Rosemarie Brendgen

PEER REJECTION
AND FRIENDSHIP QUALITY

A View from Both Friends' Perspectives

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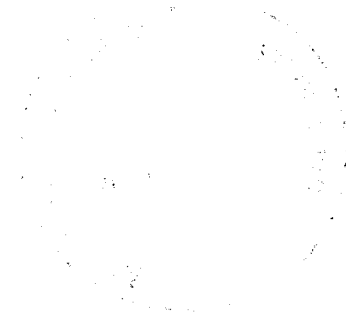
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Deutsche Zusammenfassung

Insbesondere in der mittleren Kindheit wird die soziale, kognitive, und moralische Entwicklung wesentlich durch die erfolgreiche Interaktion mit Gleichaltrigen (Peers) beeinflußt (Youniss, 1994). Die offene Ablehnung durch Gleichaltrige stellt demnach ein beträchtliches Risiko für die weitere Entwicklung dar (Parker & Asher, 1987; Asher & Coie, 1990; Kupersmidt, Coie, & Dodge, 1990). Von der Mehrheit seiner Klassenkameraden abgelehnt zu werden, bedeutet jedoch nicht zwangsläufig, überhaupt keinen Freund zu haben. Tatsächlich könnten abgelehnte Kinder, obwohl sie von den meisten ihrer Klassenkameraden nicht akzeptiert werden, genauso gute und intensive Zweierfreundschaften haben wie akzeptierte Kinder. Es ist denkbar, daß eine enge Zweierbeziehung zumindest einen Teil der negativen Erfahrungen und Folgen der Ablehnung durch Gleichaltrige mildern könnte (Sullivan, 1980). Angesichts dieser Möglichkeit ist die Untersuchung der Qualität der Zweierfreundschaften abgelehnter Kinder von besonderer Wichtigkeit. Sie ist daher der wesentliche Fokus der vorliegenden Arbeit.

Bisher gibt es nur relativ wenige Untersuchungen zu dem Verhältnis von Peer-Akzeptanz bei Grundschulkindern einerseits und der Qualität ihrer Zweierfreundschaften andererseits, die zudem recht widersprüchliche Befunde liefern. So fanden z.B. McGuire und Weisz (1982) nur eine sehr schwache positive Korrelation zwischen einem globalen Maß der Freundschaftsintensität und Popularität. Dagegen berichteten Parker und Asher (1993) von einem wesentlich stärkeren Zusammenhang zwischen niedriger Peer-Akzeptanz und geringer Freundschaftsqualität. Patterson, Kupersmidt & Griesler (1990) hingegen zeigten, daß abgelehnte Kinder die Qualität ihrer Freundschaften nicht schlechter bewerteten als akzeptierte Kinder.

Die Variabilität dieser Ergebnisse läßt sich wahrscheinlich auf methodische Unterschiede zurückführen. So differenzierte das Popularitätsmaß in der Studie von McGuire und Weisz (1982) z.B. nicht zwischen denjenigen unbeliebten Kindern, die von der Mehrheit ihrer Klassenkameraden abgelehnt werden, und denjenigen, die einfach gar nicht beachtet werden. Außerdem wurde die Erwiderung der Freundschaftsnominierung durch das nominierte Kind

nicht überprüft, so daß nicht sichergestellt war, ob die genannte Freundschaft nicht bloß auf dem Wunschdenken des nominierenden Kindes basierte. Auch erlaubte die globale Messung der Freundschaftsqualität keine differenzierte Betrachtung der unterschiedlichen Aspekte von Freundschaft. Parker und Asher (1993) stellten dagegen die Reziprozität der Freundschaftsnominierung sicher und erfaßten die Freundschaftsqualität der Kinder mit Hilfe eines multidimensionalen Instruments. Aber auch sie unterschieden nicht zwischen offen abgelehnten oder bloß ignorierten Kindern. Patterson et al. (1990) wiederum grenzten abgelehnte und ignorierte Kinder voneinander ab, aber sie kontrollierten nicht die Gegenseitigkeit der Freundschaftsnennungen. Zusammengefaßt läßt sich also feststellen, daß die Frage nach der Qualität der Freundschaften abgelehnter Kinder immer noch offen ist.

Wie oben erwähnt, ist die Wechselseitigkeit bzw. Reziprozität der Freundschaftsnominierung ein grundlegender Faktor bei der Untersuchung der Qualität tatsächlich vorhandener Freundschaften. Nach Youniss (1994) umfaßt Reziprozität jedoch mehr als die bloße Freundschaftsnennung. So beinhaltet sie bei den Freundschaften jüngerer Kinder vorwiegend die Wechselseitigkeit von (überwiegend positiven) Handlungen, während sie ungefähr ab dem Alter von neun Jahren vor allem auch die Gegenseitigkeit von Interessen und Gefühlen einschließt (z.B. gegenseitiges Mögen) (Sullivan, 1980; Youniss, 1994). Die Reziprozität von positiven Gefühlen, und damit auch die Übereinstimmung der positiven Einschätzung der Freundschaft, wird also als ein wesentlicher Bestandteil einer engen und befriedigenden Freundschaft angesehen. Dennoch basieren die meisten Studien zur Freundschaftsqualität nur auf der Freundschaftseinschätzung eines der beiden Partner. Die wenigen Untersuchungen, die die Aussagen beider Partner erfaßten, zeigen jedoch, daß Freunde die Qualität ihrer Beziehung keineswegs immer gleich einschätzen. So fanden z.B. Parker und Asher (1993), in Abhängigkeit vom untersuchten Freundschaftsaspekt, selbst bei besten Freunden (dritte bis fünfte Klasse) oft beträchtliche Unterschiede in den Freundschaftseinschätzungen (r = .21 bis r = .64). Eine ähnlich niedrige Übereinstimmung (r = .38) in der Wahrnehmung der Freundschaftsintimität fand auch Buhrmester (1990). Er konnte aber auch zeigen, daß die Übereinstimmung bei Adoleszenten (achte bis neunte Klasse) erheblich größer war (r = .81). Nach Parker und Asher (1993) deutet eine niedrige Übereinstimmung in der Freundschaftswahrnehmung darauf hin, daß die Freunde noch kein gegenseitiges Verständnis über die Bedeutung ihres Verhaltens zueinander entwickelt haben. In diesem Sinne kann z.B. die höhere Übereinstimmung zwischen älteren Freun-

den dadurch erklärt werden, daß bei ihnen die Fähigkeit zur sozialen Perspektivenübernahme stärker entwickelt ist als bei jüngeren Kindern (Piaget, 1986). Parker und Asher schlagen daher vor, das Ausmaß der Übereinstimmung in der Freundschaftswahrnehmung als einen wichtigen Aspekt der Freundschaftsqualität zu untersuchen, was ich in der vorliegenden Arbeit tun möchte.

Bei der Untersuchung der Wahrnehmungsübereinstimmung bezüglich der Freundschaftsqualität stellt sich die Frage, wie leicht sich eine interpersonale Übereinstimmung bei der Wahrnehmung eines bestimmten Aspekts überhaupt finden läßt. Die Wahrnehmung sozialen Verhaltens wird maßgeblich von den Eigenschaften der betroffenen Personen beeinflußt (z.B. von den sozio-kognitiven Fähigkeiten und Motiven der wahrnehmenden Person, sowie ihren vorangegangenen Erfahrungen mit der wahrgenommenen Person; Funder & Dobroth, 1987). Funder und Dobroth konnten zeigen, daß eine übereinstimmende Wahrnehmung zwischen Personen daher umso wahrscheinlicher ist, je „sichtbarer" (d.h., je objektiv wahrnehmbarer) ein bestimmter Aspekt ist. Basierend auf diesen Befunden soll auch in der vorliegenden Arbeit zwischen eher objektiv und eher subjektiv wahrgenommenen Freundschaftsaspekten unterschieden werden. Objektiv wahrgenommene Aspekte beziehen sich nach Funder und Dobroth (1987) eher auf offen sichtbares Verhalten, das eine eindeutig interpretierbare Information liefert und wenig Gelegenheit zu unterschiedlicher Interpretation bietet. Unabhängig von den Eigenschaften der wahrnehmenden Personen sollte hier eine hohe interpersonale Übereinstimmung in der Wahrnehmung bestehen. Die eher subjektiv wahrgenommenen Aspekte beziehen sich dagegen mehr auf intrapsychische Prozesse, deren Einschätzung die Verarbeitung vieler verschiedener und äußerst komplexer, bzw. sogar ambivalenter Informationen erfordert. Im Gegensatz zu den eher objektiv wahrnehmbaren Freundschaftsaspekten, besteht bei der Wahrnehmung eher subjektiver Aspekte also nicht ohne weiteres eine interpersonale Übereinstimmung. Hier ist zu erwarten, daß die Eigenschaften der wahrnehmenden Personen (wie z.B. ihre sozio-kognitiven Fähigkeiten) erheblichen Einfluß auf das Ausmaß der Wahrnehmungsübereinstimmung haben. Nun sind es nicht nur die jüngeren Kinder, deren sozio-kognitive Fähigkeiten (z.B. die Fähigkeit zur sozialen Perspektivenübernahme) noch ungenügend ausgebildet sind. In einer Vielzahl von Studien konnte gezeigt werden, daß auch die sozio-kognitiven Fähigkeiten abgelehnter Kinder deutliche Defizite im Vergleich zu denen akzeptierter Kinder aufweisen (siehe zusammenfassend Crick & Dodge, 1994); so treten z.B.

recht häufig Mißverständnisse bei der Interpretation der sozialen Signale anderer Personen auf (Dodge, 1980; Goldman, Corsini & de Urioste, 1980; Dodge & Frame, 1982; Dodge, Murphy & Buchsbaum, 1984). Das Ausmaß der Übereinstimmung zwischen den Freunden bezüglich der Einschätzung ihrer Beziehung könnte somit tatsächlich ein wichtiger Faktor sein, in dem sich die Freundschaften abgelehnter Kindern von denen akzeptierter Kinder unterscheiden.

Ausgehend von diesen Überlegungen wurden unter anderem folgende grundlegende Hypothesen formuliert.

- *Es ist zu erwarten, daß zwischen eher objektiv und eher subjektiv wahrgenommenen Freundschaftsaspekten unterschieden werden kann.*
- *Im Vergleich zu älteren Kindern sollten jüngere Kinder bei den subjektiv wahrgenommenen Freundschaftsaspekten weniger Übereinstimmung mit ihren Freunden zeigen.*
- *Im Vergleich zu akzeptierten Kindern sollten abgelehnte Kinder bei den subjektiv wahrgenommenen Freundschaftsaspekten weniger Übereinstimmung mit ihren Freunden zeigen.*

Die Studie basiert auf einer Stichprobe von 764 Grundschulkindern der zweiten bis fünften Klasse. Der soziometrische Status innerhalb der Klasse wurde mit Hilfe der Nominierungs- und Klassifizierungsprozedur nach Coie, Copotelli und Dodge (1982) ermittelt, die zwischen populären, durchschnittlichen, kontroversen, ignorierten und abgelehnten Kindern differenziert. So konnte eine klare Abgrenzung der *abgelehnten* von den *ignorierten* unpopulären Kindern erreicht werden. Die Einschätzung der Freundschaftsqualität im Hinblick auf verschiedene Aspekte wurde mittels eines standardisierten Interviews nach Krappmann, Oswald, von Salisch, Schuster, Uhlendorff, und Weiss (1991) in den Klassen erhoben. Für die Schulfreundschaften der Kinder konnte somit die Erwiderung der Freundschaftsnominierung sowie das Ausmaß der Wahrnehmungsübereinstimmung bezüglich der Qualität verschiedener Freundschaftsaspekte überprüft werden. Die Analysen basieren auf einem Grunddatensatz von 551 Kindern, die mindestens eine erwiderte Freundschaft hatten. Von diesen waren 85 als populäre akzeptierte und 243 als durchschnittlich akzeptierte Kinder eingestuft worden. 41 Kinder gehörten zur Gruppe der Abgelehnten. Die Vergleiche zwischen den abgelehnten und den akzeptierten Kindern (d.h. den durchschnittlichen und den populären Kindern) beruhen auf diesen Unterstichproben. Statistische Grundlage der Analysen sind MACS-Analysen (Means- and Covariance Structure Analyses), eine Variante der Strukturgleichungsmodelle

(Jöreskog & Sörbom, 1989; Little, 1996; Browne & Arminger, 1995). Die Vorteile dieser Analysetechnik sind unter anderem, daß a) die Angemessenheit der vorgeschlagenen Unterscheidung zwischen objektiv und subjektiv wahrgenommenen Freundschaftsaspekten explizit getestet werden kann, b) sichergestellt werden kann, daß den Vergleichen zwischen den Unterstichproben tatsächlich inhaltlich gleiche Freundschaftsaspekte zugrunde liegen und c) die Mittelwertsinformation der Variablen mitaufgenommen wird und so in die Gruppenvergleiche einbezogen werden kann.

Zunächst wurde die Gültigkeit der Differenzierung zwischen eher objektiv und eher subjektiv wahrgenommenen Freundschaftsaspekten überprüft. In Anlehnung an die zugrundeliegende faktorielle Struktur des Freundschaftsinterviews nach Oswald und Krappmann (1995) sowie der semantischen Unterscheidung zwischen mehr oder weniger objektiv wahrnehmbaren Aspekten nach Funder und Dobroth (1987), wurden a priori die Aspekte „Intimität", „Spaß" und „Konflikt" als eher subjektiv wahrgenommene Freundschaftsfaktoren eingestuft. Die Aspekte „Gemeinsames Spielen" und „Gegenseitiges Besuchen" wurden als eher objektiv wahrnehmbare Freundschaftsfaktoren eingestuft. Die Rationale zur Überprüfung dieser Faktorenstruktur mittels konfirmatorischer Faktorenanalyse war folgende: Wenn die Wahrnehmungsübereinstimmung zwischen den Freunden bei den objektiven Freundschaftsfaktoren tatsächlich hoch ist, dann sollten die korrespondierenden Selbst- und Freundeseinschätzungen der konstituierenden gemessenen Variablen so hoch miteinander korrelieren, daß sie einen gemeinsamen objektiven Faktor bilden. Auf diese Weise sollten sich die objektiv wahrgenommenen Faktoren „Übereinstimmend eingeschätztes Spielen" und „Übereinstimmend eingeschätztes gegenseitiges Besuchen" bilden. Bei den subjektiven Freundschaftsfaktoren hingegen sollten die korrespondierenden Selbst- und Freundeseinschätzungen der konstituierenden gemessenen Variablen nur gering miteinander korrelieren. Diese bei den eher subjektiv wahrgenommenen Faktoren bestehende geringere Übereinstimmung zwischen Selbst- und Freundeinschätzung sollte daher zur Bildung der Faktoren „Selbsteingeschätzter Konflikt /bzw. Freundeingeschätzter Konflikt", „Selbsteingeschätzte Intimität /bzw. Freundeingeschätzte Intimität" sowie „Selbsteingeschätzter Spaß /bzw. Freundeingeschätzter Spaß" führen.

Die oben beschriebene Differenzierung nach eher subjektiv und eher objektiv wahrgenommenen Freundschaftsaspekten wurde durch die Ergebnisse der konfirmatorischen Faktorenanalyse für die Gesamtstichprobe unterstützt. Bei den eher objektiv wahrnehmbaren Freundschaftsaspekten war die Übereinstimmung zwischen den Freunden tatsächlich so hoch, daß die korrespondierenden Selbst- und Freundeseinschätzungen einen gemeinsamen Faktor bildeten. In Bezug auf die eher subjektiv wahrgenommenen Freundschaftsaspekte war die Übereinstimmung zwischen den Freunden dagegen gering, so daß die Selbst- und die Freundeinschätzungen durch getrennte Faktoren repräsentiert wurden. Die geringe Wahrnehmungsübereinstimmung zwischen den Freunden in Bezug auf die subjektiv wahrgenommenen Aspekte „Intimität", „Spaß" und „Konflikt" spiegelte sich auch in den recht niedrigen Korrelationen zwischen den korrespondierenden latenten Faktoren wider (von $r = .22$ bis $r = .34$). Die Korrelationen zwischen den korrespondierenden selbst- und freundeingeschätzten latenten Faktoren lagen jedoch immerhin über Null. Außerdem unterschieden sich die Mittelwerte der selbsteingeschätzten Aspekte nicht von denen der entsprechenden freundeingeschätzten Aspekte. Obwohl die individuellen Eigenschaften (Motivationen etc.) der Freunde also offensichtlich erheblichen Einfluß auf die Wahrnehmung und Bewertung der subjektiven, eher intrapsychischen Aspekte ihrer Beziehung hatten, stimmten die Freunde somit zumindest annäherungsweise überein. Im Folgenden wurde untersucht, inwieweit dieses Muster dadurch beeinflusst wird, wenn a) das Alter und b) der soziometrische Status der Kinder berücksichtigt wird. Das oben beschriebene Faktorenmodell diente hierbei als Basis für den Vergleich zwischen Kindern in verschiedenen Klassenstufen, sowie zwischen abgelehnten Kindern und durchschnittlich-akzeptierten bzw. populär-akzeptierten Kindern.

Erwartungsgemäß zeigte sich die konzeptuelle Unterscheidung zwischen subjektiv und objektiv wahrgenommenen Freundschaftsaspekten auch unter Berücksichtigung des Alters der Kinder. Jüngere wie ältere Kinder stimmten in der Einschätzung der objektiv wahrnehmbaren Freundschaftsaspekte in hohem Maße mit ihren Freunden überein. In Bezug auf die subjektiv wahrgenommenen Aspekte zeigten sich jedoch erst ab der dritten Klasse positive Korrelationen zwischen den Einschätzungen der Freunde ($r = .28$ bis $r = .40$). Diese Korrelationen blieben auch für die Viert- und Fünftkläßler unverändert. Bei den Zweitkläßlern ergab sich dagegen keine einzige signifikante Korrelation. Im Gegensatz zu älteren Kindern zeigten jüngere Kinder bei den subjektiv wahrgenommenen Freundschaftsaspekten also keine Übereinstim-

mung mit ihren Freunden. Diese Ergebnisse untermauern die Befunde von Buhrmester (1990) und legen gleichzeitig nahe, daß die sozio-kognitiven Fähigkeiten der beteiligten Personen tatsächlich eine Rolle bei der Übereinstimmung der Freundschaftseinschätzung spielen. Ausgehend von diesen Befunden wurden daraufhin die Vergleiche zwischen abgelehnten und akzeptierten Kindern durchgeführt.

Auch unter Berücksichtigung des soziometrischen Status der Kinder zeigte sich die konzeptuelle Unterscheidung zwischen eher subjektiv und eher objektiv wahrgenommenen Freundschaftsaspekten. Wie erwartet, stimmten akzeptierte wie abgelehnte Kinder bei der Wahrnehmung der objektiv wahrnehmbaren Freundschaftsaspekte in hohem Maße mit ihren Freunden überein. In Bezug auf die Übereinstimmung bei den subjektiv wahrgenommenen Aspekten zeigten sich jedoch, wiederum erwartungsgemäß, gravierende Unterschiede zwischen abgelehnten und akzeptierten Kindern. Wie schon bei der Gesamtstichprobe, wiesen die Einschätzungen akzeptierter Kinder zumindest mäßig positive Korrelationen mit den Einschätzungen ihrer Freunde in Bezug auf die drei subjektiven Freundschaftsaspekte auf (r = .34 bis r = .36). Eine besonders hohe Freundschaftseinschätzung auf der Seite der akzeptierten Kinder war also auch eher mit einer besonders hohen Freundschaftseinschätzung auf Seiten der Freunde verbunden. Bei den abgelehnten Kindern war dies jedoch nur im Hinblick auf den Faktor „Konflikt" der Fall (r = .34). Bei den beiden anderen subjektiven Faktoren „Intimität" und „Spaß" stimmten die Einschätzungen der abgelehnten Kinder mit denen ihrer Freunde so wenig überein, daß sie negativ miteinander korrelierten (r = -.36, bzw., r = -.34).

Auch die Betrachtung der Mittelwerte der subjektiv wahrgenommenen Freundschaftsaspekte ergab bedeutende Unterschiede zwischen den soziometrischen Gruppen. Während die durchschnittlichen eigenen Einschätzungen bezüglich der Intimität, des Spaßes oder des Konflikts in ihren Freundschaften bei abgelehnten und akzeptierten Kindern gleich waren, zeigten die entsprechenden Einschätzungen der Freunde erhebliche Unterschiede. Die Freunde durchschnittlich akzeptierter Kinder beurteilten die Qualität dieser drei Freundschaftsaspekte genauso wie die durchschnittlich akzeptierten Kinder selbst. Im Gegensatz dazu schätzten die Freunde der abgelehnten Kinder die durchschnittliche Qualität dieser drei Aspekte wesentlich schlechter ein, d.h., sie empfanden die Freundschaften zu den abgelehnten Kindern als weniger eng, weniger lustig und mehr konfliktbehaftet als die abgelehnten Kinder selbst. Die

Freunde populärer Kinder hingegen bewerteten ihre Freundschaften als sogar noch enger und konfliktärmer als die populären Kinder selbst.

Zusammenfassend weisen die Ergebnisse der vorliegenden Arbeit auf einen Zusammenhang zwischen der Ablehnung durch die Gleichaltrigengruppe einerseits und Problemen innerhalb von dyadischen Freundschaftsbeziehungen andererseits hin. Offensichtlich haben abgelehnte Kinder und ihre Freunde teilweise erhebliche Schwierigkeiten, die Bedeutung ihres Verhaltens zueinander zu verstehen. Gleichzeitig wird deutlich, wie wichtig die Berücksichtigung der Einschätzungen beider Partner für die Untersuchung der Qualität von Freundschaftsbeziehungen ist. Das Ausmaß der Übereinstimmung dieser Einschätzungen sollte dabei als ein weiterer wesentlicher Aspekt der Freundschaftsqualität miteinbezogen werden.

