investigated the implications of the trust-value principle for children's expectations, it was Rotenberg (1986) who investigated this principle and its implications for actual peer friendships.

Rotenberg (1986) maintains that preadolescents acquire a "trust-value" basis of friendship, whereby friendship is a function of how much

a child trusts a peer to the extent that that peer keeps secrets and promises. In Rotenberg's study (1986) on same-sex patterns and sex differences in the trust-value basis of friendship, 36 children (18 boys and 18 girls) from fourth grade and were presented with lists of their classmates who were participating in the study. They were then given two questionnaires and for the first questionnaire the children were asked to indicate, for each of their classmates, how many secrets kept, secrets told, promises made and promises kept. In the second questionnaire, the children were asked to rate on a 7 - point scale how much they trusted each of the classmates on the list. The results indicated that trust and friendship was correlated with secret keeping and promise keeping and that children use trust-value as a basis for their friendships.

Rotenberg (1991) also suggests that children's trust-value basis of friendship may include lying. That is, children's friendship's may be negatively affected by the extent to which their peers engage in lying and those effects may be mediated by attributed trustworthiness. Consistent with this hypothesis, Wilson and Carrol (1991) introduced

an index for measuring lying which they refer to as trustworthiness. Their findings suggested that interpersonal trust and trustworthiness of communication are important aspects of children's peer relationships and that children's trustworthiness is strongly related to their standing in their peer group. Furthermore, children are less willing to share information with their untrustworthy peers, especially when the information is not trivial.

Rational and Purpose

Considering this research, it seems plausible to ask, if children use the trust-value basis of friendship, then are there stable individual differences in the importance they assign to the trust-value basis of friendship. Potentially, secret keeping, promise keeping and telling the truth are valued more for friendship by some children than by others. Research in the area of children's friendships has generally given little attention to the role of individual differences in development. Friendship development may differ depending on individual differences of children.

One study examining individual differences in children was

conducted by Graziano, Leone, Musser, and Lautenschlager (1987). Their study examining self-monitoring in children, involved the construction of a scale to measure individual differences in children's tendencies to engage in social comparison when making decisions. Results of their study indicated that children scoring high in self-monitoring were more likely to attend to the decisions of other children, and to do so for a longer period of time, than were low self-monitoring children.

Considering the role individual differences may have on children's friendships, the purpose of the present study is to examine the notion advanced by Rotenberg (1991) that there may be individual differences in children's trust-value basis of friendship. This was accomplished by constructing a scale to assess such individual differences in two related but distinct aspects of children's friendships: (a) friendship preferences, and (b) actual friendships. (Note: the term "actual" is used to denote the children's judgements of their actual friends).

This study also assessed reliability and validity of this scale. The reliability was assessed through: (a) the internal consistency of the scale

and (b) test-retest method. The test of validity of the scale is twofold. First, those children who assign importance to trust-value for friendship are those who have formed chumships - reciprocally intimate peer relationships - as indicated on the Chumship Checklist. The rationale for this comes from Mannarino (1977) as cited by McGuire and Weisz (1982) who reported that preadolescents who showed friendship stability and reciprocal liking checked a significantly greater number of items on their checklist than did their peers who did not have stable, mutual friendships. Therefore, it is expected that those children who place greater importance in trust-value as critical for friendship will be those who have formed chumships. Second, it is expected that those children who assign great importance to trust-value for friendship will be those who rate, on the Values of Friendship Scale, trustworthy and dependable as important for friendship.

Method

Subjects: As a pilot study, nine children were tested to clarify any

problems or ambiguities they may have regarding the scale. In the primary study, which consisted of two testing sessions, 130 children (60 boys and 70 girls) from fifth and sixth grades obtained from three schools in Thunder Bay, Ontario were tested. In the second testing session which took place one month later, 103 of the original 130 children were tested. The attrition of 27 children was due to the absence of some children (6) and to the lack of permission from one school to do the retest (21). The children's participation was obtained through the process of sending letters to the parents for consent. The children were also given a consent form to sign (shown in Appendix A) .

Measures:

Rotenberg-Morgan Trust-Value Friendship Questionnaire (see Appendix B).

The twelve items on this scale, generated in part from the Imber Children's Trust Scale (Imber, 1973), the Specific Interpersonal Trust Scale (Johnson-George & Swap, 1982), and from items generated by the authors, were used to assess children's friendship preferences and

modified to assess their actual peer friendships. For Preferences and Actual, two of the items depicted a boy/girl (depending on sex of child) breaking/keeping a promise, two depicted lying/telling the truth and two depicted breaking/keeping a secret. On each item for Preferences, the child had to rate on a Likert-type scale from 1 (not a good friend) to 5 (very good friend): (a) how much they would want that boy/girl as a friend and (b) how much they would want to hang out with that boy/girl. The items were modified for actual friendships such that the child had to identify, with initials, the name of a same-sex best friend and subsequently read each question depicting this friend either breaking/keeping a promise, lying/telling the truth, or breaking/keeping a secret. The child then had to rate on a scale from 1 (not a good friend) to 5 (very good friend): (a) how good a friend this boy/girl would be and (b) how much this would increase/decrease the amount of time they hang out with this friend.