Abstract

Satisfying peer contact is a fundamental factor for children's development. Children who are rejected by the majority of their peers not only often display negative social behavior and show serious deficits in social cognition, but they are also at risk to suffer from adjustment problems in later life. Being rejected by the majority of one's peers does not necessarily mean to be completely friendless, though. Thus, the support of a single close friendship may compensate for at least some of the disadvantages that result from peer rejection. Therefore, based on a study sample of 746 children (second to fifth graders), the major aim of this study was to investigate the quality of rejected children's friendships as compared to those of accepted children. However, because there are two partners in a dyadic friendship, there are also two subjective views of the relationship that may not correspond completely. The degree of perceptual concordance children show with their friends regarding the quality of their relationships was therefore studied as another aspect of friendship quality. It was important to consider, though, that some aspects are more objectively perceivable and therefore facilitate agreement of perceptions, while others refer to a more subjective reality. Consequently, a model of friendship perception was proposed and tested, that not only includes both friends' views, but also differentiates between (a) objectively perceivable aspects of friendship that are part of a shared social reality (i.e., in the present study, Play Encounters and Visits), and (b) other aspects that belong to a more subjective, non-shared reality (i.e., in this case, Closeness, Fun, and Conflict). When tenable, this model was supposed to serve as the basis for examining the relation between peer rejection and friendship quality. Mean and Covariance Structure Modeling Techniques were used for all analyses, so that comparisons could be made on the latent (i.e., non-measured) level.

The results strongly support the assumption, that, irrespective of the characteristics of the persons involved, perceptual agreement among friends is high on the objectively perceived aspects. In contrast, the degree of agreement on the subjectively perceived aspects is only moderate. Moreover, it seems to be influenced by the characteristics of the persons involved, especially by the level of interpersonal understanding reached by the two partners. Thus, comparisons among children of different grade levels showed that in second grade, the friends'

evaluations of the subjective aspects of their friendship were not correlated with each other. With third to fifth graders, though, the friends' evaluations showed at least a moderate agreement. The finding, that person characteristics influence the degree of agreement on the subjectively perceived aspects, was also supported by the results obtained from the comparison of rejected and accepted children's friendships. Specifically, accepted children showed a moderately positive correlation between their own and their friends' perceptions of closeness, fun, and conflict in friendship. In contrast, the correlations between rejected children's and their friends' perceptions of friendship closeness and fun were of the same magnitude as those for the accepted children, but in the negative direction. In other words, accepted children were usually fairly right in how they perceived these aspects of their friendships, whereas rejected children and their friends had rather contrasting views. Examination of the average ratings of friendship quality revealed that rejected children's mean ratings did not differ from accepted children's mean ratings of any aspect of friendship quality. When considering the friend-rated perspective, though, rejected children's friends evaluated all of the subjective qualities of their friendships with these children to be considerably lower than did accepted children's friends. Based on these findings, the implications of the results as well as the possible conclusions that can be drawn from them are discussed. Finally, suggestions for future research are made.

1. GENERAL THEORY

Especially in middle childhood, satisfying peer contact is a fundamental factor for children's development. In interaction with their peers, children acquire fundamental socio-cognitive skills like social perspective-taking, cooperation, and methods of conflict resolution (Youniss, 1982) which are essential for successful social adjustment. Moreover, peer relations offer both social support and security which, in turn, enhance the development of a healthy self-concept and of interpersonal confidence. In contrast, children who are rejected by their peers often display negative social behavior, like disruptiveness and differing forms of aggression, and they show serious deficits in social cognition which is the basis for effective interpersonal understanding. Moreover, rejected children are at risk to suffer from adjustment problems in later life, such as juvenile and adult crime, academic difficulties in adolescence, and adult psychopathology (Asher & Coie, 1990).

Considering the many problems associated with peer rejection, it seems especially important to study the contexts in which rejected children encounter social difficulties. In this respect, it is of specific interest to me, whether children who are rejected by the majority of their peer group also encounter problems with interpersonal interaction in their dyadic relationships. Thus, it may be possible that these children, although they are disliked by most of their peers, maintain a close dyadic friendship the same way as accepted children do. If this was so, then the stable and supportive atmosphere of a single close friendship may, at least partially, compensate for some of the disadvantages that result from being rejected by the peer group.

Because there are two partners in a dyadic friendship, there are also two subjective views of the relationship that may not correspond completely. A discrepancy between the friends' perceptions in a specific relationship does not necessarily imply problems in a child's overall friendship relations. However, a systematically biased perception (i.e., a sytematic over- or underestimation of friendship quality as opposed to the friends' evaluations) may indeed indicate problems in interpersonal understanding and friendship interaction. Moreover, such a perceptual discrepancy of friendship quality is a potential source of conflicts between friends, because it may lead to unfullfilled expectations and frustrations. In the long run, this could

present a potential threat to the child's friendships. Thus, the degree of perceptual concordance children show with their friends regarding the quality of their relationships should be studied as another aspect of friendship quality.

In summary, then, the major goals of this study are (a) to investigate friendship quality as perceived by rejected children and their friends, (b) to examine the amount of agreement between these views as another element of friendship quality, and (c) to compare rejected children's friendship quality with that of accepted children.

1.1. Children's peer relations -- why are they important?

For many decades, it has been acknowledged that experiences with peers are a fundamental factor for children's social and cognitive development (e.g., Piaget, 1986; Sullivan, 1980). Based on the works of Piaget and Sullivan, Youniss (1994) suggested that the unique characteristic of peer experiences is grounded in the symmetrical reciprocity of the relation between children. Contrary to relations with adults, which can be described as complementary, asymmetrical and unilateral power relations, children's peer relations are considered as being balanced and egalitarian relations. Thus, through interaction with peers as co-equals, children have the opportunity to discuss and negotiate conflicting ideas and multiple perspectives, and to decide whether to accept or reject the notions held by others. By so doing, the children acquire fundamental socio-cognitive skills like social perspective-taking, cooperation, and methods of conflict resolution which are the basis for successful peer relations. Once established, these peer relations offer both social support and security, which, in turn, enhance the development of a healthy self-concept. Conversely, children who fail to establish satisfactory peer relations, are deprived of the opportunity to learn the skills required by those relationships. Furthermore, because the acquisition of many skills depends on the hierarchical accumulation of competencies, these children are left at a substantial disadvantage for further development (Buhrmester & Furman, 1986). Indeed, children who experience difficulties in their peer relations are at great risk for maladjustment in later life. Thus, they exhibit greater academic difficulties, truancy, and high-school dropout, they are more likely to become delinquent in adolescence or develop anxiety and depression symptoms (Parker & Asher, 1987;

Coie, Christopoulos, Terry, Dodge, & Lochman, 1989; Kupersmidt, Coie, & Dodge, 1990; Kupersmidt & Patterson, 1991; Rubin & Coplan, 1992). Consequently, studying the context in which children encounter social difficulties is essential to identify the factors associated with problematic peer relations and their potential negative outcomes.

1.2.   Two types of peer experience

In contemporary research, mainly two types of children's social experience with their peers are distinguished: peer group status and friendship. Peer group status describes the child's degree of social acceptance by the members of a peer group and thus reflects a unilateral view of the peer group toward an individual. A child's peer group status is usually measured by his or her sociometric status. In contrast, friendship is defined as a specific, dyadic and bilateral construct that describes the relationship of mutual liking between two individuals (see, e.g., Bukowski & Hoza, 1989; Berndt, 1984).

Beyond this conceptual distinction, the two types of peer experience also differently contribute to children's development. For example, Sullivan (1980) argued that especially during the juvenile period being accepted by the peer group is extremely critical to a child's self-esteem and social development. A close friendship, on the other hand, (especially the intimate dyadic relation with a same-sex peer) promotes the first real opportunity to see oneself through others' eyes, thereby validating the self-concept developed from group experiences. In addition, it (a) offers a consensual validation of interests, hopes and fears, (b) promotes the growth of interpersonal sensitivity, and (c) offers prototypes for later romantic, marital, and parental relationships.

Relatedly, Youniss (1982) argued that, while symmetrical reciprocity is a constituting element of all peer relations, in friendships, this pure form of reciprocity is transformed into a new form of reciprocity, namely, cooperation. This means, that in their interactions with peers, children are free to act in the same way as the other person does. For positive acts, this freedom would result in a positive reaction. For negative acts, on the other hand, it would result in a similarly negative reaction, which in consequence could lead to a dead-end situation that

can only be overcome through cooperation. Because cooperation involves the discussion and negotiation of conflicting ideas and differing perspectives, this effort is only taken within a friendship. Furthermore, cooperation generates solidarity and mutual respect, as well as an increased intimacy, which are understood as basic elements of friendship (eg., Hartup, 1993).

Furman and Robbins (1985) have suggested a theory of social provisions that are considered to be differently available in the two types of peer experience. Specifically, they proposed eight social provisions that are sought and given in children's peer relations. One of them (sense of inclusion) can only be obtained in group-related experiences, while three others (affection, intimacy, and reliable alliance) are especially characteristic of dyadic friendship relations. The additional four provisions (instrumental aid, nurturance, companionship, enhancement of worth) can be found in both types of relationship.

1.2.1.   Peer group status

1.2.1.1.   Measures of peer group status

Children's peer group status (i.e., their sociometric status) has been assessed with a variety of methods (e.g., peer assessments, teachers' ratings on questionnaires, teachers' comments in school records). What is common to all of them, though, is the restriction to a certain peer group, which most often is the children's class in school. The primary method used has been peer assessments, either as nomination or rating scale procedures, because an adult's view is always that of an outsider as opposed to the first-hand appraisal of peers, despite the high overlap of perceptions (Coie, Dodge, & Kupersmidt, 1990). In the nomination procedures, each child nominates (a restricted or non-restricted number of) peers for certain positive or negative criteria (e.g., "someone you like to play with" or "someone who is your friend" and "someone you don't like to play with"). In contrast to this method, rating scales involve having each child rate all of his or her peers on a Likert-scale with respect to a specific criterion (e.g., degree of liking). As suggested by several researchers (e.g., see Asher & Hymel, 1981; Hartup, 1983, for a review), positive and negative nomination scores are not simply two sides of the same coin reflecting liking or disliking. Instead, such nominations seem to represent

two distinct aspects of popularity, namely acceptance (as measured by positive nominations) and rejection (as measured by negative nominations), because they appear to have different behavioral and nonbehavioral correlates. Furthermore, friendship nominations represent a qualitatively different concept than positive ratings of liking, although a resonable degree of overlap can be expected between the two (Asher & Hymel, 1981; Bukowski & Hoza, 1989; Rost & Czeschlik, 1994). Rating scales, on the other hand, reflect a type of composite measure, which simultaneously represents both the acceptance and rejection dimension of popularity (Bukowski & Hoza, 1989).

In addition to the variety of measures, different classification systems have been used by different researchers. Thus, often a relatively rough distinction between well-liked, average-liked, and less-liked children has been employed (e.g., Parker & Asher, 1993). However, given the evidence that positive and negative nominations reflect different dimensions of popularity, the importance of simultaneously considering these two domains has been of increasing concern in order to distinguish among finer subgroups of children with regard to popularity (see Asher & Hymel, 1981; Newcomb & Bukowski, 1984). Because average or summed scores of composite measures do not distinguish among various types of children who fall into the middle range, rating scale techniques have been critized as being of very limited use for this purpose (see Bukowski & Hoza, 1989). A classification system that has been found to be most meaningful has been developed by Coie, Dodge, and Coppotelli (1982). Based on both positive and negative nominations, as well as additional composite scores of these two dimensions (see method section for details), they distinguish between (a) popular children, who are exceptionally well-liked, (b) controversial children, who are much-liked by some peers and much-disliked by other peers, (c) average children, who are neither much liked nor much disliked, (d) neglected children, who are not disliked but completely overlooked by their peers, and (e) rejected children, who are exceptionally disliked by their peers (see Coie et al., 1982; Newcomb & Bukowski, 1983, 1984; Asher & Dodge, 1986). This classification system has become widely accepted for identifying children who differ with respect to their peer group status, and recent research suggests that within these classifications even more specific subgroups of children can be identified (e.g., French, 1988; Cillessen, Ijzendoorn, Lieshout, & Hartup, 1992). However, because the classification of children's sociometric status has not been very uniform, the rejected and neglected children

have often been conjointly referred to as generally unpopular children. Similarly, controversial children frequently have been confounded with the average group. This variability is especially problematic since different measures are likely to represent different aspects of children's peer experiences, which makes comparisons between studies very difficult and also limits their generalizability. Thus, it is often unclear if results are true for the more general classification or only for a specific subgroup. Because the proposed study emphasizes the correlates of peer rejection in middle childhood, I will only refer to literature explicitly dealing with rejected children of that age-group, when possible. In some instances, though, results for unpopular children in general or children belonging to other classificatory systems (e.g., aggressive vs. non-aggessive), and/ or for children of other age-groups will be cited.

1.2.1.2. Correlates of peer rejection

Given the importance of satisfactory peer experience, for decades a vast body of research has been looking for explanations of peer rejection and it's implications for later development. In the following sections, I will describe research findings dealing with both behavioral and socio-cognitive correlates, as well as possible outcomes of peer rejection. Although peer status has been found to be influenced by aspects like physical attractiveness (Kleck, Richardson, & Ronald, 1974; Dodge, 1983), sport skills (Coie & Dodge, 1988), academic achievement and general intelligence (Petillon, 1993; Rost & Czeschlik, 1994), or family background (Patterson, Vaden, & Kupersmidt, 1991), it will become clear that it is mainly the rejected children, and not other groups of extreme social status (e.g., the neglected children), who often show serious deficits both in social behavior and cognition, and who are at risk to suffer from adjustment problems in later life.

1.2.1.2.1. Behavioral correlates of peer rejection

At all ages, social acceptance seems to be related to positive social behavior (e.g., helpfulness, rule conformity, and friendliness). In contrast, social rejection seems to be related to negative social behavior like disruptiveness and differing forms of aggression. However, notable dif-

ferences between boys and girls have been found, suggesting that the type of behavior discriminating between rejected and non-rejected children appears to depend on the children's gender. Coie, et al. (1982), for example, investigated popular, controversial, average, neglected, and rejected children in third, fifth, and eighth grade. They found that popular children were judged by their peers to be highly cooperative and exhibit a prosocial leadership behavior, while at the same time, they were said to show little disruptive and aggressive or help-seeking behavior. Rejected children, on the other hand, were judged in the opposite way, that is, they displayed little cooperative or leadership behavior, but they showed considerable disruptiveness and aggression, as well as help-seeking behavior. However, aggressive and help-seeking behavior was especially related to peer rejection in boys, while lack of cooperative behavior was specifically related to peer rejection in girls. The controversial children were equally perceived to exhibit both highly positive and negative social behavior, while the neglected children behaved like average children in all aspects except for shyness and withdrawal. Average children showed average behavior in every respect.

In a study by Cantrell and Prinz (1985), differences among rejected, neglected, and average children were examined from grades three through six. Again, rejected children, as described by their peers, displayed significantly more physical and verbal aggression, disruption, bossiness, immaturity, and oversensitivity than neglected and average children, while the latter two groups did not differ from each other in these aspects. Also, there was some evidence that withdrawal is related to peer rejection, but this was more true for girls than for boys. Similar results were obtained by Coie and Dodge (1988), Newcomb and Bukowski (1984), and Carlson, Lahey, and Neeper (1984).

Using peer-ratings and observations of fourth-grade boys, Coie and Kupersmidt (1983) assessed the question, whether the often-reported anti-social behavior of rejected children merely represented a reaction to their negative peer status or if it was the cause of the children's rejection by the peers. The authors compared the play group behavior of boys who were either from the same classroom or who were unfamiliar with each other. In both the familiar and the unfamiliar condition, each group was composed of one popular, average, neglected, and rejected status child, as classified from prior classroom nomination. The results showed a great overlap between the peer-assessed behaviors of rejected children in the famil-

iar and the unfamiliar condition, while this relation was less clear for the children with other peer status. Furthermore, sociometric status assessed in the familar and the unfamiliar play-groups after six weeks highly correlated with the sociometric status obtained earlier in the classroom.

These findings are similar to those of Dodge (1983) who observed the play-group behavior of previously unacquainted second-grade boys. After eight sessions, the five status groups according to the Coie, et al. (1982) method were identified. Results indicated that the behavioral patterns exhibited during initial encounters with peers significantly predicted later social status. Specifically, boys who became unpopular (i.e., rejected or neglected) among their peer group engaged in more disruptive behaviors than others and they also less often engaged in interactive, cooperative play and social conversation. Furthermore, the later rejected boys, more than all other children (including the neglected ones), displayed antisocial acts like verbal or physical aggression. These findings suggest, that the socially inappropriate behavior exhibited by rejected children does not seem to be merely a reaction to their negative peer status. Instead, this behavior appears to foster both the emergence and the maintenance of peer rejection, so that together with the negative peer status it is likely to show stability over time and to be transferred into new social situations.

1.2.1.2.2. Socio-cognitive correlates of peer rejection

Based on Piaget's theory, that competent social behavior depends on the child's social information processing (i.e., the ability to correctly understand others' thoughts and the resulting actions), a developmental lag hypothesis has been offered. Specifically, this hypothesis states that rejected children's deviant behavior may result from a lack of age-appropriate perspective-taking skills (Chandler, 1973; Chandler, Greenspan, & Barenboim, 1974; Rubin, 1972). However, the differences between the status groups with respect to social cognition may depend on the type of social processing. Thus, information processing is a rather complex procedure, involving the encoding and interpretation of social cues, the evaluation and selection of an optimal response, and the enactment of the response (e.g., Dodge, 1986; Crick & Dodge, 1994). In the following sections, I review exemplary findings for these steps.

In order to assess children's accuracy in interpreting social cues, Goldman, Corsini, and de Urioste (1980) had preschool children (age range: 4-5 years) match certain emotions with one of three photographs which displayed faces expressing various emotions like sadness, happiness, anger, or fear. The children were assigned to four groups that were largely correspondent to the popular, controversial, neglected, and rejected classifications developed by Coie et al. (1982). The results indicated that the number of correctly identified emotions was lower for the rejected group than for the three other groups, who did not significantly differ from each other in this respect. As was demonstrated by Rowe and Carton (1995), children who have difficulties in reading nonverbal emotional expressions also seem to show a hostility bias in their interpretations of social cues. This notion is supported by Dodge, Murphy and Buchsbaum (1984), who investigated preschoolers', as well as second and fourth grade children's skills for interpreting others' intentions in a provocative situation. The provocation occured either with a hostile or prosocial intent, or it was accidental. The authors found, that, while rejected and neglected children showed equal performance, they were significantly less accurate than average children, who, in turn, performed worse than popular children. These differences existed even after controlling for verbal skills or general discrimiation skills. The examination of the types of errors made by the low-status children revealed that these children more than better-accepted children made hostile attributions (i.e., they mistook others' prosocial intentions or accidental behavior as being hostile), while they were accurate in identifying truly aversive acts.

Given this biased interpretation in nonambiguous social situations, rejected children should also show this attributional style in ambiguous social situations. Dodge (1980) found that rejected aggressive boys (second, fourth, and sixth grade) were 50% more likely to make hostile attributions in socially ambiguous situations than were nonaggressive, accepted boys. Similar results for third through fifth-graders were obtained by Fitzgerald and Asher (1995), and also by Steinberg and Dodge (1983) for rejected and aggressive adolescents.

In an attempt to assess whether rejected children perceive others as being unfriendly in general or only toward them, Dodge and Frame (1982) had aggressive and non-aggressive boys (kindergarten through fifth grade) interpret stories in which a peer caused a negative outcome either for the subjects themselves or for another child. When the negative outcome happened

for another child, aggressive children's interpretations did not differ from those of non-aggressive children. In contrast, when the negative outcome happened for themselves, aggressive boys mainly suspected a hostile intention of the actor, suggesting a rather "personalized, paranoid view" (Dodge and Feldman, 1990), which, nonetheless, may be grounded in the children's negative social experiences.

Apart from a maladaptive or inaccurate interpretation of social situations, rejected children have also been found to generate more incompetent responses to social situations than accepted children. Thus, Richard and Dodge (1982) examined the responses of cooperative-popular, aggressive-rejected, and shy-neglected boys (second through fifth grade) to friendship initiation and conflict situations that were presented to the children as stories. The authors found that all groups were able to generate a socially effective first response. However, when asked to generate another response in case the first one did not work, both rejected and neglected children proposed more ineffective and aggressive solutions than popular children. Similar results were obtained in studies by Dodge (1986) and Asarnow and Callan (1985). Specifically, Asarnow and Callan found that low-status boys (fourth- and sixth-grade) generated more immature and aggressive and less assertive responses to hypothetical provocations by peers than did high-status children. Furthermore, when asked to evaluate various possible responses, aggressive-rejected children (second through fourth graders) considered positive and prosocial solutions less favorably and physically aggressive solutions more favorably than did high-status children (Dodge, 1986).

In contrast to the previous steps of information processing (i.e., the encoding and interpretation of social cues, as well as response evaluation and selection), response enactment involves verbal and motor skills to execute a selected response. However, very few studies have examined children's enactments independently of the preceding steps. Thus, in order to assess the differences between aggressive-rejected and nonaggressive-accepted children with regard to social information processing and actual behavior, Dodge (1986) administered measures of each step of information processing to children from second to fourth grade. The assessment was conducted by means of prepared videorecorded stimulus material about a hypothetical peer group-entry situation and a hypothetical provocation situation. These situations were divided into various steps pertinent to the steps of information processing. For each step, the

children were asked specific questions to assess the quality of social cognition. In addition, the children's behavioral performance in an actual group entry and provocation situation was rated. Consistent with the above mentioned studies, the aggressive-rejected children showed deficits in each of the various non-behavioral steps of social information processing as well as their actual social behavior in the provocative situation. In the neutral group-entry situation, though, deficits were only found for the interpretation of social cues and response evaluation. Specifically, aggressive-rejected children interpretated the situation to be more threatening and more often preferred passive responses than nonaggressive-accepted children children. In both situations, however, the quality of social information processing was related to the competence and success of the children's actual social behavior.

Apart from problems in the main steps of social information processing, there is some evidence that rejected children (i.e., especially the aggressive ones) may also show deficits in recalling social cues from memory. In the second part of their study, Dodge and Frame (1982) presented videotaped interviews to aggressive and nonaggressive boys from kindergarten through fifth grade. The interviews contained hostile, benevolent, and neutral statements about social experiences made by boys who were unknown to the subjects. When asked to recall the statements just heard, aggressive children, much like the youngest children, more often 'recalled' statements that had actually not been made than did the non-aggressive or the older children. Notably, because the total amount of accurate recalls was similar for aggressive and non-aggressive boys, this tendency to 'make up' things does not seem to simply reflect an errant stimulus encoding pattern.