Chumship Checklist (see Appendix C)

This consists of 17 activities that preadolescents might do

together, for example, "tell each other things you wouldn't tell anyone else" and "sleep at each other's house". The child had to check those activities that they do with their same-sex best friend.

Values of Friendship Scale (see Appendix D)

This consists of eight words, such as trustworthy and dependable, that a child might use to describe a peer. The child had to rate, on a Likert-type scale from 1 (most value) to 5 (least value), how much they value each quality in a friend.

Procedure: There were two testing sessions. In the first testing session, which took about 40 minutes, the children were administered the Rotenberg-Morgan Trust-Value Friendship Questionnaire, the Chumship Checklist and the Values of Friendship Scale. In the second testing session, which took approximately 20 minutes and which took place one month later, 103 children from the original 130 were administered the Rotenberg-Morgan Trust-Value Friendship Questionnaire as a measure of test-retest reliability.

Results

Testing 1

The children's judgements on the Rotenberg-Morgan Trust-Value Friendship Questionnaire (RMTVF) were numbered 1 to 5 with greater numbers corresponding to greater ratings of: (a) friendship and (b) desire to hang out with that friend. These two ratings were averaged together for both Preferences and Actual and then was subjected to a factor analysis with principle components extraction and varimax rotation. (An oblique rotation was also performed which yielded highly similar factor structures, see Appendix E). For Preferences and Actual an eigenvalue of 1 or greater was used as a criteria to determine the factors and a factor loading of .5 or higher was used as a criteria for determining which items loaded on a factor. Tabachnick and Fidell (1989) indicate that an eigenvalue of 1 or greater is commonly used as a criterion for determining the number of factors. Unless otherwise specified, all of the items had positive factor loadings.

Preferences

Factor analysis for Preferences yielded three factors. Factor 1

had an eigenvalue of 3.82 accounting for 32 percent of the variance, factor 2 had an eigenvalue of 2.64 accounting for 22 percent of the variance and factor 3 had an eigenvalue of 1.31 accounting for 10.9 percent of the variance. The rotated factor matrix is shown in Table 1.

The following items had high loadings on factor 1:

Item 5 - Jane (John) borrowed something of value from you, says she'll (he'll) bring it back the next day and she (he) does bring it back.

Item 7 - Jane (John) told you that you looked nice and she (he) meant what she (he) said.

Item 8 - You tell Jane (John) what you are going to give your mother for Christmas and she (he) keeps it a secret.

Item 11 - You told Jane (John) something that you didn't want anyone to know and she (he) didn't tell anyone.

Since these items deal with the fulfilment of promises, secrets or telling the truth, factor 1 is labelled "trust confirming."

The following items had high loadings on factor 2:

Item 3 - Jane (John) was supposed to go to the movies with you but at the last minute changed her (his) mind.

Table 1
Varimax Rotated Factor Matrix for Preferences

Item	Factor 1	Factor 2	Factor 3
1	.32805	.01036	.74314
2	.29897	.01159	.79315
3	.17000	.60398	-.48576
4	-.06847	.71834	-.30135
5	.82733	-.15576	.06694
6	-.14913	.56197	.08648
7	.86154	-.06971	.14078
8	.83568	-.04351	.28477
9	.03499	.73868	-.06622
10	-.02722	.82347	.01911
11	.86852	.00043	.13654
12	-.18976	.63964	.3002

Item 4 - Jane (John) brags and boasts to gain status and attention and to appear better than she (he) really is.

Item 6 - You told Jane (John) that you liked a boy (girl) and then she (he) went and told the boy (girl) that you liked him (her).

Item 9 - Jane (John) accuses you of things you actually did not do.

Item 10 - Jane (John) finds out what kinds of things hurt your feelings and uses them against you.

Item 12 - Jane (John) promises you that she (he) will go bowling with you. Then Jane (John) says that she (he) can't go because she (he) has to go away with her (his) family. Later you see Jane (John) at the bowling alley.

Since these items have to do with the violation of promises, secrets or lying, factor 2 is labelled "trust violating."

The following items loaded highly on factor 3:

Item 1 - Jane (John) told you that she (he) would meet you after school and she (he) showed up.

Item 2 - Jane (John) says that she (he) won't be out in the playground at recess because she (he) has to go to the doctor. Later someone

says that they saw Jane (John) at the doctor's office.

Since these items deal with fulfilment of trust acts within the context of school, factor 3 is labelled "school trust."

Actual

Factor analysis for Actual yielded 3 factors. Factor 1 had an eigenvalue of 4.23 accounting for 35.3 percent of the variance, factor 2 had an eigenvalue of 2.53 accounting for 21.1 percent of the variance and factor 3 had an eigenvalue to 1.27 accounting for 10.6 percent of the variance. The rotated factor matrix is shown in Table 2.

The factor structure of Actual is identical to that of Preferences, that is those items making up trust confirming, trust violating and school trust for Preferences are the same items that make up the trust confirming, trust violating and school trust for Actual.

The following items loaded highly on factor 1:

Item 3 - Jane (John) was supposed to go to the movies with you, but at the last minute changed her (his) mind.

Item 4 - Jane (John) brags and boasts to gain status and attention and

Table 2
Varimax Rotated Factor Matrix for Actual

Item	Factor 1	Factor 2	Factor 3
1	-.11218	.29437	.86881
2	-.07351	.18887	.92074
3	.59031	-.00512	-.45615
4	.80871	-.07343	-.45615
5	-.04461	.64322	.21154
6	.66833	-.12777	-.00290
7	-.21381	.78015	.01785
8	-.00804	.76949	.27573
9	.87804	.03094	-.03888
10	.87660	.03177	-.07492
11	.02439	.76206	.04580
12	.80025	-.15437	.00330

to appear better than she (he) really is.

Item 6 - You told Jane (John) that you liked a boy (girl) and then she (he) went and told that boy (girl) that you liked him (her).

Item 9 - Jane (John) accuses you of things you actually did not do.

Item 10 - Jane (John) finds out what kinds of things hurt your feelings and uses them against you.

Item 12 - Jane (John) promises you that she (he) will go bowling with you. Then Jane (John) says that she (he) can't go because she (he) has to go away with her (his) family. Later you see Jane (John) at the bowling alley.

Since these items deal with the violation of promises, secrets or lying, factor 1 is labelled "trust violating."

The following items loaded highly on factor 2:

Item 5 - Jane (John) borrowed something of value from you, says she'll (he'll) bring it back the next day and she (he) does bring it back.

Item 7 - Jane (John) told you that you looked nice and she (he) meant what she (he) said.

Item 8 - You tell Jane (John) what you are going to give your mother for Christmas and she (he) keeps it a secret.

Item 11 - You told Jane (John) something that you didn't want anyone to know and she (he) didn't tell anyone.

Since these items deal with the fulfilment of promises, secrets or telling the truth, factor 2 is labelled "trust confirming".

The following items loaded highly on factor 3:

Item 1 - Jane (John) told you she (he) would meet with you after school and she (he) showed up.

Item 2 - Jane (John) says that she (he) won't be out on the playground at recess because she (he) has to go to the doctor. Later someone says they saw Jane (John) at the doctor's office.

Since these items deal with the fulfilment trust acts within the context of school, factor 3 is labelled "school trust."

Chumship Checklist

The present study found the Chumship Checklist to have an internal consistency of .61 which is rather low compared with data from

other studies reporting an internal consistency of .86 (McGuire & Weisz, 1984).

Correlations Among the Variables for Testing 1

A correlation matrix was generated for the three factors obtained from the Preferences and Actual aspects of friendships of the Rotenberg-Morgan Trust-Value Friendship Questionnaire, the Chumship Checklist and the Values of Friendship Scale (see Table 3).

Correlation Analysis

Consistent with the fact that similar factors were yielded for Preferences and Actual, the following positive correlations were found between: (a) Preferences trust confirming and Actual trust confirming, (b) Preferences trust violating and Actual trust violating and (c) Preferences school trust and Actual school trust.

In addition, modest correlations were found between other factors: (a) Preferences trust confirming and Actual trust violating, and (b) Preferences school trust and Actual trust confirming.

Table 3

Intercorrelations Among Factors, Chumship Checklist and the
Trustworthy and Dependable Value Rating

	Preferences			Actual					
Preferences	<i>TC</i>	<i>TV</i>	<i>ST</i>	<i>TV</i>	<i>TC</i>	<i>ST</i>	<i>chum</i>	<i>DP</i>	<i>TWR</i>
Trust Confirming (TC)		.00	.00	.25**	.59**	-.02	-.07	.08	.02
Trust Violating (TV)			.00	.67**	-.04	-.01	-.05	.13	.06
School Trust (ST)				.06	.19*	.50**	.24**	.11	.10
Actual									
Trust Violating (TV)					.00	.00	-.08	.11	.02
Trust Confirming (TC)						.00	.18*	.19*	.13
School Trust (ST)							.05	.16	.06
Chumship (chum)								.17	.18*
Dependability (DP)									.63**
Trustworthy (TWR)									

Note: df = 128

* p < .05

** p < .01

Consistent with our hypothesis, the Chumship Checklist correlated positively with the Rotenberg-Morgan Trust-Value Friendship Questionnaire, specifically with Preferences school trust and with Actual trust confirming. The Chumship Checklist also positively correlated with the trustworthy value rating. However, trustworthy did not correlate with any of the factors of the Rotenberg-Morgan Trust-Value Friendship Questionnaire. Actual trust confirming did correlate with the dependable value rating which is a term children use as having a similar meaning as trustworthy.

No sex differences were found for any of the factors of the Rotenberg-Morgan Trust-Value Friendship Questionnaire or for the Chumship Checklist.