In summary, the reported studies indicate a strong link between a lack of social information processing skills and inappropriate social behavior. However, as is noted by Dodge and Feldman (1990), several points have to be made here. First, the developmental lag hypothesis can be supported in some domains of information processing, such as interpreting social signals, but not for others, such as attributional biases, which do not follow simple developmental trends. Second, differences in social cognition among the status groups may depend on the specific social situation. As Dodge and Feldham argue, whether or not socio-cognitive patterns differentiate among sociometric groups depends on whether the specific situation is relevant to social functioning at this age. Thus, the problematic situations frequently used in

these studies are responding to verbal or physical provocations, initiating and maintaining friendships, being excluded from play, and fulfilling peer group norms such as helping. A third point is, that, like some of their behavioral patterns, rejected children's problems in social information processing may vary with the children's gender. That is, rejected boys are more likely to process provocative information in a way that escalates conflict by generating aggressive responses whereas rejected girls are more likely to prefer withdrawal (Feldman & Dodge, 1987).

A final point noted by Dodge and Feldman (1990) is, that social cognition and peer status may be connected via three possible pathways, which are not mutually exclusive but convey quite different implications. First, the way a child perceives the world may cause him or her to behave in a certain manner, which, in turn, leads to peer acceptance or rejection. Second, a certain status among the peer group may alter a child's understanding of the social world (e.g., the formation of self-defensive attributions). Third, social cognitions may help to maintain and preserve a child's sociometric status, without necessarily causing it in the first place. Thus, any discussion about the links between social cognition and peer status must be held with these considerations in mind; however, the reported differences in the socio-cognitive patterns of rejected and accepted children may foster behavior that sustains a certain sociometric status.

1.2.1.2.3. Possible outcomes of peer rejection

Based on both the socio-cognitive and behavioral patterns found in rejected children, their daily life in school may be rather problematic. In fact, rejected children are not only generally disliked by their peers, but they are also less favorably received than non-rejected children when they try to approach others (Putallaz & Gottman, 1981; Dodge, 1983) and are often victimized by other children (Coie & Kupersmidt, 1983), which signicantly affects the children's self-evaluation (Petillon & Wagner, 1979, Kurdek & Krile, 1982; Patterson, Kupersmidt, and Griesler, 1990). Therefore, considering that satisfying peer relations contribute substantially to cognitive and emotional development, rejected children might be more at risk for problems in later life, because peer rejection is a more stable condition over time and and across social

contexts than all other extreme status categories (Coie & Dodge, 1983; Newcomb & Bukowski, 1984; Coie & Kupersmidt, 1983).

Research on the relation between peer acceptance and later adjustment has mostly dealt with three types of adjustment, namely academic adjustment in adolescence, juvenile and adult crime, and adult psychopathology (Parker & Asher, 1987; Kupersmidt, et al., 1990). However, as Parker and Asher point out, only a few longitudinal follow-up studies have explicitly assessed how peer rejection in middle childhood relates to problems in later life. Thus, conclusions are usually based on a broader body of research that often involves follow-back (i.e., retrospective) studies on deviant adolescents' or adults' early peer relationships with post-hoc assessed childhood data of unknown reliability and validity. As one of the few exceptions, however, Kupersmidt and Coie (1990) followed a group of rejected, neglected, average, and popular fifth-graders for seven years and compared them with regard to the frequency of grade retention, truancy, early school withdrawal, and disciplinary suspension in high school. Also, aggression was included as another predictive variable. Results indicated that rejected children displayed higher proportions of all behavioral patterns than all other groups, including the neglected children, who did not differ from their accepted peers. Moreover, at least for the white majority of the sample, being peer-rejected predicted their later adjustment problems, even after controlling for earlier average grade score, aggressive behavior, and gender.

In a more recent study, DeRosier, Kupersmidt, and Patterson (1995) followed three cohorts of elementary school children (second- through fourth-graders) for four consecutive years. While peer rejection did not seem to be related to the children's academic achievement, the experience of being rejected led to a significantly higher rate of future school absenteeism, even when controlling for the children's initial level of absenteeism. Academic achievement and being absent from school were negatively correlated, though. Therefore, DeRosier et al. propose that the relation between school adjustment and peer rejection may be an indirect one, mediated by rejected children's higher level of absenteeism. Thus, both Kupersmidt and Coie's study and DeRosier et al.'s study support the results of other studies that have been conducted in the area of academic adjustment (e.g., Lambert, 1972; Ullmann, 1957), suggesting that adolescents' academic maladjustment may indeed -- at least to some degree -- originate in the ongoing frustrations of being rejected (Parker & Asher, 1987).

With respect to research on the links between peer relationships and criminality, several methodological points should be mentioned. First, the term 'criminality' covers a wide range of delinquent acts, from major crimes against persons and property like assault or theft, to relatively minor offenses like careless driving, and it also includes behavior that is only considered illegal because of the subject's youth. Thus, since the studies vary greatly with respect to the seriousness of the delinquent acts, any prediction of criminality from peer acceptance should be made with utmost caution. Second, many of the studies are not based on representative school samples but on clinically-referred or other high-risk samples, and the processes associated with criminality among the latter samples cannot be expected to generalize to unselected samples (Kupersmidt, et al., 1990). Third, a higher proportion of reported crimes is committed by males than by females, and the crimes committed by males are much more aggressive and serious than those committed by females, which are more self-destructive. For this reason, many studies in this area have focussed on male samples only. Again, the 1990 longitudinal study by Kupersmidt and Coie evades many of these problems. For example, delinquency was assessed by reports of contacts with the police or juvenile courts. Their results suggest that peer-perceived aggressiveness in elementary school, and not merely peer-rejection, is predictive of delinquency in later life, even when considering the subjects' socio-economical background, gender, race, and academic adjustment. Similarly, in a longitudinal study by Mägiste (1993), the relation between peer-status of swedish and immigrant boys in sixth grade and juvenile delinquency during the ages 13-20 was investigated. The results clearly suggest that social isolation and rejection in elementary school predicts the level of criminal activity during adolescence, regardless of residential status. Unfortunately, Mägiste only discriminated between popular and unpopular-isolated children, wich does not allow a clear distinction between peer-rejection and neglect or between children with differential levels of aggression. Essentially, though, the results of these two studies are in line with those reported from other research in this area (e.g., Roff, Sells, & Golden, 1972; Roff, 1975; Roff & Wirt, 1984a; Farrington, 1989), suggesting that delinquency and adult criminality are predicted by a pattern of childhood behavior involving aggressive and antisocial acts which is highly characteristic for rejected children.

Research on psychological disorders as a possible outcome of peer rejection focusses on such diverse diagnostic criteria as neurosis, alcoholism, or schizophrenia (Parker & Asher, 1987),

which makes a comparison of results somewhat difficult. As was also the problem with the studies on delinquency, most studies on psychological disorders are based on clinically-referred or high-risk samples, which limits their generalizability. A large proportion of the studies used retrospective analyses with post-hoc assessed data on childhood peer relations. Nonetheless, these studies generally indicate that psychologically troubled individuals had substantial difficulties with their early peer relationships (e.g., Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Fleming & Ricks, 1970; Ricks & Berry, 1970; Rolf, Knight, & Wertheim, 1976). In contrast, findings from longitudinal follow-up studies are less clear, possibly because of the primary focus on clinical samples (see Parker & Asher, 1987; Kupersmidt, et al., 1990, for reviews). One exception is a study by Roff and Wirt (1984b), who followed third through sixth graders whose peer status was determined by their social preference score in elementary school. In terms of probability of mental disorder, non-accepted children had two to three times greater risk for mental health problems than accepted children. Also, Roff and Wirt found a significant, but low negative correlation between childhood social preference scores and treatment for mental health problems in adulthood for both males and females. The weak correlation may be due to the unspecificity of the social preference score, though, which does not clearly differentiate between rejected and neglected children. Overall, some evidence indicates a relation between low peer status in childhood and psychological disorders in later life. However, as is pointed out by Kupersmidt et al. (1990), neither the causal role of peer rejection in these problems nor the strength of this relation is understood to date.

1.2.1.3. Peer rejection -- is there any cure?

Compelling evidence indicates that children who are rejected by peers are more disposed to deviant functioning than their non-rejected peers, with respect to their actual behavior, their social cognition, and their social adjustment in later life. Because a large proportion of the reported studies was conducted on boys only, the generalizability of the findings is somewhat limited. However, the disadvantages of peer rejection may hold for both boys and girls, although the specific manifestations of these disadvantages may differ. The conclusion that can be made from this literature is in concordance with Sullivan's (1980) belief. Namely, that

exclusion from the peer group is one form of developmental arrest that deprives the children of experiences that are necessary for successful social development. However, Sullivan also underlined the enormous compensatory benefits that can be provided by dyadic friendships. That is, the supportive atmosphere of a single close friendship can partially or wholly compensate for certain developmental deficits resulting from being rejected by the majority of one's peer group.

In support of Sullivan's thesis, Bierman and Furman (1984) compared the effectiveness of three treatment conditions on the social adjustment of fifth and sixth graders who were both unaccepted by their peers (as assessed by a composite score of likeability and various measures of peer-involvement) and had poor conversational skills. The treatment conditions were (a) social skills training, (b) interactions with peers that were structured to be positive in nature, much like they would be in close friendships, and (c) a combination of social skills training and positive peer-group interaction. While skill training alone enhanced the acquisition and use of social skills, the positive peer interactions increased the children's self-perceptions of social competence as well as their actual peer acceptance. The most effective (i.e., most stable) results were obtained by the combined treatment, because, here, increased peer acceptance was shown even after a follow-up period of six weeks. Thus, positive peer interaction seemed to provide a favorable environment for the unaccepted children -- an environment, in which they could apply and thus strengthen their newly-gained social skills. Unfortunately, the selection procedures in this study did not allow an explicit differentiation between neglected and rejected children. However, the findings still underscore the enormous compensatory impact of positive and supportive interactions, such as with close friends, for children who are not accepted by their peer group.

1.2.2.   Friendship

According to Bukowski and Hoza (1989) three questions must be asked when studying children's friendships. These questions may be conceptualized as consecutive levels of a hierarchy. First, does dyadic friendship exist for the child? Second, given that at least one dyadic friendship exists for the child, in how many dyadic friendships is he or she involved? Finally,

what is the quality of the child's dyadic friendship(s)? In the following sections, I describe each of these three aspects.

1.2.2.1. Does dyadic friendship exist for the child?

At this first level, the primary issue is the appropriate assessment of whether mutual, positive feelings of friendship exist between a target child and at least one other peer. In current research on children's friendships, various measurement techniques have been employed, but, unfortunately, not all of these meet the basic criterion of reciprocity, and often they have been mixed up with measures of peer status. Thus, in several studies children have been asked to simply nominate their friends (either a restricted or nonrestricted number) without examining whether the nominated child(ren) reciprocated the friendship at all (e.g., Parker & Asher, 1993; Furman & Buhrmester, 1985). Results from these studies are therefore based on measures with somewhat uncertain validity. In other studies, nomination measures have been taken from both the target children and their presumed friends, in order to properly assess the reciprocity of the relationship. For economical reasons, such measures have usually been gained from fixed settings, such as classrooms, where all children are asked to nominate their friend(s) and mutual nominations then represent a reciprocated friendship relation (e.g., Buhrmester, 1990; Cauce, 1986).

Some researchers combined friendship nominations with rating scale techniques in order to identify the children's specifically close friendships (e.g., Berndt, 1984; Berndt, Hawkins, & Hoyle, 1986; Berndt & Perry, 1986; Jones, 1985). Here, close friendships between two children are identified if one or both children nominate the other as friends and if they, in addition, show mutual ratings of high liking. Using an even more restrictive measure, Mannarino (1976) identified children's closest friendships or chumships, if the children nominated the other child as best or second best friend on two consecutive occasions, and if they reported to share many activities with the friend. However, although the existence of intense mutual liking and mutual activities could be regarded as an index for a close friendship, reciprocity of the friendship nomination was not required in these studies. In a study by Krappmann, Oswald, Weiss, and Uhlendorff (1993), children's chumships were identified if both children

nominated each other as friends and if they additionally rated each other as either good or best friend. In addition, the children had to be of the same sex, so that the identified relationship was strictly in accordance with Sullivan's (1980) definition of chumship. Similarly, based on Mannarino's criteria, McGuire and Weisz (1982) considered children's relations as chumships only if they nominated each other as best friends on two consecutive occasions and if both children reported that they share many activities. On the whole, as is maintained by Berndt (1984), in order to identify children's most intense peer relationships or chumships, this restrictive way of assessment is certainly most appopriate, although reciprocated nominations alone can be considered a sufficient condition for mutual friendship relations.

Another concern emerging with the question whether a mutual friendship exists for the child, is the issue of the correlates of having a friend as opposed to not having a friend. In other words, do children who have at least one friend differ from friendless children? At the beginning of this chapter, the theoretical implications of friendship for children's development have already been discussed, and the importance of friends for the development of social skills is indirectly supported by the results of studies comparing the interactions between friends to those between non-friends (see Newcomb & Bagwell, 1995, for a meta-analytic review). Thus, friends have been found to resolve conflicts in a socially more responsible way than non-friends (Nelson & Aboud, 1985), to less often ignore the other's interests (Krappmann & Oswald, 1992), to display more reinforcing and supportive behavior toward each other (Masters & Furman, 1981), and to show greater mutuality and social responsiveness in their interactions (Newcomb & Brady, 1982). These differences in interactional style between children with and without friends indicate that friendless children may indeed be deprived of basic social experiences that are necessary for the acquisition of both socio-cognitive and behavioral skills.

In support of this notion, McGuire and Weisz (1982) investigated the effects of having a chum on fifth- and sixth-graders' cognitive and affective perspective taking skills, as well as on their altruism behavior. The results indicated that children with intimate friends were superior to those without friends in identifying the emotions of others and in understanding the antecedents of those emotions. Furthermore, children with chums were more apt to share things than were children without chums, but no difference was found with respect to the children's

perspective taking skills. Thus, without truly suggesting any specific causal relation, the findings support the notion that close friendships foster a child's sensitivity to another's feelings, thereby contributing to successful social interaction and mutual well-being. In another study, Roopnarine and Field (1984) examined the social behaviors of preschool children with and without friendships. They found that children with friends were more likely to engage in positive verbal interaction and take turns directing and submitting during social activities than friendless children. Conversely, the friendless children tended to watch the activities of those who had friends and engage in more aggressive behavior. Overall then, children with friendship experience seem to display more the kind of behavior and to possess the socio-cognitive skills that are useful for successful social interaction, which, in turn, enhances their social and moral development (Krappmann, 1995). Friendless children, on the other hand, show deficits in socio-cognitive development and engage in behavioral styles that are also characteristic for rejected children.

1.2.2.2. In how many dyadic friendships is the child involved?

The second issue focusses on the question of whether the positive effects of mutual friendship are cumulative or an all-or-non phenomenon (Bukowski & Hoza, 1989). However, as Bukowski and Hoza point out, theoretical accounts have not addressed this question sufficiently. Usually, children with many friends are considered to be well integrated in their social environment, and thus, having as many friends as possible should be especially favorable for a child's development. Considering the variety of experiences that many different friends can offer, this notion in fact seems to have some merit, although empirical studies have not been able to definitely resolve this question.

Cauce (1986), for example, reported a positive relation between the number of mutual best friends and early adolescents' social competence as perceived by their peers. Oswald, Krappmann, Uhlendorff, and Weiss (1994) examined the relation between the total number of children's dyadic peer relationships and the developmental level of their friendship concept. Their results indicated a positive effect of the number of friendships on the children's socio-cognitive development. Yet, in these studies subjects without a mutual friendship were also

included. As a consequence, the results may merely reflect the difference between having no friend and having at least one friend or, alternatively, they may reflect a veridical linear relationship. In another study, though, Oswald and Krappmann (1991) investigated the effect of having at least three mutual friendships vs. having less than three mutual friendships in grade four on children's friendship concept in grade six. The results indicated, that having at least three mutual friends positively influenced the children's understanding of friendship. Although the group who had less than three mutual friends also included the friendless children, this finding suggests that having many friends might be advantageous for children's emotional and cognitive development. On the other hand, not only the quantity, but also the quality of friendship might play a role, which directly leads to the third question.

1.2.2.3. What is the quality of the child's dyadic friendship?

Recently, researchers have realized that the study of friendships involve more than examining whether the children have mutual friends or how many they have, but that it involves the quality of the relationship as well. Thus, standardized instruments assessing the quality of children's friendships have emerged only in the last decade, with most of them being based on questionnaires (e.g., Furman & Buhrmester, 1985; Berndt & Perry, 1986; Bukowski, Hoza, & Boivin, 1993, Parker & Asher, 1993) or interview measures (e.g., Stocker & Dunn, 1990; Oswald & Krappmann, 1995). Usually, these measures require answering a variety of questions regarding specific features of friendship on a 4- or 5-point Likert scale, or they include open-ended questions (Stocker & Dunn, 1990). Common to all of these measures is the factor-analytic approach. Specifically, a larger number of items is used to assess a smaller number of more fundamental aspects of friendship (one exception is the Stocker and Dunn-instrument, where global scores of friendship closeness and hostility are determined from the open-ended questions).

Most of the assessed features in these instruments are of a positive nature. However, as Furman (in press) notes, only a moderate amount of agreement exists concerning which features should be examined in the assessment of friendship quality. For example, Furman and Robbins (1985) proposed twelve features of friendship, namely seven positive ones (instrumental

aid, nurturance of the other, companionship, enhancement of self-worth, affection, intimacy, and reliable alliance) and five negative ones (conflict, punishment, annoyance, relative power, and satisfaction with the relationship). In contrast, Berndt and Perry (1986) identified only six features of friendship: (a) play/association, (b) prosocial behavior, (c) intimacy, (d) loyalty, (e) attachment, and (f) absence of conflicts. Parker and Asher (1993) proposed six similar features of friendship: (a) validation and caring, (b) conflict and betrayal, (c) companionship and recreation, (d) help and guidance, (e) intimate exchange, and (f) conflict resolution. Oswald & Krappmann (1995) also found six major qualitative aspects of friendship: (a) assistance, (b) fun, (c) absence of quarrels, (d) evaluation of the relationship, (e) mutual visits, and (f) mutual sleep overs. Finally, Bukowski et al. (1993) described five dimensions of friendship: (a) companionship, (b) help and aid, (c) security, (d) closeness, and (e) conflict.

Clearly, some aspects like intimacy or conflict are measured by almost all instruments, while many others are only included in specific instruments, so that some measurements focus only on the basic dimensions of friendship (e.g., Bukowski et al., 1993) whereas others investigate it in a more detailed manner (e.g., Furman & Buhrmester, 1985). While the level of analysis necessarily depends on the nature of the questions being asked, unfortunately, this situation may to some degree restrict the comparative interpretation of findings on the correlates of friendship quality. However, before turning to the correlates of friendship quality, which do not allow any definite conclusion about causality, I will address two factors that have been found to influence friendship quality, namely, the children's age and gender.

1.2.2.3.1. Factors influencing friendship quality: the case of age and gender

The study of developmental trends in children's friendship quality is mostly focussed on investigating the development of children's concept of friendship (e.g., Bigelow, 1977; Damon, 1982; Selman, 1984; Furman & Bierman, 1983, 1984). The children's friendship concepts are assumed to be based on their actual friendship experiences (Berndt, 1981; Berndt & Perry, 1986; Krappmann, 1990). Although these studies differ in both theoretical and methodological aspects (most are based on qualitative research, however), they largely agree in their basic descriptions of qualitative friendship development. For example, Damon (1982) differentiates

three developmental levels. At the first level, friends are regarded as playmates exchanging positive actions, while closeness is not considered an important factor to describe and distinguish among friendship relations. At the second level, specific psychological qualities, especially mutual trust and support, are considered to be substantial. At the third level, intimacy becomes the major element of friendship, where both partners share inner feelings and thoughts and see to each other's psychological well-being. In a related view, Selman (1984) describes five levels of friendship understanding. The earliest level 0 is only characterized by momentary play interaction and does not include psychological qualities like intimacy. At the first level, which Selman calls one-way assistance, a friend is primarily seen as someone who satisfies the needs and interests of the self. Thus, a first understanding of reciprocity in relationships does not develop before level 2, where both partners coordinate their perspectives; however, still no continuity exists that can maintain the relationship during conflict. At the third level, though, friendships are seen as stable relationships with mutual feelings of intimacy, concern, and trust. Now, conflicts do not automatically terminate the friendship any more. The final level differs from the third insofar as it is not characterized by mutual possessiveness any more. Instead, the friends view their relationship as part of each other's broader social context.

Based on these findings, the effect of children's age or grade level on their impressions of the qualitative aspects of their actual friendships has been directly investigated. Thus, Berndt and Perry (1986) compared the perceptions of the qualitative aspects of friendships in children from grade two, four, six, and eight. They found a clear linear trend for the ratings of intimacy in the children's friendships and more frequent comments about cooperative behavior and emotional support in the higher grades than in the lower ones. Similarly, Furman & Buhrmester (1992) examined the perceptions of same-sex friendships with respect to the qualitative aspects proposed by Furman and Robbins (1985) among four developmental periods (i.e., from fourth-graders to college students). The results indicated an increase in perceived friendship intimacy and affection from fourth to seventh and tenth grade, while no changes were found with regard to the other qualitative aspects. In a similar study (Buhrmester & Furman, 1987), which included younger subjects from second to eighth grade, an increase in perceived intimacy of friendship was only found from second to fifth grade, and

only for girls. The older children of both genders showed stability in their perceived intimacy ratings.

In summary, the qualitative aspects that children focus on in their friendships seem to be subject to a gradual change, with the younger children emphasizing frequent and undisturbed play interactions and older children emphasizing intimacy, trust, and emotional support as the salient elements of friendship. Thus, friendship understanding develops in progressive, unidirectional, qualitatively different, and nonreversible stages. However, as is suggested by Berndt (1981), the developmental transformations may be cumulative and not in mutually exclusive stages. That is, the children do not abandon initial notions about play and mutual association when they eventually recognize the importance of intimacy and loyalty. Also, on an individual level, many children's conceptualization of the sub-aspects of friendship (e.g., closeness, trust, or conflict resolution) show differential levels of development (Keller & Wood, 1989). Principally, however, children's friendships seem to gradually progress from predominantly play interactions to deep relationships of mutual support and intimacy.

Another aspect that has been found to influence friendship quality is the children's gender. Against the background of the primarily sex-segregated formation of friendship in middle childhood (Maccoby, 1988; Eder & Hallinan, 1978; Oswald, Krappmann, Chowdhuri, & von Salisch, 1986; Petillon, 1993), the two genders seem to engage in different kinds of interactions with their friends and playmates. Thus, boys have been observed to engage more in rough and tumble play behavior with their mates than do girls (Humphreys & Smith, 1987), and to more often display fun behavior that involves teasing (Oswald et al., 1986). In conflict situations, girls exhibit more mutually reassuring signals than boys (Miller, Danaher, & Forbes, 1986). Furthermore, boys appear to be more oriented toward group activities in their friendships, while girls seem to put a stronger emphasis on close dyadic relationships (Eder & Hallinan, 1978). Also, girls spend more time with their friends than do boys (Wong & Czikszentmihalyi, 1991).