Testing 2

The procedure for factor analysis and the criteria used were the same as in testing 1.

Preferences. Factor analysis for Preferences yielded three factors.

Factor 1 had an eigenvalue of 3.97 accounting for 33.1 percent of the

variance, factor 2 had an eigenvalue of 3.14 accounting for 26.2 percent of the variance, and factor 3 had an eigenvalue of 1.16 accounting for 9.7 percent of the variance. The rotated factor matrix for Preferences is shown in Table 4.

The following items loaded highly on factor 1:

Item 1 - Jane (John) told you she (he) would meet with you after school and she (he) showed up.

Item 5 - Jane (John) borrowed something of value from you, says she'll (he'll) bring it back the next day and she (he) does bring it back.

Item 7 - Jane (John) told you that you looked nice and she (he) meant what she (he) said.

Item 8 - You tell Jane (John) what you are going to give your mother for christmas and she (he) keeps it a secret.

Item 11 - You told Jane (John) something that you didn't want anyone to know and she (he) didn't tell anyone.

Since these items deal with the fulfilment of promises, secrets or telling the truth, factor 1 is labelled "trust confirming."

The following items load highly on factor 2:

Table 4
Varimax Rotated Factor Matrix for Preferences

Item	Factor 1	Factor 2	Factor 3
1	.72482	-.07807	-.33862
2	.37899	.02525	-.81375
3	.05200	.37366	.74493
4	.16439	.64895	.42613
5	.80019	-.01484	-.11468
6	-.10342	.62723	.02129
7	.87615	-.00301	-.00433
8	.91125	-.05013	-.07769
9	.03887	.83282	.11757
10	-.05264	.83156	.22135
11	.86193	-.02545	.11196
12	-.09450	.77943	-.05518

Item 4 - Jane (John) brags and boasts to gain status and attention and to appear better than she (he) really is.

Item 6 - You told Jane (John) that you liked a boy (girl) and she (he) went and told the boy (girl) that you liked him (her).

Item 9 - Jane (John) accuses you of things you actually did not do.

Item 10 - Jane (John) finds out what kinds of things hurt your feelings and uses them against you.

Item 12 - Jane (John) promises you that she (he) will go bowling with you. Then Jane (John) says that she (he) can't go because she (he) has to go away with her (his) family. Later you see Jane (John) at the bowling alley.

Since these items deal with the violation of promises, secrets or lying, factor 2 is labelled "trust violating."

The following items load highly on factor 3:

Item 2 - Jane (John) says that she won't be out on the playground at recess because she (he) has to go to the doctor. Later someone says that they saw Jane (John) at the doctor's office. (This item had a negative factor loading).

Item 3 - Jane (John) was supposed to go to the movies with you, but at the last minute changed her (his) mind.

Given that item 2 loaded negatively on this factor for Preferences but positively for Actual, it is not clear what this factor represents.

Actual

Factor analysis for Actual yielded three factors. Factor 1 had an eigenvalue of 4.36 accounting for 36.4 percent of the variance, factor 2 had an eigenvalue of 3.03 accounting for 25.3 percent of the variance, and factor 3 had an eigenvalue of 1.02 accounting for 8.5 percent of the variance. The rotated factor matrix is shown in Table 5.

The following items loaded highly on factor 1:

Item 3 - Jane (John) was supposed to go to the movies with you, but at the last minute changed her (his) mind. ♣

Item 4 - Jane (John) brags and boasts to gain status and attention and to appear better than she (he) really is.

Item 6 - You told Jane (John) that you liked a boy (girl) and she (he) went and told the boy (girl) that you liked him (her). ♣

Item 9 - Jane (John) accuses you of things you actually did not do.

Table 5
Varimax Rotated Factor Matrix for Actual

Item	Factor 1	Factor 2	Factor 3
1	-.03806	.33828	.79607
2	-.17835	.15341	.77486
3	.69139	-.00328	-.39282
4	.86971	-.01645	-.03410
5	-.08164	.82939	.06777
6	.64101	.19218	.21873
7	.04152	.66753	.42208
8	-.03130	.68653	.50372
9	.90152	-.02048	-.01575
10	.89682	-.08489	.00354
11	-.01567	.83646	.09667
12	.83604	-.19372	.02832

Item 10 - Jane (John) finds out what kinds of things hurt your feelings and uses them against you.

Item 12 - Jane (John) promises you that she (he) will go bowling with you. Then Jane (John) says that she (he) can't go because she (he) has to go away with her (his) family. Later you see Jane (John) at the bowling alley. Since these items deal with the violation of promises, secrets or lying, factor 1 is labelled "trust violating."

The following items loaded highly on factor 2:

Item 5 - Jane (John) borrowed something of value from you, says she'll bring it back the next day and she (he) does bring it back.

Item 7 - Jane (John) told you that you looked nice and she (he) meant what she (he) said.

Item 8 - You tell Jane (John) what you are going to give your mother for christmas and she (he) keeps it a secret.

Item 11- You told Jane (John) something that you didn't want anyone to know and she (he) didn't tell anyone.

Since these items deal with the fulfilment of promises, secrets or telling the truth, factor 2 is labelled "trust confirming."

The following items loaded highly on factor 3:

Item 1 - Jane (John) told you she would meet with you after school and she (he) showed up.

Item 2 - Jane (John) says that she (he) won't be out on the playground at recess because she (he) has to go to the doctor. Later someone says that they saw Jane (John) at the doctor's office.

Since these items deal with the fulfilment of trust acts within the context of school, factor 3 is labelled "school trust."

Correlations Among the Variables for Testing 2

A correlation matrix was generated for the three factors for Preferences and Actual obtained from the second testing of the Rotenberg-Morgan Trust-Value Friendship Questionnaire (see Table 6).

Consistent with the fact that similar factors were yielded for Preferences and Actual, the following correlations were found between:

(a) Preferences trust confirming and Actual trust confirming, (b)

Preferences trust violating and Actual trust violating and (c) the

undefined factor of Preferences and Actual school trust. (This was a

Table 6

Intercorrelations Among the Factors of Preferences and Actual for
Testing 2

	Preferences			Actual		
Preferences	<i>TC</i>	<i>TV</i>	<i>ST</i>	<i>TV</i>	<i>TC</i>	<i>ST</i>
Trust Confirming (TC)	.00	.00	.34**	.64**	.16	
Trust Violating (TV)			.00	.72**	.04	.13
School Trust (ST)				.20*	-.02	-.52**
Actual						
Trust Violating (TV)					-.01	.00
Trust Confirming (TC)						.03
School Trust (ST)						

Note: df = 101

* p < .05

** p < .01

negative correlation)

In addition, modest correlations were found between: (a) Preferences trust confirming and Actual trust violating, and (b) the undefined factor of Preferences and Actual trust violating.

Test-Retest Reliability

From the factor analysis scores obtained from testing 1 and testing 2, subscale scores were constructed from those items loading highly on each factor. The subscales for testing 1 were correlated with testing 2, and from these correlations there is evidence for test-retest reliability for Preferences and Actual.

Preferences. (a) trust confirming in testing 1 with trust confirming in testing 2, $r(101) = .74, p < .01$, (b) trust violating in testing 1 with trust violating in testing 2, $r(101) = .62, p < .01$, and (c) school trust in testing 1 with the undefined factor in testing 2, $r(101) = .21, p < .05$.

Actual. (a) trust violating in testing 1 with trust violating in testing 2, $r(101) = .80, p < .01$, (b) trust confirming testing 1 with trust confirming in testing 2, $r(101) = .58, p < .01$, and (c) school trust in testing 1 with

school trust in testing 2, $r(101) = .55, p < .01$.

Internal Consistency of the Subscales

The subscales derived from the RMTVF were analyzed for internal consistency using Cronbach's alpha. The alpha levels are shown in Table 7.

Table 7

Cronbach's Alpha Levels for the Subscales

Preferences	Testing 1	Testing 2
trust confirming	.89	.89
trust violating	.76	.81
school trust	.71	.60
Actual		
trust confirming	.74	.81
trust violating	.87	.89
school trust	.52	.67

Discussion

The purpose of this thesis was to develop a scale to measure individual differences, in children's trust-value basis of friendships, specifically in terms of children's friendship preferences and their actual friendship.

Structure of the Rotenberg-Morgan Trust-Value Friendship Questionnaire

Factor analysis revealed that the RMTVF is a multidimensional rather than a unidimensional scale. Three factors were yielded for friendship preferences and actual friendships: (a) trust confirming, (b) trust violating, and a less clear factor (c) school trust. It appears that children perceive, as critical for friendship, trust confirming acts such as secret keeping, promise keeping and truth telling differently than trust violating acts such as secret breaking, promise breaking and lying.

Furthermore, there is a third factor in which children view secret keeping, promise keeping and truth telling within the context of school.

One possibility as to why the RMTVF is multidimensional may be

that trust violating acts draw upon children's morality and moral judgement. Lying, in particular, is regarded by most children and adults as a serious core violation of moral principles (Piaget, 1965). The moral meaning of lying describes evaluative cognitions about how right or wrong it is to deceive (Peterson, 1991). In this context, lying, secret breaking and promise breaking as criteria for friendship preferences and actual friendships are directly tied to morality. In contrast, the acts of truth telling, secret keeping and promise keeping conform to moral principles and in judging these acts morality may play less of a role. Specifically, the importance children assign to telling a truth, keeping a secret and keeping a promise for friendships may reflect more on their desire for such behaviors than on their judgement of the morality of such acts. Furthermore, factor analysis showed that there is another factor indicating trust within the context of school as a distinct domain.