These gender differences in children's relationships have also been supported from studies that did not involve observations of the children's actual behavior but assessments of how these relationships were perceived by the children. For example, Furman and Buhrmester

(1985) found that early adolescent girls described their friendships as containing more affection, intimacy, and enhancement of self-worth than did boys, and similar results were obtained for the intimacy-ratings of preadolescent children (Buhrmester, 1990; Buhrmester & Furman, 1987). Similarly, Parker and Asher (1993) reported that third through fifth grade girls rated their friendships more favorable than boys with respect to intimate exchange, conflict resolution, validation and caring, and help and guidance. Conversely, however, Berndt & Perry (1986) did not find any significant difference between boys' and girls' (second through eighth grade) ratings of overall friendship intimacy.

In summary, girls' friendships seem to be more characterized by intimacy and mutual self-disclosure than boys' friendships, at least from the preadolescent period on. However, this gender difference may be more a matter of style than of substance (Buhrmester & Furman, 1987). That is, boys may not achieve closeness with a friend by means of interpersonal disclosure, but rather through mutual activities. Another possibility is that the gender differences may reflect a greater variability of intimate behavior among boys than among girls (Hartup, 1993). Thus, in order to rightfully interpret any gender differences in friendship quality, such alternative possibilities must be considered.

1.2.2.3.2. Correlates of friendship quality

As suggested at the beginning of this chapter, having friends may be related to children's emotional and cognitive development. In addition, the degree to which these relationships offer valuable experiences such as support and intimacy might also be an important factor. In fact, the few studies that have addressed the issue supported this notion. For example, in their study on third- through fifth-graders, Parker and Asher (1993) examined how the perceived quality of children's best friendships is related to their feelings of loneliness. They found that each of the six assessed aspects of friendship quality (i.e., validation and caring, conflict, companionship, help and guidance, intimate exchange, and conflict resolution) significantly predicted the amount of perceived loneliness. Similarly, Oswald et al. (1994) found that the intensity of children's dyadic peer relationships (grade 2 to 5) as well as the amount of assistance and fun experienced in these relationships were positively related to the children's feel-

ing of social acceptance and negatively related to their feeling of loneliness. Furthermore, friendship quality concerning each of these aspects had a significant predictive effect on the children's socio-cognitive development as measured by their friendship concept. In addition, the amount of conflict experienced in relationships positively influenced the children's friendship concept. Notably, the impact of conflict underlines the importance of this feature of friendship for children's development (Selman, 1984).

The relation between friendship quality and social adjustment was also explored by Buhrmester, Yin, and Kraynick (1995) for children in sixth grade. Friendship quality was examined with regard to friendship intimacy and friendship discord. Intimacy was assessed as a composite score of subject-rated and friend-rated amount of disclosure, support, approval, satisfaction, and companionship within the relationship. Similarly, discord was assessed as a composite score of subject-rated and friend-rated amount of conflict, criticism, pressure, exclusion, and power within the friendship. While friendship discord was not notably related with social adjustment, friendship intimacy showed significant correlations with the target children's self-esteem and their feelings of loneliness and depression. Moreover, there was a positive relation between friendship intimacy and the children's level of social competence as rated by themselves and their parents.

Although only Buhrmester et al. (1995) explicitly checked for the reciprocity of children's friendships, the findings I have reviewed strongly indicate that the quality of children's friendships fundamentally contributes to both their socio-cognitive and socio-emotional development. Importantly, however, these studies were only correlational and cross-sectional in nature, and therefore, do not imply a directional relation. Thus, friendship may enhance social adaption, but the reverse may also be true (Hartup, 1993). Oswald et al. (1994) suggest a bidirectional influence whereby the experiences and interactions in relationships promote the children's social development, and this advanced level of development in turn enables the children to positively shape their social experiences. Overall, overwhelming support has emerged for Bukowski and Hoza's (1989) proposed hierarchical assessment of friendship, which specifically addresses three separate aspects of friendship status (i.e., having/ not having friends, the number of friends, and the quality of relationships), and seemingly, each of these three levels of friendship status can independently contribute to children's development.

1.3. Links between peer group status and friendship

On the basis of the preceeding review it can be concluded that both a child's peer-group and his or her dyadic friendships constitute fundamental domains of social experience. As a consequence, a lack of positive experiences in either of these domains suggests significant disadvantages for the child's social development and adjustment. Moreover, the experience of being rejected by one's peers seems to be especially problematic. However, being rejected by the majority of one's peers does not necessarily imply being without friends; instead, the negative correlates of peer rejection might be alleviated by having at least one satisfying friendship (e.g., Sullivan, 1980; Furman & Robbins, 1985; Bukowski & Hoza, 1989). This notion is supported by Parker and Asher (1993), who found a soothing effect of friendship quality on children's feelings of loneliness, even when controlling for the effects of peer-group acceptance on loneliness. Similarly, Oswald et al. (1994) reported that the quality of dyadic peer relations significantly influenced elementary school children's socio-cognitive development, even after controlling for the effects of negative sociometric votings. Thus, if satisfactory friendship experience moderates the negative correlates of peer rejection, then investigating the friendship status of rejected children is of essential importance.

1.3.1. Peer-rejected children's friendship participation: Do they have friends at all?

In order to have a mutual friend a child must be liked by at least one other child. Consequently, children who are liked by many peers have more opportunities to establish friendships than children who are disliked by many peers. Moreover, as was discussed above, friendlessness seems to be related to the same socio-cognitive and behavioral deficits as peer rejection. Based on this logic, rejected children should be at a relative disadvantage when it comes to friendship formation. On the other hand, although rejected children show significant deficits in several aspects of social cognition, they do not seem to differ from better-liked children with respect to their theoretical understanding of what a friendship is about and how it ideally should be. For example, Bichard, Alden, Walker, and McMahon (1988) compared the friendship concept of rejected, neglected, and socially accepted children in second and seventh grade, and found no evidence for a developmental lag in either rejected or neglected

children's understanding of friendship. Hence, judging from the friendship conceptions of rejected children, they should not be at a severe disadvantage for friendship formation.

Although several studies have addressed the issue, only a few studies have explicitly investigated rejected children's participation in dyadic relationships. For example, in a study on the dyadic conversational behavior of rejected and popular children (third- and sixth-graders), Austin (1985) formed friendship matches by pairing those children who had given each other positive votes in the sociometric test (i.e., who the children liked to sit next to and play with). Although all rejected children could be matched with a friend in the third grade, Austin could not match any of the rejected children in sixth grade, because no one had positively nominated them. Although this study was not specifically aimed at investigating rejected children's probability of maintaining dyadic friendships, it suggests that some rejected children do in fact have friends, in spite of obvious difficulties in friendship formation. This notion is supported by findings from Feltham, Doyle, Schwartzman, Serbin, and Ledingham (1985), who examined the friendship participation of aggressive-withdrawn, aggressive, withdrawn, and non-deviant children (grades 4 through 7), as identified from behavioral peer assessments. Aggressive-withdrawn children can be considered to be similar to the rejected group, aggressive children are similar to the controversial group, and withdrawn children resemble the neglected group. The results indicated that aggressive-withdrawn (i.e., rejected) children had fewer reciprocal friends than both non-deviant and aggressive children, while the number of the withdrawn children's friends did not significantly differ from either of the three other groups.

These findings are also comparable to those of Ladd (1983) who, in an extensive study, compared the social networks of popular, average, and rejected children in first through sixth grade. At first, the children completed a sociometric test and a friendship nomination questionnaire in order to identify reciprocal friendships. Then, in order to assess the characteristics of the children's peer networks, Ladd conducted observations of the children's play behavior during school recess periods. All children were profiled on various dimensions representing variations in their peer networks; namely, (a) *intensivity/extensivity,* which depicted the number of participants involved in the target child's play interactions, (b) *homogeneity/diversity,* which assessed similarity of network members with respect to gender, grade

level, and sociometric status, and (c) *affinity*, which described the ratio of mutual friendships to the total number of a target child's playground companions. Compared to average and popular children, rejected children spent more time alone and unoccupied on the playground, indicating that the rejected children had a harder time finding playmates and friends than better-accepted children. Also, the rejected children with playmates interacted in smaller groups than both average and popular children, and a larger proportion of the rejected children's playmates were younger and/or similarly unpopular. Furthermore, average and popular children had a friendship relation with significantly more play companions than did rejected children, suggesting that the rejected children's interpersonal contacts are less often characterized by affective relations than those of accepted children.

Similar results for a sample of younger children were obtained by Rizzo (1988), who observed the classroom interactions of popular, average, and rejected children in nursery school (age range: three to five years). Children's mutual friendships were identified if both children spent more than the average amount of time together and if they additionally had nominated each other as being among each other's two best friends. Of the four children without any friends, two belonged to the neglected group and the other two were rejected by their peers, but the majority of the rejected children in this study did have at least one mutual friend. However, the number of mutual friends was significantly smaller for the rejected children as compared to both the popular and the average group. In addition, Rizzo investigated whether rejected children had a disproportionally large amount of friends who were also rejected by their peers. In contrast to Ladd (1983), though, he found no difference between popular, average, and rejected children with regard to the status distribution of their friends. However, Ladd did not restrict the analysis of status similarity to the children's friendship relations ; instead, he referred to all of the children's interaction partners. Therefore, even Ladd's results do not imply that rejected children are only friends with other rejected children. This finding suggests that, although rejected children have more difficulties finding friends than accepted children, they do not seem to form a status-segregated friendship subsystem of their own.

In summary, then, rejected children clearly have a greater probability of being without a friend, which may be associated with their relative lack of appropriate socio-cognitive and behavioral skills necessary for initiating or maintaining friendships (see section 1.2.1.2). In-

spite of this reduced probability, however, many of the rejected children are still able to establish at least one friendship, underlining the notion that peer rejection does not automatically imply friendlessness. However, there is a link between peer acceptance and friendship participation, because rejected children appear to be unable to maintain many friendship relationships. Because an extended social network provides a wide variety of different social experiences, rejected children might therefore miss important learning opportunities to develop the knowledge and skills that are essential to successfully adapt to and perform in larger or varying social contexts. Moreover, a large friendship network offers a broader basis for emotional support. Thus, rejected children who have a friend, may be strongly dependent on this friend, because they lack alternative outlets in their peer group. As a result, the quality of their friendships may become especially important for rejected children's psychological well-being and social adjustment.

1.3.2. Peer rejection and friendship quality

As mentioned above, rejected children are less likely to exhibit appropriate socio-cognitive and behavioral skills that are necessary for initiating or maintaining friendships. While these difficulties may reflect rejected children's relative disadvantages in friendship participation, another aspect that might be affected is the quality of their existing friendships. Unfortunately, as is pointed out by Parker & Asher (1993), the link between children's peer status and the quality of their friendships is not clear.

1.3.2.1. An indirect approach: Observing interactional patterns between friends

A first approach to examining friendship quality has been to investigate whether the often unsuitable socio-cognitive and behavioral patterns found in rejected children's interactions with their general peer group (i.e., non-friend peers) are also inherent in their dyadic friendship interactions. Thus, in the second part of his study, Rizzo (1988) observed the styles of joint play interactions of popular, average, and rejected children and their friends (aged 3-5 years). Specifically, he compared the percentage of time that children spent in (a) adjacent

play, (b) parallel play, (c) cooperative play, and (d) not playing with their friends. Children's behavior was scored as *adjacent play*, if the friends were involved in different activities. If the friends were involved in the same play activities, the number of products (e.g., clay figures) emerging from the interaction was determined. If two or more products resulted from the play interaction, he identified it as *parallel play*, and if the children together composed one product, the interaction was coded as *cooperative play*. The target child was classified as *not playing* if he or she was unoccupied or merely watching an event or other children. However, play interactions were only recorded when the children were playing with no more than two friends at a time.

Similar to the first part of the study, children's mutual friendships were identified if both children spent more than the average amount of time together and if they additionally had nominated each other as being among each other's two best friends. The first important finding was that children of either sociometric status spent similar amounts of time in play interaction with each friend. However, the interactions between rejected children and their friends contained more adjacent play and less parallel play than the interactions of average and popular children with their friends. Importantly, though, the groups did not notably differ with respect to the relative amount of cooperative play or not playing at all. Thus, rejected children seem to join in interaction with their friends, much like better-accepted children do, but the relative amount of *related* interaction (e.g., being involved in the same activity) seems to be smaller. From this outcome pattern Rizzo concluded that rejected children's friendship interaction may be less satisfying for the friends than average or popular children's friendship interaction.

A rather different picture emerges from the study by Austin (1985), who examined the dyadic conversational behavior of rejected and popular children (grades 3 and 6) with their friends. As mentioned, friendship matches were formed by pairing those children who had given each other positive votes in the sociometric test that indicated with whom the children liked to sit next to and play with. Notably, some rejected children had not been positively nominated by any other child. Thus, Austin paired them with someone who had not rejected them, so that the results do not entirely refer to explicit friendship interaction. Austin then analyzed the children's conversational styles according to the following categories: (a) frequency of mutual verbal or nonverbal engagements in the same play or theme, (b) use of verbal or nonverbal

reinforcers for the acknowledgement of the partner, (c) use of verbal or nonverbal attention-getting advices, (d) amount of attention to the conversation, and (e) the impact of the child's verbal and nonverbal signals on the partner.

Austin found, that rejected children and their friends worked cooperatively to evoke conversation, much like popular children did, but their interactions significantly differed in style. Specifically, rejected children initiated more mutual engagements with their friends and used more verbal acknowledgements than popular children. Because all children were equal to their friends with regard to their general verbal skills, Austin proposed that rejected children's interactions with their friends may be characterized by an exaggeration of interactive strategies. In her view, rejected children well understand that mutual engagements are part of an interaction between friends, but they seem to overinvest in order to meet this requirement. As a consequence, they may form a more intensive or even overly compensating relationship with their friends (Austin, 1985). However, Austin only examined children of extreme positive or negative social status, and did not include the majority of average status children. Therefore, the interactional pattern displayed by rejected children may not be different from the pattern of average children. In contrast, perhaps the popular children differ from their less-liked peers. Popular children may form less intensive friendships because they rely on a more extensive friendship network, instead (Ladd, 1983).

Apart from the methodological restrictions of the two studies (i.e., Rizzo's study dealt with preschoolers and Austin's study only compared extreme status groups), they suggest rather contrasting interactional patterns for peer-rejected children. On the one hand, rejected children appear to exhibit less interactive play behavior with their friends than accepted children, which seems to reflect friendships of less satisfying quality. On the other hand, these children appear to particularly emphasize interactive strategies in their conversational behavior, which suggests especially intensive relationships. However, these studies also have certain limitations for judging the quality of rejected children's friendships. Here, friendship quality and satisfaction can only be indirectly concluded from observed interactions in specific situations. A more direct approach would ask the children specifically, how they perceive their relationships.

1.3.2.2. A direct approach: Children's perceptions about the quality of their friendships

Only a few studies have explicitly investigated the relation between children's peer acceptance and the perceived quality of their dyadic friendships (McGuire & Weisz, 1982; Parker & Asher, 1993; Patterson et al., 1990). McGuire and Weisz (1982) had fifth- and sixth-graders name their five best friends and then indicate for their two best friendships if features like the exchange of secrets or mutual sleep overs existed within these relationships or not. A global measure of friendship closeness was then created by summing up the positively checked items. Each child's sociometric status was assessed by a popularity score that was determined by the rank order and frequency with which he or she had been nominated in the friendship list. Only a weak positive correlation emerged between friendship closeness and children's popularity ($r = .14$), suggesting that better-liked children may have slightly closer friendships than less-liked children. Unfortunately, the sociometric measurement was based on positive friendship nominations only, thus rejected children could not be accurately isolated from neglected children. Also, friendship nominations were not checked for reciprocity which also impedes valid conclusions.

In a more detailed study by Parker and Asher (1993) on third- through fifth-grade children, only those with reciprocated very best friendships were included in the analyses. They identified children's friendships by having them nominate their three best friends in the class and then indicate which of the three choices represented their very best friendship. They classified children as having very best friends if the classmate they designated as the very best friend in turn included them in his or her list of three best-friend choices. The children's sociometric status was assessed by first asking them to indicate on a rating scale how much they liked to play with each classmate and then calculating for each child the average rating received from his or her classmates. Thus, all children were classified as either high-accepted, average-accepted, or low-accepted. Friendship quality was examined by having the children rate their friendships with regard to various characteristics comprising the following six major aspects of friendship: validation and caring, conflict resolution, conflict and betrayal, help and guidance, companionship and recreation, and intimate exchange.

In most qualitative aspects, low-accepted children's mutual best friendships significantly differed from average- and high-accepted children's friendships. Specifically, low-accepted children felt less validated and cared for by their best friends, they experienced less help and guidance and more conflicts in their friendships, and they had more difficulty in resolving these conflicts. The average and high-accepted children did not differ from each other in these respects. With regard to the amount of both intimate exchange and companionship and recreation, low-accepted children's friendships did not differ from average children's friendships. Parker and Asher concluded that, on the whole, low-accepted children's friendships are more problematic than the friendships of better-accepted children. However, low-accepted children did not report less satisfaction with their best friendships than did either average- or high-accepted children. This latter result is consistent with Cantrell and Prinz's (1985) finding that rejected and neglected children considered their general peer relations to be as satisfying as did accepted children.

Unfortunately, Parker and Asher's sociometric categorization of low-accepted children also did not distinguish between rejected and neglected children. However, Parker and Asher also pointed out the exceptional variability within the low-accepted group on five of the six qualitative aspects of friendship. This outcome indicates that the subgroups of low-accepted children might differ from each other with regard to the quality of their friendships. Specifically, neglected and rejected children may quite differently evaluate the quality of their friendships.

This notion is supported by findings of Patterson et al. (1990) on the quality of the personal relationships of third- and fourth-graders with differing sociometric status. In their study, children's sociometric status was assessed by means of the procedure suggested by Coie et al. (1982), which explicitly discriminates among popular, average, controversial, neglected, and rejected children. In addition to evaluating other types of relationships, the children were also asked to evaluate their single best friendship with respect to (a) instrumental help, (b) companionship, (c) affection, (d) intimacy, (e) conflict, and (d) satisfaction with the relationship. Notably, though, the children's friendship nominations were not checked for reciprocity. In contrast to the results obtained by Parker and Asher (1993), Patterson et al. found only one significant difference in perceived friendship quality among the status groups. Specifically, neglected children reported less companionship in their best friendships than did average,

controversial, or popular children. Importantly, however, rejected children's impressions of the quality of their best friendship were not different from those of non-rejected children in any aspect.

Parker and Asher's (1993) and Patterson et al.'s (1990) studies are the most thorough assessments of the link between peer acceptance and friendship quality. However, Parker and Asher did not differentiate between neglected and rejected children and Patterson et al. did not check the friendship nominations for reciprocity. Thus, both studies contain major limitations which impede conclusions regarding the quality of rejected children's friendships. Furthermore, the results obtained in both studies are rather contradictory. While Parker and Asher found low-accepted children's friendships to be more problematic in almost every aspect, Patterson et al. found practically no substantial difference among rejected, neglected, and other sociometric groups. Therefore, the question still remains if there truly is a relation between peer rejection and friendship quality and what this relation is like.

1.4.   Another aspect of friendship quality: Reciprocity of friendship perception

The basis of friendship, as is put forth from theorists like Sullivan (1980), or Youniss (1994), is reciprocity. For younger children, reciprocity mainly refers to the mutuality of actions; from about age 9, however, it primarily includes the mutuality of thoughts, interests, and feelings (Youniss, 1994). Thus, already in middle childhood, a true and satisfying friendship is not only characterized by shared activities or the exchange of objects, but also -- and primarily -- by shared thoughts and emotions (e.g., mutual liking). In this context, reciprocal interaction is a visible expression of mutual affection. Through this reciprocal interaction, the children create or co-construct a shared social reality which defines their friendship. In other words, a shared social reality reflects shared interactional experiences as well as a shared understanding of the meaning of each other's behavior as an expression of each other's emotions. Consequently, a lack of concordance in friends' perceptions of their relationship indicates that "the dyad has not progressed toward a shared understanding of each other's behavior" (Parker & Asher, 1993) and, thus, toward a truly rewarding mutual friendship.

Differences in the perception of a specific friendship do not necessarily imply problems in a child's overall friendship relations. However, a general failure of recognizing and differentiating among, for example, very close and not so close friendships (i.e., a systematic over- or underestimation of friendship quality) may indeed indicate problems in interpersonal understanding and result in a potential threat to the child's friendships. [1] For example, the overestimation of friendship closeness as opposed to one's friends' evaluations may lead to very high expectations about the provision of emotional or other types of support. If these expectations are not met, because the partners do not perceive the friendships to be equally close, anger and frustration may result. Such disappointments can lead to conflicts, which, in the long run, may damage the friendships. Moreover, the impression of not being liked back to the same extent may seriously affect an individual's self-esteem, which can also lead to frustrations, again resulting in problems with friends. Hence, Parker and Asher propose that the concordance (i.e., the reciprocity) of the friends' perceptions of their relationship should be studied as a window on the quality of a child's friendships. In a similar vein, Furman (in press) maintains that a satisfactory measure of friendship quality must simultaneously consider both friends' views of the various aspects of the friendship.

In accordance with the theoretical demand of reciprocity as the defining construct of friendship, some studies investigating friendship quality have been based on the reciprocity of nomination (e.g., Berndt & Perry, 1986; Parker & Asher, 1993). Here, the underlying assumption is that children who nominate each other as friends also hold the same (positive) feelings for each other. As a consequence, assessing the various aspects of friendship quality has been mostly limited to only one child's perspective. Unfortunately, even in the case of mutual friendship nomination, the friends' perceptions of the quality of their relationship may not necessarily correspond. Thus, for a subgroup of their sample of very best friendships, Parker and Asher (1993) investigated the correspondence of the two friends' perceptions and found considerable differences between the friends' opinions about the quality of their relationship. The correlations between the partners' perceptions ranged from r = .64 for the companionship and recreation aspect to r = .21 for conflict resolution.

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[1] As noted by Kruglanski (1989), the lack of perceptual concordance does not imply a specific judgement's superiority over another. Consequently, the terms 'perceptual bias' as well as 'over- and 'underestimation' are not supposed to indicate a perceptual error on a specific perspective as opposed to the other. Rather, they are meant to convey the relations between the partners' perceptions.