Reliability and Consistency

The results indicate that two factors of this multidimensional scale, trust confirming and trust violating, have acceptable test-retest reliability

and internal consistency for both friendship preferences and actual friendships. Support for reliability and internal consistency for school trust, however, was more limited. Although school trust for friendship preferences and actual friendships had significant test-retest correlations, they were lower than conventionally accepted. Furthermore, the alpha levels for school trust for friendship preferences and actual friendships were somewhat lower than conventionally expected for acceptable internal consistency. Kaplan and Saccuzzo (1989) suggest that reliability estimates in the range of .70 to .80 are good enough for most purposes in basic research.

Validity

The results also lend support for validity of the RMTVF. Consistent with the hypothesis, there was a correlation between the RMTVF and the Chumship Checklist. Specifically: (a) children who assigned higher ratings for school trust in their friendship preferences were those who had formed chumships as indicated on the Chumship Checklist, and (b) children who assigned higher ratings for trust

confirming in their actual friendships were those who had formed chumships as indicated on the Chumship Checklist. Furthermore there was a correlation between the RMTVF and the Values of Friendship Scale. Specifically, those children who assigned higher ratings for trust confirming in their actual friendships were those who rated dependability as an important quality in a friend. However, contrary to expectation, there was no significant correlation between the RMTVF and the trustworthy value rating. Given this finding, future research is required to further establish the validity of the RMTVF.

Future Directions

One area to be investigated further, concerns the relationship between trust-value and chumship. Although the present data is correlational and causality cannot be inferred, it is interesting to explore this area. First, evidence for the importance that children assign to trust-value in their "actual" friendships was derived from their judgements of their real friends in hypothetical situations. Specifically, children engaged in pretending that their peer friends kept secrets, promises,

etc. In the future, researchers should explore the extent to which the RMTVF generalizes to children's reactions to "real life" events of secret keeping, promise keeping and truth telling with their peers.

Second, does trust-value facilitate the formation of chumships or do having chumships facilitate children in adopting the trust-value basis of friendship? The fact that chumship correlated with school trust for friendship preferences may reflect on the issue that it is within the context of school where social interactions occur and where most children form friendships. Researchers should continue to explore this relationship between trust-value and chumship.

There are two important implications of the trust-value differences for children's friendships. One implication concerns how children select and maintain friendships. In particular, those children who have acquired the trust-value basis maybe more selective in who they decide will become a friend and who will remain a friend. Direct observation of peer behavior may be one method by which to assess this. Another implication concerns trust-value and its impact on later friendships. Hartup (1983) proposed that friendships are precursors for other

relationships and may be used as important models for the formation of future friendships later in development. In this context, children who have attained high trust-value as a criteria for friendship may demonstrate different interpersonal relationships later in development than those who have attained low trust-value. For example, perhaps high trust-value children tend to demand more confidentiality from a relationship and hence have more intimate relationships as adults than would low trust-value children.

A final important consideration concerns the origins or factors influencing a child's adoption of the trust-value basis of friendship. One of these factors is the impact parents may have on trust-value. Previous research in this area show that certain child rearing practices affect how children acquire values of their society (Grusec & Lytton, 1988). It would be interesting to explore to what extent child rearing practices have on whether children develop the trust-value basis of friendship.

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List of Appendices

Appendix A - Parent and Child Consent Form.

Appendix B - Rotenberg-Morgan Trust-Value Friendship Questionnaire.

Appendix C - Chumship Checklist.

Appendix D - Values of Friendship Scale.

Appendix E - Oblique Rotated Structure Matrices

Appendix A
Consent Form

Dear Parent:

We would like to request your permission to allow your child to take part in a study that we (Dr. Ken J. Rotenberg and Cathy Morgan) are conducting. The purpose of the study is to examine how much children value trust as a basis for their friendships. That is, how much children believe secret sharing, secret keeping, lying and promise fulfilment are important in deciding who they want as a friend. In the study, students in 5th and 6th grades will be asked to complete 3 questionnaires: The Rotenberg-Morgan Trust-Value Friendship Questionnaire, the Chumship Checklist, and a Values of Friendship Scale. (The questionnaires will be available in the principal's office for you to examine.) The student's participation in the study will be completely voluntary. The questionnaires will take about 60 minutes to complete and will be done in school.

It should be emphasized that the present study is concerned with differences in children's value of trust as a basis for friendship in general. Each students' answers will be kept completely confidential and the findings will be reported as group data only. The present study has been approved by the Lakehead University Ethics Advisory Committee and the Lakehead District Catholic School Board.

Please fill out the attached form indicating whether or not you are willing to allow your child to participate in the study and return it to his/ her school. Should you have any questions about the study please feel free to contact us, Dr. Ken Rotenberg at 343- and Cathy Morgan at 343-

Yours Sincerely,

Ken J. Rotenberg, Ph.D Associate Professor

Cathy J. Morgan, M.A Candidate

Dear Student:

We would like to ask you to take part in a study that we (Dr. Ken Rotenberg and Cathy Morgan) are carrying out. This study will look at how much different children value trust for their friendships. That is how much each child believes that things such as secret keeping are important for deciding who should be a friend and who will remain a friend.