In a similar study, Buhrmester (1990) only found a moderate correlation between self-rated and friend-rated intimacy of friendship among fifth- and sixth-graders (r = .38). However, for older subjects (eighth- and ninth-graders) the correlation was considerably higher (r = .81), indicating that the correspondence between the friends' perceptions increases with age. As Buhrmester (1990) suggests, this increasing reciprocity in perceptions and feelings in friendship indicates that children adopt a more similar evaluation of the qualities of their interactions as they grow older. In other words, given the fact that children's interpersonal understanding increases with age (e.g., Dodge et al., 1984; Dodge & Frame, 1982; Goldman et al., 1980), such a developmental trend in perceptual consensus supports the notion that the mutual concordance of perspectives may indeed depend on the level of interpersonal understanding reached by the partners. Consequently, considering that rejected children exhibit deficits in their level of interpersonal understanding (e.g., a biased interpretation of social cues), studying the reciprocity of perceptions with regard to the various qualitative aspects of friendship may provide the key to understanding rejected children's friendships.

1.5.   Reciprocity of perceptions and the problem of perceptual accuracy

Examining the perceptual reciprocity or concordance of the qualitative aspects of friendship raises the question of how accurately different characteristics of friendship can be perceived (i.e., how easily a consensus is reached between people's perceptions). [2] As suggested by Funder and Dobroth (1987), whether individuals concordantly perceive and evaluate social behavior is, on the one hand, determined by factors that are inherent to the persons involved and, on the other hand, by external factors that refer to the perceived aspect. Furthermore, among the internal factors guiding social perception, two major sources can be distinguished, namely the characteristics of the perceiving person (e.g., social skills and motivational factors) and the characteristics of the perceived person (e.g., traits attributed to this person on the basis

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[2] In the present study, the term "perceptual accuracy" will be used as defined by Funder and Dobroth (1987), indicating agreement between judges. It does not necessarily imply the existence of an objectively measurable social reality.

of prior knowledge). [3] In the following sections, I will separately refer to each of these three influential components (i.e., perceiver-internal, perceivee-internal, and external factors).

1.5.1. Influences on perception: The perceiver's characteristics

Regarding the links between perceptual accuracy and the perceiver's characteristics, individuals with high social skills (i.e., who display positive social interactional patterns) should also be able to more accurately perceive and evaluate other persons' social behavior. In support of this notion, Funder and Harris (1986) presented filmed sequences of an individual portraying various emotional states to undergraduate subjects. The subjects were asked to interpret the nonverbal behavioral cues and to decide which emotional state best described the filmed sequence. The responses were then scored for the total amount of accurate solutions. Thus, although perceptual accuracy was not determined strictly by means of interpersonal agreement, it nevertheless reflects the concordance of the behavioral intention expressed by one individual and the perception of another individual. In addition, the subjects were rated by two close acquaintances on a list of characteristics describing the quality of their interpersonal behavior, and the two ratings were averaged for each behavioral aspect. The results indicated that an individual's accuracy in perceiving nonverbal behavioral cues was positively related to his or her interpersonal effectiveness. Specifically, accurate perceivers were more likely to be described as being warm, sympathetic, open, and protective of others and as not being nonconforming, hostile, or deceitful. Thus, these data suggest that individuals who exhibit prosocial interactional patterns are also more likely to accurately perceive and evaluate other persons' social behavior.

Another important factor that has been found to influence a person's perception of another person's behavior is his or her (i.e., the perceiver's) motivational status. This notion is related to the idea, that people's positive outcomes, such as happiness and success, in many domains of life often depend on the behavior of others. Therefore, people want to perceive important others in ways that are beneficial to their own happiness and well-being (Klein & Kunda,

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[3] Depending on one's view, the second source could also be considered as being part of the perceiver's characteristics, i.e., his or her attributions about the perceived person.

1992). For example, this motivationally-biased perception may occur in interpersonal relationships, where an individual's affection, and thus the behavioral expression of this affection, is very important for another individual's well-being. Here, as the perceiver's dependence upon the perceived person increases, the perception and interpretation of the other's behavior should be more in the direction of wishful thinking; that is, it should yield a particularly positive evaluation. A classical study testing this assumption was conducted by Berscheid, Graziano, Monson, and Dermer (1976). In their study, college students were asked to exclusively date those people who were assigned to them by the experimenters for several weeks. In addition, each subject watched a video depicting a discussion among three persons of the other sex about dating problems. The subjects were assigned to three experimental conditions. In the first condition, one of the three discussants was the subject's only dating partner for the subsequent weeks, reflecting high exclusivity and importance. In the second condition, one of the three discussants was one of several assigned dating partners, reflecting low exclusivity and importance. In the third condition, none of the discussants were among the dating partners assigned to the subject (i.e., no importance). After the videos, the subjects evaluated each discussant with regard to several personality characteristics like warmth and sensitivity and indicated how much their liked each of the three persons. Compared to the ratings in the no-importance condition, which represented a neutral baseline of perception, the perceived persons were rated more positively and were also liked more in both importance conditions. Notably, this biased perception was even more extreme in the high-importance situation than in the low-importance situation. Hence, these findings demonstrate the significant impact of the perceiver's motivation, as determined by the emotional importance of the perceived individual and the range of alternatives available to the perceiver, on perceiving social cues.

1.5.2. Influences on perception: The perceived person's characteristics

In addition to the influences on interpersonal perception exerted by the perceiver's characteristics, prior knowledge about the characteristics of the perceived person seem to influence social perception. Here, the underlying assumption is that individuals primarily process information about others that maintains consistency between prior, category-based beliefs about the other and his or her present behavior (Fiske, Neuberg, Beattie, & Milberg, 1987). Thus,

biases in the evaluation and interpretation of other people's behavior may stem from such category-based characteristics as the perceived person's gender or race (see Ashmore, 1981; Crosby, Bromley, & Saxe, 1980).

These factors have been shown to influence even early elementary school children's social information processing (Martin & Halverson, 1981). For example, Koblinsky, Cruse, and Sugawara (1978) examined fifth-graders memory for behavioral information that was consistent or inconstistent with sex-stereotypic behavior. They found that children of both genders remembered more behavioral information about another (hypothetical) child if it was consistent with the appropriate sex-role stereotypes. However, at least with adults, detailed information processing is preferred over category-based information processing if the perceived person is important to the perceiver (Neuberg & Fiske, 1987). In this way, ambivalent or even inconsistent information about the perceived person is more likely to be detected and integrated into a differentiated impression about the other individual. However, as maintained by Hymel, Wagner, and Butler (1990), children do not seem to fully develop this ability until fourth or even sixth grade. Thus, throughout middle childhood, children's perceptions of others are likely to be particularly oriented toward prior category-based knowledge.

In summary, from the relations between individual characteristics and the accuracy of social perception outlined so far, the diversity of people's motivations and/or cognitive skills may impede a concordant perception of social behavior. [4] In the light of this conclusion, the question arises, which external factors facilitate or impair perceptual agreement with regard to social behavior.

1.5.3.   Influences on perception: The characteristics of the perceived aspect

Processing information may be more accurate (i.e., people's perceptions are more likely to be in agreement) when the perceived aspect is more easily visible. This notion that interpersonal

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[4] Although not all of the findings reported above refer to children, considering the findings that are based on children, there is sufficient reason to presume that children's social cognition is basically susceptible to the same individual influences (i.e., general social skills, motivation, or prior beliefs) as it is with adults.

agreement of perceptions depends on the visibility of the perceived aspect is supported by findings of Funder and Dobroth (1987). They examined, whether certain personality characteristics are more concordantly perceived than others and which properties distinguish the former from the latter. In the first step of their study, undergraduate subjects evaluated personality traits with respect to various properties like "Ease of judgment", "Ease of imagining observable behaviors that confirm the trait", and "Number of behavioral instances required to confirm the trait". In a second step, the subjects rated themselves and were rated by two close acquaintances on those personality characteristics. As the basic hypothesis, Funder and Dobroth suggested that for both the subjective visibility of a trait and the actual interrater-agreement (a) behavioral overtness and (b) amount of information would be essential factors. Specifically, aspects that referred to overt behavior and / or did not require a large number of behaviors to be judged confidently were expected to facilitate perceptual concordance.

The results indicated that the more accurately rated traits (i.e., those that showed a high total interpersonal agreement) were also regarded as more easily visible (r = .32). Furthermore, perceptual agreement was positively related to the ease of imagining trait-confirming behavior (r = .79) and negatively related to the number of behavioral instances required for trait-confirmation (r = -.66). In other words, perceptual concordance was facilitated if the perceived aspect referred to directly observable behavior and required only few behaviors to be judged. In contrast, traits that were less easily visible, and were hence judged with less accuracy more often refered to intrapsychic states that had to be inferred rather than directly observed. Also, these traits had to be evinced by a large number of behaviors in order to be judged. Thus, the perceptual accuracy for certain personality traits is influenced by specific characteristics of the perceived aspect, despite the possible differences in the personal characteristics of the persons involved.

Perceiving another person's personality traits is based on their social behavior, as is perceiving the friendship quality with another person. Therefore, regarding various aspects of friendship, too, some of them are probably more easily visible and hence facilitate the concordance of the partners' perceptions, while others are less easily visible and thus impede perceptual agreement.

1.5.3.1. The characteristics of the perceived aspect and perceptual accuracy in friend-ship

When looking at the various aspects of friendship, some of them clearly require very little overt behavioral information to be perceived accurately. An example is the aspect of mutual visits within a friendship. Here, only one piece of behavioral information, the frequency of mutual visits, has to be taken into account. Furthermore, this information reflects very overt social behavior. Therefore, despite possible differences in the personal characteristics of the persons involved, large discrepancies in perceptions are not very likely. In contrast, other aspects of friendship require much more complex and often indeterminate behavioral information to be assessed in order to make judgments. The intimacy of a friendship is an example of such an aspect. Many different and often not very obvious pieces of information are combined in order to evaluate the degree of a relationship's intimacy. Here, and not surprisingly, the personal factors influencing social information processing can foster a biased perception. Some of the previously reported results by Parker and Asher (1993) support this notion. Here, two friends' perceptions of companionship and recreation, which includes such overt behavioral features like frequency of mutual visits and play interactions, showed a relatively high correlation (r = .64). In contrast, for the more affective and complex aspect of conflict resolution, the correlation between both friends' views was small (r = .21).

Given these considerations, some aspects in social life facilitate perceptual accuracy and are therefore part of a shared social reality, whereas others are more subject to the influences of each person's characteristics on the perceptual process and thus belong to a non-shared reality. The difference between more or less visible aspects may be a matter of degree, of course, and thus represent a continuum rather than absolute categories. For sake of clearity, though, a more explicit distinction between shared and non-shared social aspects shall be made, because it has substantial consequences for assessing friendship quality. As I discussed in section 1.4., a satisfactory measure of friendship quality should simultaneously consider both friends' views of the various friendship aspects. However, if both partners' views of friendship are to be considered simultaneously, one should distinguish not only between different qualitative contents but also between different levels of visibility of the perceived aspect. More easily visible characteristics of friendship refer to overt behavioral aspects where the information is

very clear-cut and leaves little room for differential interpretation. Thus, these aspects should be more objectively perceived and the friends' perceptions should correspond highly. [5] Furthermore, this high correspondence should hold, regardless of possible differences in social skills or motivation that might further influence the perceptual process. The less visible subjective characteristics of friendship, on the other hand, refer to more affective aspects wherein many different pieces of information are evaluated. Often such pieces of information are not clear-cut or overt, and are therefore open to various differential interpretations. Here, perception is much more influenced by personal characteristics (i.e., motivation, sociocognitive skills, prior experiences), which should foster a biased perception in one or the other direction. In other words, the perception of a certain (subjective) aspect held by one partner may be either more or less favorable than the other partner's perception. The extent and direction of this perceptual difference is likely to depend on the personal characteristics of the persons involved. Thus, the difference (i.e., the bias) in friendship perception may be a critical factor that distinguishes the friendships of accepted children from those of rejected children.

1.6.   Perceptual consensus on friendship quality and peer rejection

In the previous section, I have delineated the assumption that perceptual concordance on the more subjective aspects of friendship, which reflects the partners' ability to accurately perceive each other's psychological state, is dependent on such factors as the partners' general social skills, motivations, and their prior knowledge about each other. Thus, in order to make any predictions about the link between perceptual consensus on the subjective aspects of friendship on the one hand and peer rejection on the other hand, the relations between peer rejection and the influential factors on social perception must be considered.

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[5] The term "objectivity" is used in the sense of classical test theory. It is defined by interpersonal agreement between judges on the evaluation of the same aspect (Bortz, 1984) which is indicated by a high correlation among judgments. Accordingly, the term "subjectivity" is used to represent a non-shared perceptual process and is indicated by a low correlation among judgments.

1.6.1. Influences on friendship perception: The social skills of rejected children

As outlined above, a person's perceptual accuracy in the social domain (i.e., the ability to perceive the psychological state of others) is related to his or her social skills. Thus, individuals who exhibit prosocial interactional patterns are also more likely to accurately perceive and evaluate other persons' social behavior. If this is so, then rejected children should differ from accepted children with respect to the accuracy of friendship perception, because they show a considerable degree of inappropriate interpersonal behavior, and there are some indications that this might extend even to the interactions with their friends (Austin, 1985; Rizzo, 1988) Apart from this behavioral evidence of a lack of social skills, rejected children also seem to exhibit a serious deficit in interpersonal understanding. Thus, they appear to be less skillful at interpreting emotional cues and generate more deviant responses to social dilemmas than accepted children (Richard & Dodge, 1982; Asarnow & Callan, 1985; Dodge, 1986). Furthermore, even if they choose appropriate interactive strategies, they appear to lack the skills to behaviorally express them in a competent way (Dodge, 1986).

Whether this socio-cognitive deficit also occurs in rejected children's friendship interactions has not been tested; however, indirect evidence suggests that this might be the case. Specifically, rejected children have fewer chances than accepted children to establish a friendship and less often engage in stable relationships (Krappmann & Oswald, 1983; Drewry & Clark, 1984; Ogawa, Hiester, & Hartup, 1995). This situation gives them less possibility to learn how to interact with a friend and, therefore, may make misunderstandings of their friends' behavioral signals more likely. In contrast, accepted children not only have a higher probability of being involved in close mutual friendships, but they are apparently also more able to maintain these relationships, because they form more stable friendships (Krappmann & Oswald, 1983; Ogawa et al., 1995). As a consequence, they get a better chance to learn how to interact with a friend, which makes misunderstandings of their friends' behavioral signals less likely.

These differences in social skills between rejected and accepted children may also be prevalent in the children's perceptual accuracy of the subjective aspects of their friendship relations. Specifically, the difference between the friends' interpretations of each others' social signals,

which occurs in varying degrees, should be more severe in rejected children's friendships than in better-accepted children's friendships. In turn, the greater gap in interpretations should result in more divergent perceptions of the subjective aspects of the relationship.

In summary, relative to accepted children's friendships, the pronounced lack of social skills evident in rejected children should lead to a severe lack of perceptual consensus in their friendships. If this is so, then the next important question refers to whether there is a specific pattern to this gap. In other words, is there a specific bias in rejected children's evaluations of the subjective aspects of friendship as compared to their friends' evaluations? An approach to answering this question is to examine the other influential factors on interpersonal perception; namely motivational and category-based biases.

1.6.2. Influences on friendship perception: The motivations of rejected children

As outlined above, a motivationally-based bias in perception may occur in situations where the perceived individual is very important for the perceiver's well-being. Here, the perception and interpretation of the other's behavior yields a particularly positive evaluation. Such a situation occurs in interpersonal relations like friendships, where an individual's affection and the behavioral expression of this affection is very important for another individual's well-being. In addition, this positivity-bias is even increased, if the perceived individual represents an exclusive source for a positive outcome (i.e., if there are no alternative sources available; Berscheid et al., 1976). This situation would occur, if the perceived person was one of very few or the only friend available to the perceiver. Hence, when examining the possible motivations guiding rejected children's friendship perception, one must consider the friendship status of these children.

As mentioned, many rejected children do establish friendships, and these relationships are not just with other rejected children; often they also involve better-accepted children (Ogawa et al., 1995). However, rejected children do have fewer friends than accepted children. Thus, rejected children are likely to be strongly dependent on their few friendships because of a lack of alternative sources in their peer group. In contrast, accepted children, who are more likely

to be engaged in various friendship relations, have several sources to turn to for emotional support. Consequently, they would not depend on a specific friend for emotional support as strongly as rejected children. Because of this difference in dependance, rejected children might exhibit a positivity-bias in their friendship evaluations. In other words, rejected children are likely to evaluate the subjective aspects of their friendships more favorably than their friends. As I detail in the next section, this assumption of an 'overestimation' of certain aspects of friendship quality is also supported when considering their friends' possible perceptual biases.

1.6.3. Influences on friendship perception: Peer status stereotypes and perceptual bias

As outlined above, prior knowledge about the category-based characteristics of the perceived person appear to influence elementary school children's social perception. Such prior knowledge can lead to stereotyped biases in evaluating and interpreting other people's behavior. Apart from recognizing such obvious characteristics as gender or race, by the middle to late elementary school years children are also aware of each other's social status in the peer group (Ausubel, Schiff, & Gasser, 1952). Thus, the knowledge about another child's status characteristics can be expected to contribute to a biased interpretation and evaluation of this child's behavior (see Hymel, et al., 1990, for a review of such a status bias).

For example, Wagner (1986) investigated in her dissertation the differences in sixth-graders' evaluations of hypothetical ambiguous group-entry behavior of either a popular, average, or unpopular peer. Importantly, the children were informed in advance about the sociometric status of the peers they should evaluate. For the popular actors, ambiguous entry behavior was almost unanimously approved of and evaluated in a positive way; this overwhelmingly positive evaluation was not the case for unpopular actors, though. Here, ambiguous behavior was equally likely to be interpreted in a negative or in a positive manner, and it was approved of less than for popular actors. The interpretations of average-status actors fell between these two extremes. These results suggest that behavior, which is acceptable to chil-

dren when performed by accepted peers, is viewed as less acceptable when performed by non-accepted children.

Similarly, Butler (1984) demonstrated in her dissertation that this status bias seems to reflect category-based processing involving specific expectations about popular and unpopular children's behavior. In her study, sixth-graders were interviewed about their evaluations and expectations of a hypothetical peer actor, who was introduced as being either of popular, unpopular, or average peer status. For all hypothetical actors, the same set of positive, negative and neutral interpersonal behavior was presented to the subjects. Despite of their same behavior, though, popular actors were evaluated as being more socially competent than average actors, and unpopular actors were considered as being less socially competent than average actors. Moreover, the children expected more negative than positive behavior from unpopular actors, while the reverse was true for popular actors. For the average status actors, no specifically valenced expectation of behavior was found.

Although these studies did not clearly distinguish between neglected and rejected children, the negative-status bias may be aimed at rejected rather than neglected children, because only rejected children are explicitly disliked. What does this mean for the friends' evaluations of rejected children's friendship behavior? Because a child's peer status may influence how his or her behavior is perceived by others, even when displaying neutral or positive behavior, rejected children may be evaluated less favorably than accepted children. In other words, although mutual friends can be expected to generally evaluate each other in a positive way, they are presumably aware of each other's peer status. Consequently, the negative status bias may also shift the friends' evaluations of rejected children's social signals in a more downward direction, even if these signals are meant to convey positive affective content. In turn, this downward shift would result in a more favorable estimation of the subjective aspects of friendship quality from the rejected children's side as compared to their friends' evaluations. In contrast, the positivity bonus granted to popular children is likely to shift their friends' evaluations in a more upward direction, even if their behavior includes ambiguous or negative signals. As a consequence, this upward shift would result in a more favorable estimation of the subjective aspects of friendship quality on the friends' side as compared to popular children's own evaluations.

1.7. Research goals and hypotheses

Based on the literature outlined above, the planned study is aimed at the following major goals. First, to test a model of friendship perception that not only includes both friends' views on the qualitative aspects of their relationship but also categorizes these aspects according to both quality and visibility of content. Second, to examine the relation between children's level of socio-cognitive development (as modified by their age/grade level) and the quality of their mutual friendships as expressed by the degree of agreement between the friends' perceptions. Third, to investigate the relation between children's sociometric status and the quality of their mutual friendships as expressed by the degree of agreement between the friends' perceptions. For this purpose, the following major hypotheses are proposed.

Hypothesis 1:

Regarding the qualitative characteristics of friendship, a general factorial pattern should emerge whereby some features are identified that refer to a shared "objective" reality and others that refer to a non-shared "subjective" reality.

As mentioned, because the more objectively perceived features refer to overt social behavior that is non-complex and clear-cut in informational content, they are more easily perceived and interpreted (Funder & Dobroth, 1987). Consequently, with these aspects, the friends' perceptions should highly and positively correlate so that the friends' perspectives form a common "objective" factor. In contrast, the more subjectively perceived features refer to more affective intrapsychic states that are behaviorally less overt and/or more complex and indeterminate in informational content. Therefore, they are not as clearly perceivable and interpretable. Accordingly, with these aspects, the friends' perceptions should not be as highly correlated so that they form two separate "subjective" factors. The extent and direction of the perceptual difference is likely to depend on the personal characteristics of the persons involved, though. Consequently, for the overall group, no specific bias in friendship perception (i.e., a specific over- or underestimation) from one perspective as compared to the other is expected.

Hypothesis 2:

As compared to older children, younger children should show a lower degree of agreement with their friends' perceptions of the same subjective aspect of friendship.

Children's level of interpersonal understanding (i.e., their ability to correctly understand others' thoughts and the resulting actions) grows with age (Piaget, 1986). Thus, older children should better understand their friends' social signals than younger children, especially when these signals refer to intrapsychic processes that are not very obvious. As a consequence, older children's perceptions of the more intrapsychic and thus subjective aspects of friendship should show higher positive correlations with their friends' perceptions than younger children's perceptions (Buhrmester, 1990). Again, though, no specific bias in friendship perception from one perspective as compared to the other is expected, neither with younger nor with older children.

Hypothesis 3:

As compared to accepted (i.e., average and popular) children, rejected children should show a lower degree of agreement with their friends' perceptions of the same subjective aspect of friendship.

As outlined above, rejected children show significant deficits in socio-cognitive skills (Dodge, 1986; Crick & Dodge, 1994). As a consequence, more than popular or average children, rejected children should misunderstand even their close friends' social signals, especially when these signals refer to intrapsychic processes that are not very obvious. Therefore, rejected children's and their friends' perceptions of the more intrapsychic and thus subjective aspects of friendship should show lower positive correlations than the perceptions of both average and popular children and their friends.

Hypothesis 3a:

As compared to their friends, rejected children should express a more positive view on the subjective aspects of their friendships.

Because rejected children are likely to have fewer friends than accepted children, they are more likely to strongly depend on their friends for emotional support. Therefore, rejected children are expected to favorably evaluate the more subjectively perceived aspects of their friendships. In contrast, the stereotyped bias in the interpretation and evaluation of unpopular children's behavior may shift their friends' evaluations in a downward direction. As a result, I expect rejected children's average evaluation of the subjective aspects of friendship (i.e., their mean level evaluation) to be more positive than their friends' average evaluation. In addition,

I expect the positivity bonus granted to popular children to be expressed as more positive evaluations of popular children's friends as compared to the popular children's own evaluations.

2. EMPIRICAL STUDY

Tests of the hypotheses outlined above were conducted in three separate phases and are therefore reported in three different sections of analysis. In the first phase of the analyses, I tested the general tenability of the basic factorial structure. The general model emerging from these analyses was then used as the basis for all subsequent phases of hypotheses testing. Namely, in the second phase, I evaluated possible developmental trends in friendship perception of children. In the final phase, I tested the hypotheses regarding the differences in the self-rated and friend-rated friendship qualities of rejected, average, and popular children.

2.1. The proposed model of reciprocal friendship perception

2.1.1. Methodological basis: The Friendship Interview

For the various characteristics of a dyadic friendship, I expected a general factorial pattern, wherein some features refer to a shared objective reality and others to a non-shared subjective reality. However, the specific test of this general hypothesis to some degree depends on the applied instrument. For example, with varying instrument complexity, the number of obtained friendship aspects may also vary. However, the basic conceptual distinction between more subjectively perceived and more objectively perceived aspects should still hold. In German language, only one standardized instrument exists that thoroughly assesses various qualitative features of children's relationships with other children in middle childhood, namely the Friendship Interview (Krappmann, Oswald, von Salisch, Schuster, Uhlendorff, Weiss, 1991). Thus, all hypotheses concerning the specific factorial structure of reciprocal friendship perception are based on those characteristics of friendship that are measured by the instrument.

In a study on the social life of families in East- and West-Berlin, Oswald and Krappmann (1995) used confirmatory factor analytical methods to analyze data from elementary-school-children. They propose six major aspects of friendship when considering a given child's per-

spective, namely (a) the Evaluation of the Relationship, (b) Assistance, (c) Fun, (d) Absence of Quarrels, (e) Mutual Visits, and (f) Mutual Sleep-Overs. As Oswald and Krappmann demonstrated, this factorial pattern of friendship quality was consistent for children from both sociocultural groups. Specifically, the Relationship Evaluation included the "degree of liking the friend" and the "ranking of the relationship" as asessed by a scale ranging from mere playmate to best friend. The Assistance factor covered the aspects "sharing of secrets", "reconciliation after conflict", "encouragement", and "protection against others". The Fun factor consisted of "fooling around" and "playing jokes", while the Absence of Quarrels factor was comprised of a single variable only. [6] The Mutual Visits factor consisted of two items, namely "how often did the target child visit the friend at home" and "how often did the friend visit the target child at home". Similarly, the Mutual Sleep Overs factor consisted of "how often did the target child sleep at the friend's home" and "how often did the friend sleep at the target child's home". [7] Because these last two factors represent the general frequency of the friends' meetings at each other's homes, they were combined into a general Mutual Visits factor in later analyses by Oswald and Krappmann (1995).

With the conceptual distinction of subjective and objective perspectives in mind, some of these aspects should clearly facilitate a more objective and thus shared perspective, and others should generate a more subjective and thus non-shared perspective. As mentioned, objective features refer to overt social behavior that is simple and clear-cut in informational content, and thus more easily perceived and interpreted. Using the factorial structure suggested by Oswald and Krappmann (1995), the general Mutual Visits factor clearly fits into this category. Consequently, with this aspect the friends' perceptions should highly correlate so that they form a common objectively perceived factor. In contrast, subjective features refer to more intrapsychic states that are conceptually more complex and indeterminate in informational content and/or behaviorally less overt. Therefore, they are not as clearly perceivable and interpretable. The Assistance factor, for example, which delineates a form of the general and rather complex support experienced in a friendship, would belong to this category. The same is true

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[6] In a slightly revised and more complex version of the Friendship Interview the Fun factor comprises a third variable, namely "the development of good ideas". Furthermore, three more variables measuring conflicts and quarrels in friendship are included, namely "being mad at each other", "calling each other names", and "disagreements with the friend".

[7] Note, that these last two factors reflect the target child's perspective, only.

for the factors Relationship Evaluation, Fun, and Absence of Quarrels. Accordingly, with these aspects the friends' perceptions should not be as highly correlated so that both perspectives form two separate subjectively perceived factors (i.e., self-rated and friend-rated constructs).

When looking at the original factorial pattern in Oswald and Krappmann's study, though, a few subtle changes can be proposed. For example, Oswald and Krappmann found a very high correlation between the factors Assistance and Relationship Evaluation, r = .78 for the West-Berlin children and r = .80 for the East-Berlin children, respectively. Given (a) such a high correlation between these two factors, and (b) the aim of a parsimonious representation of the psychological space, these two factors could be expected to form a single subjective factor representing the more general Relationship Closeness. Furthermore, in the old model, a variable assessing the children's choice of "taking a nominated friend on a trip" (three choices allowed), was not included, although it was measured by the Friendship Interview. However, because such an expression of preference indicates a child's fondness of a friend, this variable should be included as another element of the subjectively perceived Relationship Closeness.

In their factor analysis, Oswald and Krappmann did not include another aspect of children's friendship that is measured by the Friendship Interview; namely, the "frequency of the friends' after-school play encounters". However, since this feature constitutes one of the basic characteristics of friendship, both theoretically and in the reality of children's social lifes (Hartup, 1989), it was included in this study. The "frequency of after-school play encounters", much like the "frequency of mutual visits at home" or the "frequency of mutual sleep overs", represents an unambiguously and thus objectively perceivable aspect of friendship. Thus, the target children's and their friends' evaluations can be expected to form a common factor for each of these aspects. However, for a parsimonious representation of the friendship aspects referring to overt meeting behavior, a general differentiation can be made between the type of friends' meetings that do not take place at the children's homes and the type of friends' meetings that do take place there. Therefore, the target children's and their friends' perceptions of the frequency of mutual visits at home and of their mutual sleep overs will be combined into a common factor in this study, representing the (objectively perceived) frequency of the friends' meetings at home, i.e., the Mutually-rated Visits factor. The factor

representing the (objectively perceived) frequency of the friends' meetings outside home will then consist of both the target children's and their friends' perceptions of the frequency of mutual play encounters, i.e., the Mutually-rated Play factor. In Figure 1 (see following page), the hypothesized factors and their constituting items are depicted.

Figure 1

Friendship Interview Items and Proposed Model Factors

SELF-RATED ITEMS   FACTORS   FRIEND-RATED ITEMS
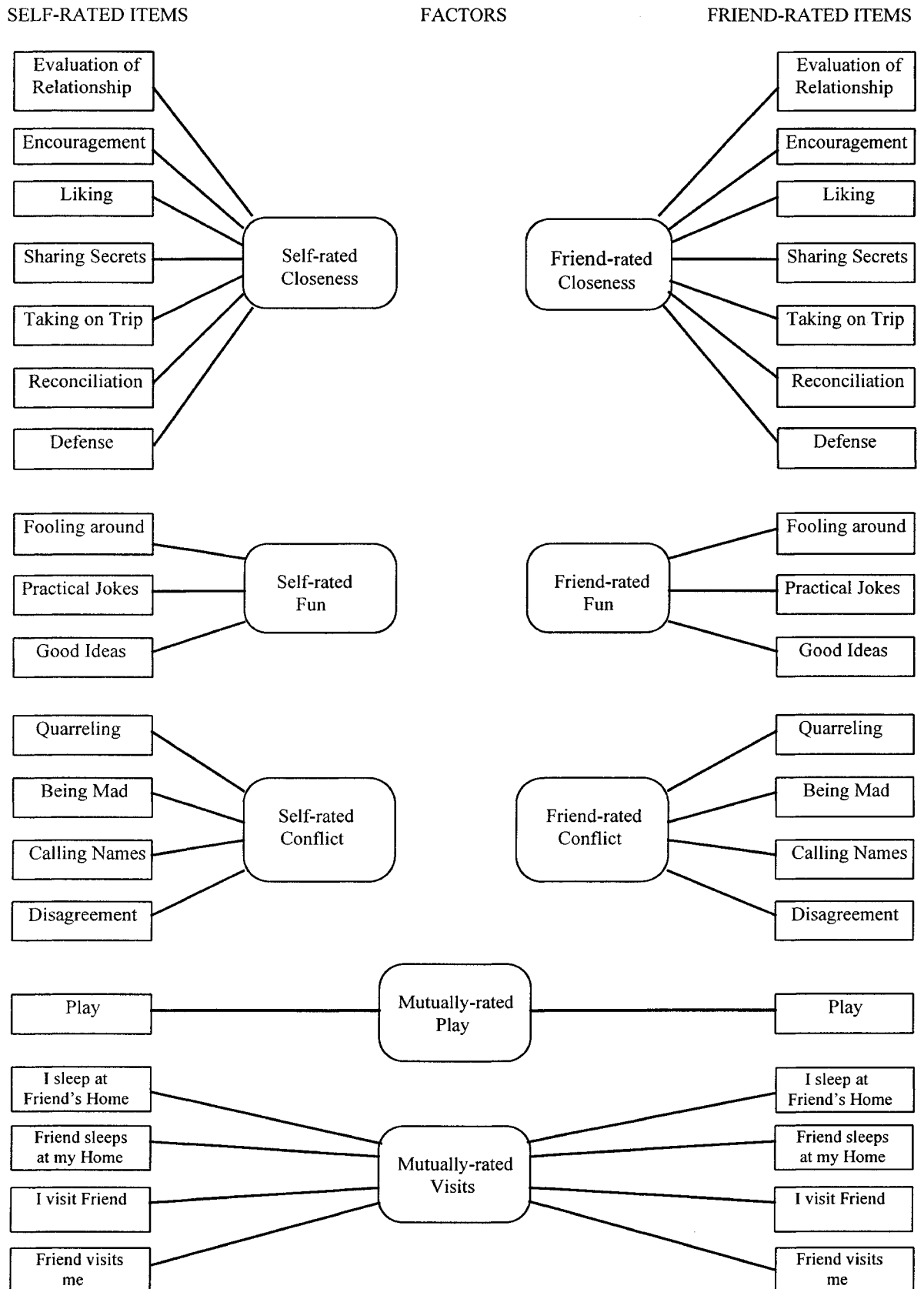
2.1.2. Specifications of the general hypotheses concerning the basic factorial structure of reciprocal friendship perception

Based on the aspects assessed by the Friendship Interview and the considerations outlined above, I propose the following specifications of the general hypotheses regarding the factorial pattern of reciprocal friendship perception.

Specification of the General Hypothesis 1:

When simultaneously considering both the target children's and their friends' perspectives, three friendship factors will emerge, where the friends' perceptions do not correlate highly, so that both perspectives form two separate factors, a self-rated factor from the target children's perspective and a corresponding friend-rated factor from their friends' perspective. These factors are: Self-rated Closeness and Friend-rated Closeness, Self-rated Fun and Friend-rated Fun, Self-rated Conflict and Friend-rated Conflict. Specifically, Self-rated Closeness comprises the target children's evaluations of the features "degree of liking", "ranking of the relationship", "sharing secrets", "reconciliation after conflict", "preference for taking on a trip", "encouragement", and "defense against others". Self-rated Fun includes the target children's evaluations of the features "fooling around", "playing jokes", and "developing good ideas". The factor Self-rated Conflict consists of the features "being mad at each other", "quarreling", "calling each other names", and "disagreements with the friend". The friend-rated aspects of Closeness, Fun, and Conflict will be comprised of the corresponding friend-rated evaluations of these features (see Figure 1).

When simultaneously considering both the target children's and their friends' perspectives, two friendship factors will emerge, where the friends' perceptions correlate highly, so that both perspectives form a common factor. These factors are: Mutually-rated Play and Mutually-rated Visits. Specifically, the factor Mutually-rated Play represents the frequency of the friends' meetings outside home and consists of both the target children's and their friends' evaluations of the "frequency of mutual after-school play encounters". The factor Mutually-rated Visits represents the frequency of the friends' meetings at home and includes both the target children's and their friends' evaluations of the "frequency of mutual visits at home", as

well as the target children's and their friends' evaluations of the "frequency of mutual sleep overs" (see Figure 1).

This general distinction between self-rated and friend-rated subjective aspects of friendship implies that the constituting self-rated and friend-rated indicators (or measured variables) do not correlate highly between friends. Consequently, the underlying self-rated and friend-rated latent (i.e., non-measured) factors are not expected to correlate highly, either.

2.1.3. Method and procedure

2.1.3.1. Subjects

Data collection took place from fall 1992 to spring 1993 in 38 classrooms of four primary schools located in two Eastern innercity districts of Berlin. The schools were located in middle-class neighborhoods. In the first round of data collection, sociometric tests were given to the 870 children in the schools. In five classes more than one child in class failed to participate in the sociometric tests. Because sociometric classification becomes unreliable with an increasing amount of missing cases (Oswald, Krappmann, Brekenkamp, Uhlendorff, & Weiss, 1993), these classes were excluded from the analyses. The remaining classes included a total number of 746 children for whom sociometric data were available. 23 % of all 870 children in the schools refused to participate in the interview about friends, which was conducted a few days after the sociometric tests. As a consequence, the interview was administered to 673 pupils (343 boys and 330 girls; age range: 6;10 to 12;2 years). 165 children attended the second grade, 156 the third, 166 the fourth and 186 children attended the fifth grade. [8]

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[8] Because the analyses were conducted only with those subjects who had at least one friend, the distributional pattern for this part of the total sample will be reported after the description of the identification procedure.

2.1.3.2. Measures

2.1.3.2.1. Children's sociometric status

Children's sociometric status was assessed by means of the nomination procedure developed by Coie et al. (1982). Here, each child is asked to write down the names of three children in the classroom he or she likes most and likes least. The classroom roster is put in front of the child to ensure that all children are equally remembered and thus have the same theoretical probability to be nominated. [9] In order to estimate a child's sociometric status, the number of positive and negative votes in the classroom received by each child are separately aggregated. By further treatment of the data, five different sociometric groups can be clearly distinguished to which most children can be assigned: popular, average, controversial, neglected, and rejected children. Thus, a confounding of theoretically distinct groups -- for instance among neglected and rejected children -- is avoided. This procedure has been extensively used with children at elementary school age (e.g., Dodge, 1983; Coie & Dodge, 1988; Kupersmidt & Coie, 1990; Kupersmidt & Patterson, 1991; Patterson et al., 1990). It not only meets the conceptual criteria of popularity measurement as proposed by Bukowski and Hoza (1989) but the nomination procedure also reveals strong relationships with other measures of popularity, such as rating scales (Bukowski & Hoza, 1989), which suggests good validity of measurement. Furthermore, the sociometric status measure yielded by this procedure shows acceptable stability across both time (Coie & Dodge, 1983) and new situations (Coie & Kupersmidt, 1983), indicating good reliability of measurement.

2.1.3.2.2. Quality characteristics of children's friendships

Children's friendship characteristics were investigated by using a standardized interview about friends (Krappmann, et al., 1991). Given prior parental consent, the interview was ad-

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[9] Although there is some evidence of a sex-bias against opposite-sex peers in sociometric studies of elementary school children (Singleton & Asher, 1977), full class sociometrics and sex-segregated sociometrics have been found to correlate very highly, namely $r = .96$ for positive nomination scores and $r = .83$ for negative nomination scores (Asher & Hymel, 1981), $r = .81$ for social preference and $r = .86$ for social impact (Coie & Kupersmidt, 1983). This finding suggests that while there may be a sex-bias in sociometric ratings, there is a reasonably high consensus in social status ranking across gender groups.

ministered to a total of 673 children. Each child was interviewed individually in a separate room of the school during a single class period by trained interviewers. The child was first asked to nominate children with whom they share activities outside school hours. The interviewer prompted a child with different places (e.g., in the playground, at home, in the street), specific occasions (e.g., at sports), and different times (e.g., in the afternoon, at the weekend or during vacations) to ensure a complete list of all playmates and friends. These questions help to differentiate friends from non-friends and to classify the peer relationships of the interviewed child according to their intensity and quality. By interviewing entire classrooms, many of the children that are nominated by the interviewed child are interviewed as well. Thus, at least for the friendships maintained in the classroom, reciprocity of friendship nomination as well as perceptual correspondence with respect to the several characteristics of the friendship can be assessed. Because friendships in the classrom are an especially important part of children's social experiences during middle childhood (Krappmann et al., 1993), these data reflect crucial friendship relationships.

On the basis of previous research on children's friendship characteristics (Krappmann & Oswald, 1983; Oswald & Krappmann, 1984; Oswald, Krappmann, & Fricke, 1988), the children were asked to describe all nominated relationships with respect to characteristic aspects. As presented in Figure 1, the questions referred to the degree of liking, the frequency of reconciliation after conflict, sharing of secrets, encouragement in case of sadness, defense if ridiculed by peers, fooling around, practical jokes on others, the development of good ideas, quarreling, disagreements, calling each other names, mutual play encounters, mutual visits at home, and mutual sleep overs (see Figure 1). Additionally, the children were asked whom of the nominated children they would take with them on a journey when only allowed to take three. Finally, children had to indicate how much they liked each of the nominated children and to assign them to the four levels 'best friend', 'good friend', 'friend' and 'playmate'. All questions were presented as either 4-point Likert response scales (i.e., 'never', 'seldom', 'sometimes', 'often') or as dichotomous items with a 'yes'- or 'no'- option. [10]

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[10] In the original interview, the item assessing the mutual play encounters was presented as a 5-point Likert-scale. However, level 1 of this item represented mutual play only during school (recess) time. Because children who only see each other at school are not considered having a friendship, this level was excluded from analyses.

With respect to the instrument's validity, fairly strong relations exist between the various aspects measured by the friendship interview and other measures of social integration. For instance, moderate correlations have been reported between the number of nominated relationships and a child's feeling of social acceptance (r = .28), a child's loneliness (r = -.19), and the developmental level of the friendship concept (r = .22), (Oswald et al., 1994). Information about the instrument's test-retest reliability is unavailable. However, a comparison between the number of nominations a child received from his or her classmates in the friendship interview and the positive votes received in the sociometric test suggest good reliability of the friendship interview (r = .57).

2.1.3.3. Data treatment

2.1.3.3.1. Identification of peer status

Based on the method suggested by Coie et al. (1982), the total number of positive and negative nominations received were calculated for each child and z-standardized. Then, the sum of a child's received positive plus negative nominations was computed to yield the child's social-impact-score which indicates the child's social visibility. Additionally, the number of each child's positive nominations minus the number of negative nominations yielded the child's social-preference score indicating the child's general likability. The social impact and social preference scores were z-standardized and were then used to identify children for the five distinct social status groups as described by Coie et al. (1982).

The *popular* group consisted of all those children who (a) received a social preference score of greater than 1.0, (b) a standardized positive score of greater than 0, and (c) a standardized negative score of less than 0. Thus, the popular children are exceptionally well-liked by their peers.

The *rejected* group consisted of those children who received (a) a social preference score of less than -1.0, (b) a standardized negative score of greater than 0 and (c) a standardized positive score of less than 0. Thus, the rejected children are exceptionally disliked by their peers.

The *neglected* group consisted of those children who received (a) a social impact score of less than -1.0 and (b) an absolute positive score of 0. The neglected children thus had no one identifying them as among the three classmates they liked most. They differed from the rejected children in that the rejected children received many negative votes, whereas the neglected children did not. Thus, the popular children are not explicitly disliked but rather overlooked by their peers.

The *controversial* group consisted of those children who received (a) a social impact score of greater than 1.0 and (b) positive and negative standardized scores that were each greater than 0. Thus, members of this group were all above the mean for both positive and negative nominations. These children stand out, because they have many peers who like them and many others who dislike them.

The *average* group consisted of those children who received a social preference score that was greater than -.5 and less than .5. Thus, these children are not especially liked or disliked, but they differ from the neglected children in that they are not overlooked by their peers.

By following these criteria, 584 children were identified from the original sample of 746 as fitting into one of the four extreme social status types or the average group. Specifially, there were 110 (15%) children in the popular group, 90 (12%) in the rejected group, 29 (4%) in the neglected group, 20 (3%) in the controversial group, and 335 (45%) in the average group. The remaining 162 (21%) children did not meet Coie et al.'s stringent classification criteria, and therefore, they could not be positively classified into one of the sociometric groups. This phenomenon is typical for the Coie et al.-method which is aimed at identifying 'pure' average and extreme sociometric groups. The relative sizes of the various sociometric groups and the remaining unclassified children in the present sample are in accordance with the relative sizes usually obtained with this method (e.g., Coie et al., 1982; Dodge, 1983; Coie & Dodge, 1988; Patterson et al., 1990; Kupersmidt & Coie, 1990).

2.1.3.3.2. Identification of reciprocal friendship evaluations

In order to achieve a representation of children's appraisals about their most salient friendship(s) in class, those children had to be identified who had at least one of their friendship nominations in class reciprocated. For this purpose, in a first step, children's nominations of friends who were absent from school during testing sessions were excluded from analyses. In a second step, each child's friendship nominations were ordered in the sequence originally given during the interview. Each of the friendship nominations was then checked for reciprocity. The first friendship nomination that was found to be reciprocated was assumed to be the most salient mutual friendship, the second reciprocated nomination was assumed to be the next most salient friendship, and so on. All non-reciprocal friendship nominations were excluded from further analyses. Then, each child's statement about a specific friendship was matched with the respective friend's evaluation of the same variable. As a result, for every child a data set of reciprocated friendship information was gained that consisted of their own and their friends' judgments about every aspect of each specific relationship. Only in 0.7% of all cases was information about a certain reciprocal friend missing on a variable (e.g., on the degree of sharing secrets with that friend). In such cases, the missing value was replaced by the respective information given by the nominated friend (e.g., the friend's evaluation of shared secrets within the friendship).