You will be asked to answer a number of questions (about an hour's worth) about your likes and dislikes about friendship and about the friendships you have. You will answer these on a sheet that only we will get to see and specifically know about. Keep in mind that taking part in the study is up to you and you can decide not to answer a given question or stop answering altogether.

Please sign below if you agree to take part in the study.

Yours sincerely,

Ken J. Rotenberg, Ph.D

Cathy J. Morgan, M.A. Candidate

This is to show that I _____ agree to take part in the study described above.

Signed: _____

Appendix B

Rotenberg–Morgan Trust–Value Friendship Questionnaire

Pretend that you have just met Jane (John), a girl (boy) of the same age as yourself. Then pretend that the following events happened while you two were hanging out. (By hanging out we mean doing things/activities with Jane (John).

Jane (John) told you she (he) would meet with you after school and she (he) showed up.

Circle how much you would want Jane (John) as friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

Jane (John) says that she (he) won't be out on the playground at recess because she (he) has to go to the doctor.

Later someone says that they saw Jane (John) at the doctor's office.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

Jane (John) was supposed to go to the movies with you, but at the last minute changed her (his) mind.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

Jane (John) brags and boasts to gain status and attention and to appear better than she (he) really is.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

Jane (John) borrowed something of value from you, says she'll (he'll) bring it back the next day and she (he) does bring it back.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

6. You told Jane (John) that you liked a boy (girl) and then she (he) went and told the boy (girl) that you like him (her).

Circle how much you would want Jane (John) as a friend?

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

Jane (John) told you that you looked nice, and she (he) meant what she (he) said.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

8. You tell Jane (John) what you are going to give your mother for Christmas and she (he) keeps it a secret.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

9. Jane (John) accuses you of things you actually did not do.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

10. Jane (John) finds out what kinds of things hurt your feelings and uses them against you.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

You told Jane (John) something that you didn't want anyone to know and she (he) didn't tell anyone.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

12. Jane (John) promises you that she (he) will go bowling with you. Then Jane says that she (he) can't go because she (he) has to go away with her (his) family. Later you see Jane (John) at the bowling alley.

Circle how much you would want Jane (John) as a friend.

1	2	3	4	5
not at all		not sure		very much

How much would you want to hang out with Jane (John)?

1	2	3	4	5
not at all		not sure		very much

In the blank, put the initials of a same-sex peer who is a friend of yours _____. Pretend that _____ did each of the following things to you.

1. _____ told you that she (he) would meet you after school and she (he) showed up.

Circle how good a friend _____ would be.

1 2 3 5

not a good friend not sure very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1 2 3 4 5

decrease hanging out not sure increase hanging out

2. _____ says that she (he) won't be out on the playground at recess because she (he) has to go to the doctor. Later someone says they saw _____ at the doctor's office.

Circle how good a friend _____ would be.

1 2 3 5

not a good friend not sure very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1 2 3 4 5

decrease hanging out not sure increase hanging out

3. _____ was supposed to go to the movies with you, but at the last minute changed her (his) mind.

Circle how good a friend _____ would be.

1 2 3 5

not a good friend not sure very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1 2 3 4 5

decrease hanging out not sure increase hanging out

4. _____ brags and boasts to gain status and attention to appear better than she (he) really is.

Circle how good a friend _____ would be.

1 2 3 5

not a good friend not sure very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1 2 3 4 5

decrease hanging out not sure increase hanging out

9. _____ accuses you of things you actually did not do.

Circle how good a friend _____ would be.

1	2	3	5
not a good friend		not sure	very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1	2	3	4	5
decrease hanging out		not sure		increase hanging out

10. _____ finds out what kinds of things hurt your feelings and uses them against you.

Circle how good a friend _____ would be.

1	2	3	5
not a good friend		not sure	very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1	2	3	4	5
decrease hanging out		not sure		increase hanging out

11. You told _____ something that you didn't want anyone to know and she (he) didn't tell anyone.

Circle how good a friend _____ would be.

1	2	3	5
not a good friend		not sure	very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1	2	3	4	5
decrease hanging out		not sure		increase hanging out

12. _____ promises you that she (he) will go bowling with you. Then says she (he) can't go because she (he) has to go away with her (his) family. Later you see her (him) at the bowling alley.

Circle how good a friend _____ would be.

1	2	3	5
not a good friend		not sure	very good friend

Circle how much this would cause you to change the amount of time you hang out with _____.

1	2	3	4	5
decrease hanging out		not sure		increase hanging out

Appendix C

Chumship Checklist

Please check those activities that you do with your same-sex best friend.

1. Play games in which you both take turns being the leader.
2. Walk to school together.
3. Help out when one of you gets behind in her (his) work.
4. Talk about boys (girls).
5. Share each others games.
6. Tell each other things you wouldn't tell anyone else.
7. Stick up for one another if an older girl (boy) is picking on you.
8. Sit together on the school bus.
9. Try to be on the same side when choosing teams, even if she (he) is not the best player.
10. Do fun things together, such as going to the movies or shopping (ball game).
11. Tell each other if one of you has done something wrong.
12. Phone each other about school assignments.
13. Talk about what you want to be when you grow up.
14. Sleep over at each others house.
15. Talk about your parents.
16. Find it hard to disagree with her (him) on important things.
17. Go on a vacation or short trip with her (him) and her (his) family.

Appendix D

Values of Friendship Scale

Typed below are some words we can use to describe other people. How important to you is it that your friends have these qualities? Circle the number on the scale according to how much you value that quality in a friend.

1 means most value

5 means least value

loyal	1	5
	most value	least value
funny	1	5
	most value	least value
good looking	1	5
	most value	least value
trustworthy	1	5
	most value	least value
helpful	1	5
	most value	least value
co-operative	1	5
	most value	least value
dependable	1	5
	most value	least value
common	1	5
interests	most value	least value

Appendix E

Oblique Rotated Structure Matrices

Oblique Rotated Factor Matrix for Preferences Testing 1

Item	Factor 1	Factor 2	Factor 3
1	.39965	-.03847	.76413
2	.37570	-.03804	.81196
3	.08711	.61587	-.47835
4	-.13765	.73344	-.31215
5	.83718	-.19863	.12607
6	-.17041	.56419	.07055
7	.87382	-.11770	.34289
8	.86109	-.09665	.34289
9	-.01247	.73830	-.07056
10	-.07041	.82216	.00941
11	.87653	-.04872	.19692
12	-.19367	.63421	.28018

Oblique Rotated Factor Matrix for Preferences Testing 2

Item	Factor 1	Factor 2	Factor 3
1	.74059	-.12714	.40851
2	.41837	-.06930	.82906
3	.01520	.45064	-.78775
4	.14287	.68796	-.50857
5	.80486	-.04155	.18476
6	-.10478	.62764	-.13033
7	.87531	-.01939	.08097
8	.91400	-.07467	.16370
9	.03248	.83979	-.24553
10	-.06400	.85137	-.35534
11	.85543	-.02884	-.03102
12	-.09223	.77055	-.07873

Oblique Rotated Factor Matrix for Actual Testing 1

Item	Factor 1	Factor 2	Factor 3
1	-.20631	.40936	.91148
2	-.16648	.30932	.94142
3	.62817	-.09792	-.51399
4	.82508	-.14375	-.28496
5	-.10009	.66653	.31437
6	.67210	-.16578	-.09740
7	-.25878	.78711	.16484
8	-.07670	.79764	.39327
9	.87478	-.02548	-.13089
10	.87653	-.02920	-.16596
11	-.02340	.75892	.16290
12	.80424	-.19901	-.11021

Oblique Factor Matrix for Actual Testing 2

Item	Factor 1	Factor 2	Factor 3
1	-.10392	.44037	.84356
2	-.23891	.25292	.80565
3	.71897	-.04834	-.46737
4	.86996	-.01206	-.14153
5	-.10119	.83019	.22937
6	.65217	.16795	-.25534
7	-.00222	.71795	.53009
8	-.08131	.74687	.62203
9	.90036	-.01330	-.12823
10	.89537	-.07463	-.12076
11	-.03771	.84169	.25088
12	.83483	-.17982	-.10937

modified to assess their actual peer friendships. For Preferences and Actual, two of the items depicted a boy/girl (depending on sex of child) breaking/keeping a promise, two depicted lying/telling the truth and two depicted breaking/keeping a secret. On each item for Preferences, the child had to rate on a Likert-type scale from 1 (not a good friend) to 5 (very good friend): (a) how much they would want that boy/girl as a friend and (b) how much they would want to hang out with that boy/girl. The items were modified for actual friendships such that the child had to identify, with initials, the name of a same-sex best friend and subsequently read each question depicting this friend either breaking/keeping a promise, lying/telling the truth, or breaking/keeping a secret. The child then had to rate on a scale from 1 (not a good friend) to 5 (very good friend): (a) how good a friend this boy/girl would be and (b) how much this would increase/decrease the amount of time they hang out with this friend.

Chumship Checklist (see Appendix C)

This consists of 17 activities that preadolescents might do

together, for example, "tell each other things you wouldn't tell anyone else" and "sleep at each other's house". The child had to check those activities that they do with their same-sex best friend.

Values of Friendship Scale (see Appendix D)

This consists of eight words, such as trustworthy and dependable, that a child might use to describe a peer. The child had to rate, on a Likert-type scale from 1 (most value) to 5 (least value), how much they value each quality in a friend.

Procedure: There were two testing sessions. In the first testing session, which took about 40 minutes, the children were administered the Rotenberg-Morgan Trust-Value Friendship Questionnaire, the Chumship Checklist and the Values of Friendship Scale. In the second testing session, which took approximately 20 minutes and which took place one month later, 103 children from the original 130 were administered the Rotenberg-Morgan Trust-Value Friendship Questionnaire as a measure of test-retest reliability.