Of the 673 interviewed children, 573 (85%) had at least one mutual friend in school. Of these, 152 children (27%) had only one friend, 161 children (28%) had two friends, 116 children (20%) had three friends, 76 children (13%) had four friends, 44 children (8%) had five, 13 children (2%) had six, and 11 children (2%) had more than six mutual friendships in school. Since the percentage of children with four or more mutual friends was small, all following analyses were based on the friendship information about the children's first three reciprocal friendships. Altogether 1252 mutual friendships in school were nominated by the children, all of them were with children of the same grade and 1118 (89%) of these were with children of the same gender. This underscores the common finding (see Maccoby, 1990, for a review) that in middle childhood children's friendships are mainly same-sex-relationships.

In the next step, for children with more than one reciprocated friendship and for every friendship aspect, each interviewed child's evaluations about the first three (or two) most salient friendships in school were averaged. By so doing, I obtained the child's typical (i.e., average) evaluation of his or her most salient friendships about this specific characteristic. Similarly, for every friendship aspect, the three friends' judgments were averaged. Thus, I obtained the most salient friends' typical (i.e., average) evaluation of this specific characteristic of friendship with the interviewed child. Using these aggregate indices has two advantages. First, it can be assessed how a target child typically perceives the quality of his or her friendships, and how having a friendship with this child is typically evaluated by his or her friends (see, e.g., Berndt & Keefe, 1995, for a similar approach). Thus, from the target child's perspective, any possible dyadic-specific variance is reduced in favor of the commonalities across the child's evaluations of his or her most salient friendships. In contrast, from the friends' perspective, any possible dyadic-specific variance is reduced in favor of the commonalities of the friends' ratings of the quality of their friendships with the target child. Thereby, any existing bias (i.e., systematic over- or underestimation) in the average friendship perception can be assessed for each target child.[11] A further advantage is that duplicate observations are avoided, thereby maintaining sufficient sample size for the analytic procedures. For children with only one mutual friend, information about this single friendship was kept. Yet, among those children with only one mutual friend, there were 44 children who had exclusively nominated each other. In order to avoid double listings of the same information (i.e., listed twice, once on the nominator's and once on the nominee's side), for all of these dyads one partner was randomly excluded from the sample, which resulted in a final sample size of 551 subjects (see Figure 2 in the Appendix for complete sampling information). As can be seen in Table 1, the gender distribution is approximately equal across grade levels. The distributional characteristics of the aggregated items (i.e., mean levels, standard deviations, skewness, kurtosis) are presented in Table 1 of the Appendix.

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[11] A potential limitation of this procedure is that by aggregating across more than one friendship the relations across perspectives might be attenuated (e.g., overestimation of one friendship and underestimation of another friendship might neutralize each other, thus leading to unduly high correlations across perspectives). However, as shown in section 2.1.5.3., no attenuation of relations occured.

	Grade 2	Grade 3	Grade 4	Grade 5	*Total*
Boys	65 (12%)	60 (11%)	75 (13%)	79 (15%)	279 (51%)
Girls	67 (12%)	74 (13%)	58 (11%)	73 (13%)	272 (49%)
Total	132 (24%)	134 (24%)	133 (24%)	152 (28%)	N=551
Average Age (Years)	8.0	9.1	10.0	11.0	9.5

Table 1. Sample distribution by gender and grade and average age

2.1.3.3.3. Identification of reciprocal friendship evaluations by peer status

Not all of the 584 children that had been identified as belonging to one of the sociometric groups had participated in the friendship interview. Specifically, friendship data were available from 64 (71%) rejected, 22 (76%) neglected, 15 (76%) controversial, 92 (84%) popular, and 284 (85%) average status children. Of the 284 children in the average group, 253 had mutual friendships (89%), of the 92 popular children 85 had established friendships (92%), and of the 64 rejected children 44 had at least one reciprocal friend (69%). Of the 22 neglected children, 14 had a mutual friendship (64%), and all of the 15 controversial children had friends. The lower percentage of rejected and neglected children having a mutual friendship is in line with previous results by Parker and Asher (1993), indicating less-accepted children's generally lower chance of establishing a mutual friendship as compared to accepted children. In Table 2 of the Appendix, the mean number of mutual friendships in school as well as the mean number of same-status friends are presented for each of the five sociometric groups. Because 6 children in the rejected group (14%) and 20 children in the average group (1%) had exclusively nominated each other, one partner was randomly excluded from the analyses to avoid double listings of the same information. As a result, the size of the average group was reduced to 243 children and the size of the rejected group was reduced to 41 children. No exclusive nominations occured in the other sociometric groups (see Figure 3 in the Appendix for complete sampling information). The distribution of the three sociometric groups being used in the sociometric group comparisons (rejected, average, and popular) by gender and grade level is shown in Table 2.

		Grade 2	Grade 3	Grade 4	Grade 5	*Total*
Rejected	Boys	4 (1%)	6 (2%)	5 (1%)	7 (2%)	41
	Girls	3 (1%)	6 (2%)	3 (1%)	7 (2%)	
Average	Boys	21 (5%)	21 (5%)	42 (12%)	32 (9%)	243
	Girls	27 (7%)	33 (9%)	32 (9%)	35 (10%)	
Popular	Boys	9 (2%)	9 (2%)	11 (3%)	9 (2%)	85
	Girls	11 (3%)	13 (4%)	11 (3%)	12 (3%)	
Total		75	88	104	102	N=369

Table 2. Distribution of the three sociometric groups (rejected, average, and popular) by gender and grade.

2.1.4. Analytic procedures

2.1.4.1. MACS analyses as statistical strategy

Multiple group mean and covariance structures analyses (MACS; see Jöreskog & Sörbom, 1989; Little, 1996; Browne & Arminger, 1995) were used as the main testing procedure. In the following section, a short overview of this type of analysis is given (see Little, 1996, for a detailed description).

The first advantage of a MACS analysis, which is a variant of the standard structural modeling techniques (Jöreskog & Sörbom, 1989) is that it allows a direct test of whether the hypothesized factorial pattern is justifiable. If the expected factor structure is consistent with the data, this is indicated by the quality of fit indices for the tested model (e.g., the non-normed fit index NNFI or Rho ; Bentler & Bonett, 1980; Bentler, 1990; Tucker & Lewis, 1973; Marsh, Balla, & McDonald, 1988; the incremental fit index IFI ; Bollen, 1989; Bentler, 1990; or the Root Mean Square Error of Approximation RMSEA; Browne & Cudeck, 1993; Raykov &

Widaman, 1995). A second advantage of a MACS analysis is that information on the indicators' means is included. [12] Finally, the MACS framework allows a test whether comparisons between groups (e.g., between sociometric groups) are made on the same underlying constructs, that is, whether the factorial structure (i.e., the measurement model) holds for all groups.

Equivalence of the measurement structure is an important precondition for any comparison across groups (Little, 1996). Because the MACS framework contains the means of the constructs' indicators, six types of parameter estimates can be evaluated: (a) the latent factor loadings of the indicators, (b) the means of the indicators, (c) the residual variances of the indicators, which represent both measurement errors and unique variances, (d) the latent factor means, (e) the latent factor variances, (f) the latent factor covariances or correlations, which can also be represented as structural paths among the latent factors. While the first three elements primarily refer to the measurement model (i.e., the relations between the measured variables and the latent constructs), the latter elements refer to the underlying latent factor model. Since the basic requirement for any cross-group comparison of latent constructs (e.g., of the latent construct means) is that the constructs are defined in precisely the same manner, the measurement model must show metric invariance across groups. Hence, if the same cognitive process which underlies the constructs works for these groups, both the factor loadings of the indicators and the indicator means must be mathematically equivalent between them (Meredith, 1993; Little, 1996). [13] Differences (or similarities) between the selected groups regarding the latent factor model, on the other hand, will manifest themselves in the latent space (i.e., in the latent constructs' mean and covariance information or in the structural paths between the constructs).

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[12] Here, an additional factor was introduced to represent the means (or intercepts) of the indicators (see, e.g., McArdle & McDonald, 1984). Specifically, the indicator means were represented by loadings on this additional factor, while the latent construct means were represented as regressions of the latent constructs on this means factor. Thus, both the estimates of the latent constructs' covariations and the constructs' means were corrected for measurement error (dissattenuation).

[13] The residual variances of the indicators are not necessarily expected to be equal because they represent both measurement errors and specific variances in each group (MacCallum & Tucker, 1991).

2.1.4.2. Test of model fit

For testing hypotheses, two general rationales can be used: a statistical rationale and a modeling rationale. With the statistical rationale, a difference test is conducted as a nested model comparison between a model, in which, for example, the factor correlations are freely estimated in each group, and a model in which these parameters are constrained equal across groups. The significance of the difference between the two models is then determined as a nested statistical test (i.e., a model with more parameter constraints is tested against a model with less constraints). Specifically, the difference in the chi-square statistic relative to the difference in degrees of freedom between the two models is examined. If this test is not significant, the imposed constraints do not lead to a significant loss in fit, which means that the parameters do not differ across groups. A significant difference suggests that the restrictions in the nested model are too limiting and that one or more of the constrained parameters should be estimated freely.

With a modeling rationale, measurement invariance can be imposed and evaluated using practical fit indices. Because a metrically invariant model is more parsimonious both theoretically and empirically and is the required basis for comparing differences between groups, measurement invariance is then justifiable if (a) the overall model fit is acceptable, as indicated by relative fit indices (e.g., if the NNFI or a similar standard like the IFI is approximately .90 or greater; Bentler & Bonett, 1980; Marsh, et al., 1988; and if the RMSEA is less than .05; Browne & Cudeck, 1993) and (b) the difference in model fit is negligible (e.g., the difference in Rho <= .05; Little, 1996), and (c) the justification for the accepted model is substantively more meaningful and interpretationally more parsimonious than the alternative model (Jöreskog, 1971).

Principally, both rationales can be used for testing cross-group invariance of both the measurement model's parameters and the latent factor model's parameters. However, because these two models represent qualitatively different theoretical and empirical goals, the use of different rationales is appropriate and justifiable (Little, 1996). Testing a measurement model aims at evaluating a general factorial measurement structure. Because a metrically invariant model is not only a more parsimonious representation than a freely estimated model but also

the necessary basis for any further cross-group comparisons, employing the modeling ration-
ale is more appropriate in this case. Conversely, testing specific hypotheses that do not refer
to the measurement model but to the latent factor model (e.g., the equality of the latent factor
means), aims at testing specific hypotheses. In this case of specific multivariate tests of pa-
rameter invariance, the use of a statistical rationale is more appropriate. Therefore, in all
analyses the two different rationales were used separately for invariance tests of the measure-
ment model and the latent factor model.

2.1.5.   Testing the basic factor model

2.1.5.1.   Measurement structure

In order to just identify a measurement model, the constructs should not be represented by
more than three indicators, since only then the number of equations in the measurement model
equals the number of the parameters to be estimated, which minimizes the probability of ran-
dom dual factor loadings (Sullivan & Feldman, 1979). In the present study, four of the eight
hypothesized friendship constructs have more than three items (Self-/ Friend-rated Closeness
each have seven items; Self-/ Friend-rated Conflict each have four items). Therefore, for each
of the four constructs, the constituting items were combined (i.e., parceled) into three indica-
tors. The parceling rationale was based on the domain representativeness rationale developed
by Kishton & Widaman (1994). This rationale ensures that all indicators of a given construct
(a) contain as much common variance, (ie., factor-related variance) as possible, (b) as a con-
sequence, are as highly intercorrelated as possible, and (c) represent the underlying construct
as equally as possible.

To do so, I first conducted exploratory factor analyses, wherein I specified a series of two
factor solutions for the corresponding self-rated and friend-rated items. Specifically, the
fourteen items comprising Self- and Friend-rated Closeness were included in a factor analysis
wherein I extracted two factors, and the same procedure was used for the eight items of Self-
and Friend-rated Conflict. Table 3 of the Appendix shows the rotated factor pattern and the
communalities for both analyses. I then combined the seven items comprising Self-rated

Closeness into three parcels and the seven items comprising Friend-rated Closeness into three parcels to represent the indicators of the two constructs in the LISREL model. The parceling rationale was to combine (i.e., averaging) into a single parcel the item with the highest factor loading and the item with the lowest factor loading, then to combine into another parcel the items with the second highest and the second lowest loading. The third parcel consisted of the three items with loadings of "average" size. In addition, the constraint was imposed, that corresponding parcels for the self-rated and the friend-rated perspective consisted of analogous items. For the items comprising Self-rated and Friend-rated Conflict, the same procedure was used. Because only four measured variables existed for each of the two constructs, only two items were combined into a parcel in order to achieve a three-indicator representation for the two constructs.

In order to gain the self-rated and the friend-rated indicators of the Mutually-rated Visits factor, a different rationale was used. The friends' visits and sleep overs were considered to together represent a general Mutual Visits factor (Oswald & Krappmann, 1995). Therefore, the four self-rated items depicting the frequencies of mutual visits and sleep-overs were combined (i.e., averaged) to the self-rated indicator of the Visits factor. The analogous procedure was used for the friend-rated indicator of the Visits factor. Figure 1 in the Appendix shows the items and the corresponding parcels or indicators for each of the proposed eight friendship constructs.

In addition to these constructs, three covariates, namely gender (represented by a dummy-coded variable), grade and quadratic grade, were included in the model to partial out and thereby control for possible interactive effects of gender as well as linear and non-linear effects of grade level as a proxy for age. Because gender and grade level have been found to be influential factors in children's friendship relations (e.g., Furman & Buhrmester, 1985; Buhrmester & Furman, 1987; Buhrmester, 1990; Parker & Asher, 1993; Berndt & Perry, 1986; Furman & Buhrmester, 1992) such effects could possibly bias any conclusions drawn from the analyses. Each of these covariates were represented by a single indicator. [14] How-

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[14] Except for these covariates, all latent constructs were represented twice, both at the first-order level and the second-order level. The purpose of such a second-order representation is to decompose covariances among the latent constructs into variances and correlations. A specific second-order construct is specified to predict all the variance of its associated first-order representation. The resulting covariances among the second-order versions

ever, because the hypothesis on the grade-related differences in friendship evaluation, just like the underlying theoretical assumptions (e.g., Selman, 1984; Damon, 1982), refers to the linear components of development, only these will be tested and referred to.

2.1.5.1.1. Structural equations modeling and the problem of outliers

Outliers can seriously bias estimations of variance (Boomsma, 1987). Assessments of the distributional characteristics (e.g., skewness and kurtosis) were conducted for each indicator. Outliers for each of the indicators were identified by using multivariate regression techniques. Specifically, each indicator was predicted by the set of remaining indicators used in the analyses. Any value falling outside the 99% isodensity contour (i.e., the conditional confidence interval) was considered an outlier and replaced with a value that was at the 95% isodensity contour for the same equation (Tabachnik & Fidel, 1984). Overall, less than 2% of the data points were identified as outliers. Skewness and kurtosis information about the indicators used in the following analyses is given in Table 4 of the Appendix.

2.1.5.2. Description of model tests and results

2.1.5.2.1. Testing the measurement structure

As mentioned above, in the first phase of the analytical procedure the general tenability of the basic factorial structure was tested. However, because of the possibility of capitalizing on chance relations, cross-validation procedures were used. Specifically, the hypothesized factorial structure was simultaneously tested and cross-validated in a two-group MACS-model by randomly splitting the sample in half. As is shown in Table 3, the distribution of gender and grade level was approximately equivalent in both subsamples.

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of the constructs are estimated in correlational metric which is more easily interpretable than covariance metric (see Little, 1996, for details). The effects of the covariates were partialled from the latent constructs at the first-order level. For all analyses, the model specification followed LISREL submodel 3B notation (Jöreskog & Sörbom, 1989) or 'y-side' estimation.

		Grade 2	Grade 3	Grade 4	Grade 5	*Total*
1. Group	Boys	32	30	38	39	139
	Girls	34	37	29	36	136
2. Group	Boys	33	30	37	40	140
	Girls	33	37	29	37	136
						N = 551

Table 3. Random samples distribution by gender and grade

Table 5 in the Appendix shows the various steps of the model testing procedure in order to test and cross-validate the basic factorial pattern of reciprocal friendship perception. The first random group was considered the 'model-testing'-sample, while the second random group served as validation sample. I started with the Null-Model (Model 0), which tested the Null-hypothesis that (a) the relations among all variables are zero in both groups (i.e. independance of all variables in both groups), (b) the variable means are zero in each group, and (c) the variable variances are unity in each group. This model was rejected with $\chi2$ (600) = 4673.70.

In the next model (Model 1), the expected pattern of factor loadings for the indicators (i.e., the expected measurement structure as is delineated in Figure 1 in the Appendix) was tested. At this stage no directed relations among the latent second-order constructs were assumed and no equality constraints were placed on the latent parameters, neither within nor across groups. Yet, based on the assumption that the self-rated friendship factors are subject to the same psychological mechanisms as the associated friend-rated factors, the factor loadings of the corresponding indicators should be equal. For example, Indicator 1 of the Self-rated Closeness factor should have the same factor loading as Indicator 1 of the Friend-rated Closeness factor. For this reason, the factor loadings of all matching self-rated and friend-rated indicators were constrained to be equal. This model revealed a fit of NNFI = .878, $\chi2(474)$ = 867.59, suggesting that one or more additional parameters should be freely estimated.

Jöreskog and Sörbom (1989) recommend that only one parameter be freed at a time on the basis of the LISREL modification indices. Usually the largest index is chosen, if it agrees with theoretical considerations. Based on the modification indices, I identified a direct effect of grade level on the amount of exciting ideas developed in their friendship (i.e., the "idea" indicators of Self-rated and Friend-rated Fun), which was not reflected by the general effect of grade level on the Fun factor. As is shown in Model 2, additional loadings of the "I-idea" indicator (I-Fun 3) and the "U-idea" indicator (U-Fun 3) on grade resulted in an acceptable level of fit. At this point, I did not place equality constraints on these additional loadings across the two random groups. However, because all of the children's reciprocal friends in school were at the same grade level, the direct grade effects could be expected to work in the same way for the children's ratings and their friends' ratings, even though grade information was only extracted for the target child. Thus, these direct effects were constrained to be equal for the associated self- and friend-rated indicators in Model 2 (i.e., "I-Fun 3" and "U-Fun 3" should have the same loading on grade). Model 2 showed an acceptable fit of NNFI = .895, IFI = .920, $\chi2(472)$ = 806.99, which suggests, that the hypothesized factorial structure is well-reflected by the data. Thus, Model 2 represents the best freely estimated model of the structure of the Friendship Interview when simultaneously considering both friends' perspectives as well as the visibility of the perceived friendship factor.

In the next step (Model 3), metric invariance of the measurement space between the 'model-testing'-group and the validation group was tested. To do so, the factor loadings and indicator means in the second group were constrained to be equal to those in the first group. [15] This model did not significantly differ from the previous one, NNFI = .901, $\Delta\chi2(21)$ = 15.72, p = .785, demonstrating that both the psychological processes underlying the responses to the items and the means of the measured variables were indeed equivalent in both groups. More importantly, it also demonstrates that the presumed factorial structure is well validated, both internally and externally (Little, 1996). Because metrical invariance provides the basis for assessing differences across groups and because there was no loss in fit between the freely estimated Model 2 and the metrically invariant Model 3, Model 3 was used as the main point

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[15] The additional loadings on grade were not equated at this point, since they did not represent essential parts of the measurement space, but effects of the model covariate Grade.

of reference for the following nested hypotheses tests. [16] Table 6 in the Appendix shows the factor loadings, the standard errors, and the residual variances of the indicators, as well as the variance explained in each indicator by the latent factor. In addition, Cronbach's alpha is reported for each latent construct.

In the first nested test, Model 4, the groups were tested for equal variances of the latent constructs both across the self-rated and the friend-rated perspective and across the two random groups. [17] When compared to the metrically invariant model, this model did not reveal any significant difference in fit, $\Delta\chi^2(11) = 13.37$, $p = .270$, suggesting that the construct variances were the same across perspectives and groups.

2.1.5.2.2. Testing the effects of gender and grade

In the next two models, I tested the assumption, that the gender and grade effects on the separately rated factors were the same across the self-rated and the friend-rated perspective and that no random fluctuation existed between the two groups regarding the gender or grade effects. Specifically, in Model 5, the effects of gender on friendship perception were tested for invariance. For this purpose, the effects of gender on the latent friendship constructs in the second group were equated to those in the first group. In addition, because the gender effects on the latent friendship constructs could be expected to work in the same way for both the self-rated and the friend-rated perspective, they were also constrained to be equal. When compared to the metrically invariant model, this model was not significantly different, $\Delta\chi^2(11) = 9.27$, $p = .597$. This indicates that no difference existed between the two groups regarding both the size of the gender effects and the invariance across the self-rated and the friend-rated perspectives. Table 4 depicts the effects of gender on all latent friendship constructs as well as the standard errors.

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[16] In several instances, nested tests within a major hypothesis framework will be reported that did not use the metrically invariant model as the comparison base. In every case the reference model will be explicitly stated.

[17] In order to identify the model and to establish a scale of measurement, the latent variances of the self-rated and of the mutually rated factors were fixed to unity in the first random group. Thus, when equating these parameters across perspectives and groups, all variances became one.

Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict	Mutually rated Play	Mutually rated Visits
-.02	.02	-.02	-.02	.02	-.02	-.11	.07
(.04)	(.05)	(.04)	(.04)	(.05)	(.04)	(.06)	(.05)

Table 4. LISREL maximum likelihood estimates of the gender effects on the latent friendship constructs. Positive values favor girls, negative values favor boys. The standard errors of the LISREL estimates are depicted in brackets.

As expected, the gender effects on the subjective aspects of friendship were the same for both the self-rated and the friend-rated perspective. None of the gender effects on the latent friendship factors was significant, though.

In the next model, Model 6, the grade effects were tested for equivalence across perspectives and groups. [18] That is, the grade effects on the latent friendship constructs as well as on the "idea" indicators of Self-rated and Friend-rated Fun in the second group were set equal to those in the first group. Furthermore, since the grade effects on the latent friendship constructs could be expected to work in the same way for both the self-rated and the friend-rated perspective, they were also constrained to be equal. [19] This model, too, did not reveal a significant loss in fit as compared to the metrically invariant model, $\Delta\chi2(23) = 33.19$, p = .078. Again, this indicates no difference between the two groups regarding the size of the grade effects or the invariance across perspectives. Table 5 depicts the effects of grade on all latent friendship constructs as well as the direct grade effects on the idea-indicators of Self-rated and Friend-rated Fun.

[18] The quadratic effects of grade were included in the validation analyes in order to test any fluctuations between the two random groups. For reasons given above, though, only the linear effecs of grade will be reported and discussed.

[19] The direct effects of grade on the "idea" indicators of Self-rated and Friend-rated Fun had already been equated in the freely estimated model.

Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict	Mutually rated Play	Mutually rated Visits
.00	.43***	.16**	.00	.43***	.16**	-.39***	.52***
(.04)	(.07)	(.04)	(.04)	(.07)	(.04)	(.07)	(.06)

	Self-rated Ideas			Friend-rated Ideas			
	-.26 ***			-.26***			
	(.04)			(.04)			

Table 5. LISREL maximum likelihood estimates of the grade effects on the latent friendship constructs and the direct effects of grade on the ideas-aspect of Self-rated and Friend-rated Fun. The standard errors of the LISREL estimates are depicted in brackets. **p<= .01. *** p<= .001.

As can be seen, there was an effect of children's grade level (i.e., their developmental level) on every latent friendship aspect but the closeness of friendship. Also, as with the effects of gender, all effects of grade on the subjective aspects of friendship were the same for both the self-rated and the friend-rated perspective. Specifically, with increasing age the children reported to have more fun in their friendships, β = .43, p<=.001. A somewhat different picture emerged for a specific attribute of fun, namely the children's ability to develop new and exciting ideas with their friends. Because the actual grade effect on this specific aspect is the combined construct effect (β = .43) and direct effect (β = -.26), this aspect showed only a slight increase with the children's grade level, β = .17. Furthermore, with increasing grade level, the children perceived more conflicts, β = .16, p<=.01. Also, with age, the friends less frequently played with each other after school, β = -.39, p<=.001, but they more often visited each other at home, β = .52, p<= .001.

2.1.5.2.3. Testing the correlations among the latent friendship constructs

The next model test, Model 7, examined whether the correlations among the subjective aspects of friendship were the same from the self-rated and the friend-rated viewpoint. For this purpose, each correlation between two subjective aspects on the self-rated side (e.g., the correlation between Self-rated Closeness and Self-rated Fun) was constrained to be equal to the correlation between the corresponding friend-rated aspects (the correlation between Friend-rated Closeness and Friend-rated Fun). At this point, no cross-group equality constraints were set, though. This model did not reveal a significant difference in fit, $\Delta\chi2(6) = 8.95$, $p = .176$, suggesting, that the relations among the subjective aspects were concordantly perceived by the friends. In the next step, Model 8, the correlations among the self-rated subjective friendship aspects and the mutually rated objective aspects were equated to the corresponding correlations among the friend-rated and mutually rated aspects. For example, the correlation between Self-rated Closeness and Mutually-rated Visits was equated to the corresponding correlation between Friend-rated Closeness and Mutually-rated Visits. No equality constraints were set across groups at this point. When compared to Model 7, this model did not reveal a significant loss in fit, $\Delta\chi2(12) = 20.14$, $p = .065$, indicating that the corresponding correlations between the separately-rated and the mutually rated aspects were equal. This model therefore served as a basis of comparison for the next model (Model 9), where I additionally constrained all correlations to be equal across groups, thus examining any fluctuations in size or direction of the correlations. No significant difference in fit occured as compared to Model 8, $\Delta\chi2(13) = 11.63$, $p = .558$, suggesting that no random processes were affecting the correlation estimates. In Figure 2a, the correlations among the subjective aspects and among the objective aspects of friendship are depicted. In Table 6, the correlations among subjective and objective aspects are presented. In Figure 2b, the correlations among the corresponding self-rated and friend-rated aspects are shown.
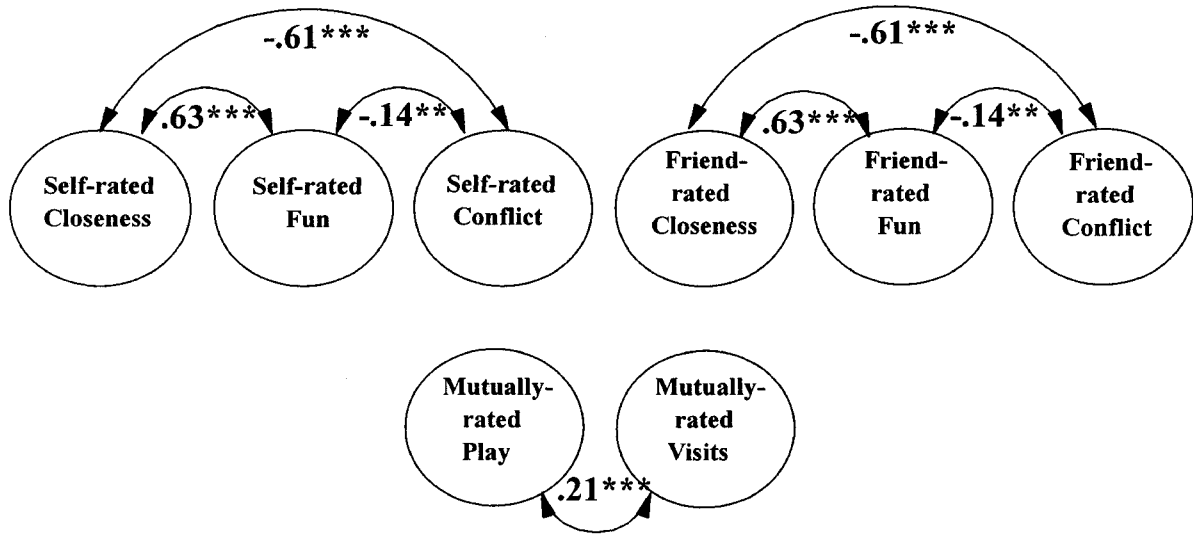
Figure 2a. Correlations among the separately-rated subjective aspects of friendship and among the mutually rated objective aspects of friendship. *** p <= .001; ** p <= .01.

All subjective aspects of friendship were related to each other and these relations were the same from both the children's self-rated perspective and their friends' perspective. Specifically, friendship closeness was highly and positively related with perceived fun, r = .63, SE = .03, p<=.001, but negatively related to conflict in the children's friendships, r = -.61, SE = .03, p<=.001. The more fun the friends had with each other the closer their friendship got, but friendship closeness decreased the more conflicts the friends experienced. Fun and conflict showed only a very moderate negative correlation, r = -.14, SE = .04, p<=.01, indicating that fun with friends decreased as friendship conflicts increased. The mutually rated aspects of friendship were positively, yet moderately correlated with each other. The more frequently friends played with each other after school the more often they also visited each other at home, r = .21, SE = .07, p<= .001.

	Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict
Mutually rated Play	.27*** (.05)	.26*** (.05)	-.05 (.05)	.27*** (.05)	.26*** (.05)	-.05 (.05)
Mutually rated Visits	.23*** (.04)	.36*** (.04)	.11** (.04)	.23*** (.04)	.36*** (.04)	.11** (.04)

Table 6. LISREL maximum likelihood estimates of the correlations among the separately-rated subjective factors and the mutually rated objective factors. The standard errors are depicted in brackets. ** p<= .01; *** p<= .001.

With the exception of conflict, all subjectively perceived aspects of friendship were significantly related to every objectively perceived aspect of friendship. Furthermore, these correlations were the same from the self-rated and the friend-rated perspective. Thus, the friends more frequently played with each other and visited each other's homes, the closer their relationship was, r = .27, p<= .001, and r = .23, p<= .001. Also, the friends more often visited each other and played with each other, the more fun they experienced in their relationship, r = .36, p<= .001, and r = .26, p<= .001. Friends who often visited each other also showed a slight tendency to quarrel more often, r = .11, p<= .05. No relation was observed between the amount of conflict in friendship and the frequency of the friends' after school play encounters, though.
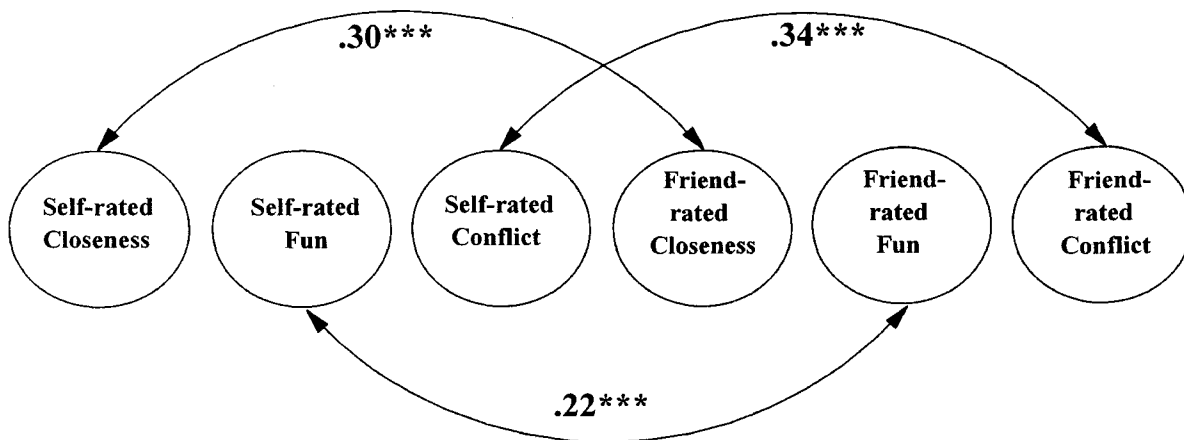
Figure 2b. Correlations among corresponding self-rated and friend-rated aspects. *** p<=.001.

As can be seen, the children's self-rated perspective and their friends' perceptions did not correlate very highly (approximately 5-12 % shared variance!), although both perspectives relate to the same mutually confirmed friendships. All correlations were positive, though. This means, that a high evaluation of friendship quality from one perspective more often was linked with a high than with a low evaluation of friendship quality from the other perspective. Specifically, the correlation was lowest for perceived fun r = .22, SE = .07, p<=.001, a little higher for perceived closeness, r = .30, SE = .05, p<=.001, and highest for perceived conflict, r = .34, SE = .05, p<=.001. [20]

2.1.5.2.4. Testing the equality of the latent mean levels

In the last set of models, the means of the latent constructs were tested for equivalence across perspectives and groups. First, in Model 10, I tested whether the means of the friend-rated constructs could be equated to the means of the corresponding self-rated constructs (i.e., they were fixed to zero in the first group and constrained to be equal in the second group). No cross-group equality constraints were set at this point, yet. No difference in fit occured as compared to Model 3, $\Delta\chi2(6) = 6.91$, p = .329, indicating that, on average, friendship quality was perceived to be the same from the self-rated and the friend-rated perspective. In other words, although there was only a moderate amount of agreement between the self-rated and friend-rated evaluations of the subjective friendship aspects, no general bias in friendship evaluation existed from either perspective in the overall group. In the final test, Model 11, the means of all latent constructs were additionally tested for cross-group equivalence. For this purpose, the latent means in the second group were equated to those in the first group (i.e., all were fixed to zero). When compared to the previous model, no difference in fit was found, Δ $\chi2(5) = 0.99$, p = .963, indicating that no random processes were affecting the latent construct means in the two random groups.

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[20] These correlations were not significantly different from one another, though. Specifically, the equated estimate yielded a common correlation of r = .30, SE = .04, p<=.001, $\Delta\chi2(2) = 2.04$, p = .361 (Model 9a).

2.1.5.3. Summary

In the first part of the analyses, I tested a model of reciprocal friendship perception which simultaneously includes both friends' perspectives, and, at the same time, differentiates between aspects of friendship with differing visibility. The results strongly support the assumption, that, when simultaneously investigating both friends' views on the quality of their friendship, a conceptual distinction can be made between (a) those aspects of friendship that are more objectively perceivable and thus part of a shared social reality (i.e., in this case, Play Encounters and Visits), and (b) other aspects that belong to a more objective, non-shared reality (i.e., in this case, Closeness, Fun, and Conflict). The differences in friends' evaluations of the subjective aspects of their friendship were also supported by the fact, that the corresponding self-rated and friend-rated factors were only moderately correlated. As expected, though, no general bias (i.e., no general over- or underestimation of the subjective friendship aspects) existed on either the self-rated or the friend-rated side in the overall group. In summary, the proposed model of reciprocal friendship perception was strongly supported and can thus serve as a basis for the subsequent analyses. [21] No gender effects on the latent friendship constructs were found, suggesting that no further gender comparisons were necessary. Grade effects were found for every aspect of friendship except for Closeness, though.

2.2. Developmental trends in reciprocal friendship perception -- A comparison among grade groups

2.2.1. Theoretical considerations and specifications of the general hypotheses concerning the developmental influences on reciprocal friendship perception

In the previous section, the general distinction between subjectively and objectively perceived aspects of friendship has shown to be valid, when simultaneously investigating both friends'

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[21] As mentioned, the possibility of attenuated relations in the factorial model due to the aggregate indices of more than one friend was tested. For this purpose, the validation analyses were repeated on the basis of . only the top nominated and reciprocated friendship rating. As depicted in Tables 7a and 7b in the Appendix, even with the reduced power the results were very similar, both regarding the fit indices and factor loadings, as well as the other results presented above. This indicates that no attenuation of relations occured in the tested factorial model.

views on the quality of their friendship. Based on the pattern obtained above, the major results regarding the structure of reciprocal friendship perception (i.e., basic measurement structure, correlations among the subjective aspects and among the objective aspects, gender and grade effects) can also be expected to hold for subgroups of children with differing grade level. However, a different picture should emerge regarding the degree of agreement between the friends' perceptions of the subjective aspects of friendship (i.e., the correlations between the corresponding self-rated and friend-rated aspects). Here, there should be be a marked influence of the children's level of socio-cognitive development.

As outlined above, children's level of interpersonal understanding (i.e., their ability to correctly understand others' thoughts and the resulting actions) grows with age (Piaget, 1986). Thus, older children should better understand their friends' social signals than younger children, especially when these signals refer to intrapsychic processes that are not very obvious. As a consequence, I stated in the General Hypothesis 2 that older children's perceptions of the subjective aspects of friendship should show higher positive correlations with their friends' perceptions than younger children's perceptions. Following from these considerations, and using the specific model of reciprocal friendship perception tested above, the subsequent specifications of the general hypothesis concerning the developmental influences can be made.

Specification of the General Hypothesis 2:

Compared to older children, younger children should show a lower degree of agreement with their friends' perceptions of Closeness, Fun, and Conflict in Friendship. Because both the target children and their friends belong to the same grade level, I expect no difference between the target children's average evaluation of the subjective friendship aspects and their friends' average evaluation.

2.2.2. Description of model tests and results

In Table 8 of the Appendix, I present the various steps of the model testing procedure for comparing the four grade levels with respect to their reciprocal friendship perception. Be-

cause possible developmental trends are represented as differences between the groups, only a dummy-coded variable representing gender was included as a covariate in the following tests.

2.2.2.1. Testing the measurement structure

Just like in Phase 1, I started with the Null-Model (Model 0), which was rejected with χ^2 (1012) = 5532.62. In the next model (Model 1), the cross-validated pattern of factor loadings for the indicators was tested in a freely estimated model (which included the previously obtained additional loadings on Grade). This model showed a fit of NNFI=.890, $\chi^2(836)=1246.29$. [22] In the next step (Model 2), metric invariance of the measurement space in the four grade groups was tested. The fit for this model, NNFI = .865, $\Delta\chi^2(45) = 165.75$, significantly differed from the freely estimated model, p = .000. However, the difference in relative fit was negligible (i.e., <.05), suggesting that the psychological processes underlying the responses to the items are substantively equivalent across grade levels. Therefore, Model 2 was used as the comparison base for the following nested hypotheses tests. [23]

As in the validation procedure, the first nested test in Model 3 referred to the equality of the variances of the latent constructs across the self-rated and the friend-rated perspective and across the four grade levels. This model revealed a significant loss in fit, $\Delta\chi^2(27) = 52.32$, p = .002, suggesting that one or more of the construct variances differed. Two of the 36 latent variances were freely estimated to achieve a model fit that did not significantly differ from the metrically invariant model, $\Delta\chi^2(25) = 37.48$, p = .052 (Model 4). Specifically, as is depicted in Table 9 in the Appendix, the variance of Mutually-rated Play was lower in grades 2 and 5 than in the other grade groups, and the variance of Mutually-rated Visits was lower in grade 5 than in the other grade groups. [24]

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[22] The model fit was deemed acceptable, because (a) the NNFI was close to .9 and the IFI was above .9, (b) the proposed factorial structure has been found to be tenable in the previous validation analyses on the same sample, and (c) no alterations to the measurement model were suggested by the data.

[23] In several instances, nested tests within a major hypothesis framework will be reported that did not use the metrically invariant model as the comparison base. In every case the reference model will be explicitly stated.

[24] For the interpretation of possible differences among the groups with respect to some of these constructs, the differences in variance may be of importance, but equality of variances is not an assumption of MACS model comparisons. However, the low variance of Play in second and fifth grade may be explained by the fact, that 93% of the second graders and only 2% of the fifth graders attended after-school day-care institutions, which

2.2.2.2. Testing the effects of gender

In the next models, the effects of gender on the latent friendship constructs were tested for invariance across perspectives and grade levels. Specifically, these models examined the possible gender x grade interactions. (Note, that in Table 4 I showed that no significant overall gender effects existed.) First, in Model 5, the effects of gender on the self-rated subjective aspects of friendship were constrained to be equal to the gender effects on the corresponding friend-rated aspects. No cross-group equality constraints were set at this point, though. As in the validation procedure, this model was not significantly different from the metrically invariant model, $\Delta\chi2(12) = 3.45$, $p = .991$, indicating that at all grade levels the gender effects were invariant across perspectives. Therefore, this model was used as a basis of comparison for the following Model 6, which additionally tested the equivalence of the gender effects on friendship perception across grade levels. This model led to a significant drop in fit, $\Delta\chi2(15) = 28.25$, $p = .020$, though. A non-significant difference in fit was obtained by freely estimating one parameter, $\Delta\chi2(14) = 16.63$, $p = .276$, (Model 7). Table 7 presents the effects of gender on all latent friendship constructs as well as the corresponding standard errors.

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usually were attached to the school. Probably because day-care attendance decreased with the children's age, the variance in Play was higher for the other grade groups. In contrast, because in fifth grade only 2% of the children attended day-care, probably more friends visited each other at home, if they wanted to see each other.

	Grade 2		Grade 3		Grade 4		Grade 5	
Self-rated Closeness	-.03	(0.04)	-.03	(0.04)	-.03	(0.04)	-.03	(0.04)
Self-rated Fun	.04	(0.04)	.04	(0.04)	.04	(0.04)	.04	(0.04)
Self-rated Conflict	.00	(0.04)	.00	(0.04)	.00	(0.04)	.00	(0.04)
Friend-rated Closeness	-.03	(0.04)	-.03	(0.04)	-.03	(0.04)	-.03	(0.04)
Friend-rated Fun	.04	(0.04)	.04	(0.04)	.04	(0.04)	.04	(0.04)
Friend-rated Conflict	.00	(0.04)	.00	(0.04)	.00	(0.04)	.00	(0.04)
Mutually-rated Play	-.18*	(0.08)	-.18*	(0.08)	-.18*	(0.08)	-.18*	(0.08)
Mutually-rated Visits	.03	(0.05)	.35***	(0.09)	.03	(0.05)	.03	(0.05)

Table 7. LISREL maximum likelihood estimates of the gender effects on the latent friendship constructs, separately shown for grades 2 through 5. The standard errors are depicted in brackets. Positive values favor girls, negative values favor boys. * p<= .05; *** p<= .001.

As was the case in the validation analyses with the overall sample, all gender effects on the subjective aspects of friendship were the same for both the self-rated and the friend-rated perspective. As can be seen, no significant effect of gender occured for any of the subjective aspects of friendship. With respect to the mutually perceived aspects, boys claimed to more often play with their friends after school than girls in each grade level, β = -.18, p <= .05. In contrast, girls more often visited their friends at home than boys, but this effect only occured in grade 3, β = .35, p <= .001. Overall, the occuring gender effects represent rather weak or inconsistent differences between boys' and girls' friendships, though.

2.2.2.3. Testing the correlations among the latent friendship constructs

In the next set of models, I tested the invariance of the correlational pattern among the latent friendship constructs both across perspectives and grade levels. In Model 8, I first examined whether the correlations among the subjective aspects of friendship were the same from the

self-rated and the friend-rated viewpoint. No equality constraints were set across grade levels, yet. This model showed no loss in fit, $\Delta\chi2(12) = 16.79$, $p = .158$. In the following test (Model 9), in addition to the previous constraints, the corresponding correlations among the subjective and the mutually rated aspects were equated across perspectives. Still, no equality constraints were set across grade levels. Again, no difference in fit emerged, $\Delta\chi2(24) = 25.75$, $p = .366$. Thus, in Model 10 the correlations among the subjective aspects and among the subjective and the mutually rated aspects were not only equated across perspectives but also across grade levels. In addition, the correlation between Play and Visits was also equated across groups. When compared to the previous model, this test led to a significant loss in fit, $\Delta\chi2(30) = 62.70$, $p = .000$, suggesting that one or more of these relations varied with grade level. In the next model (Model 11), three parameters were freed, namely, the estimates for the correlation between Play and Visits in grades 4 and 5 and among Closeness and Play in Grade 5. Now, no significant difference in fit was found as compared to Model 9, $\Delta\chi2(27) = 39.00$, $p = .063$.

Model 11 was the comparison base for the next model test, which investigated the equality of the three correlations among the corresponding self-rated and friend-rated aspects of friendship across grade levels. For this purpose, in Model 12 I additionally constrained each correlation between a specific self-rated aspect and the corresponding friend-rated aspect to be invariant across grade levels. This model revealed a significant drop in fit, $\Delta\chi2(9) = 20.83$, $p = .013$, suggesting that one or more of the correlations between the self-rated and the friend-rated perception of the subjective aspects of friendship varied with grade level. All three correlations were freed in grade 2 in order to avoid a significant loss in fit. Thus, in Model 13, the three correlations were only equated in grade levels 3 through 5, while being freely estimated in grade 2. This model did not differ from Model 11, $\Delta\chi2(6) = 11.71$, $p = .069$, and was therefore used as the comparison base for the next model test. Here, in Model 14, I examined whether the three correlations among the corresponding self-rated and friend-rated aspects of friendship were zero in grade 2. No difference in fit occured as compared to Model 13, $\Delta\chi2(3) = 5.44$, $p = .142$. Thus, Model 14 reflects the most parsimonious representation of the relevant correlations among the latent friendship constructs in the four grade groups. Figure 3a presents the correlations among the subjective aspects and among the objective aspects

of friendship. In Table 8, the correlations among the separately-rated aspects and the mutually rated aspects are depicted. In Figure 3b, the correlations among the corresponding self-rated and friend-rated aspects are shown.
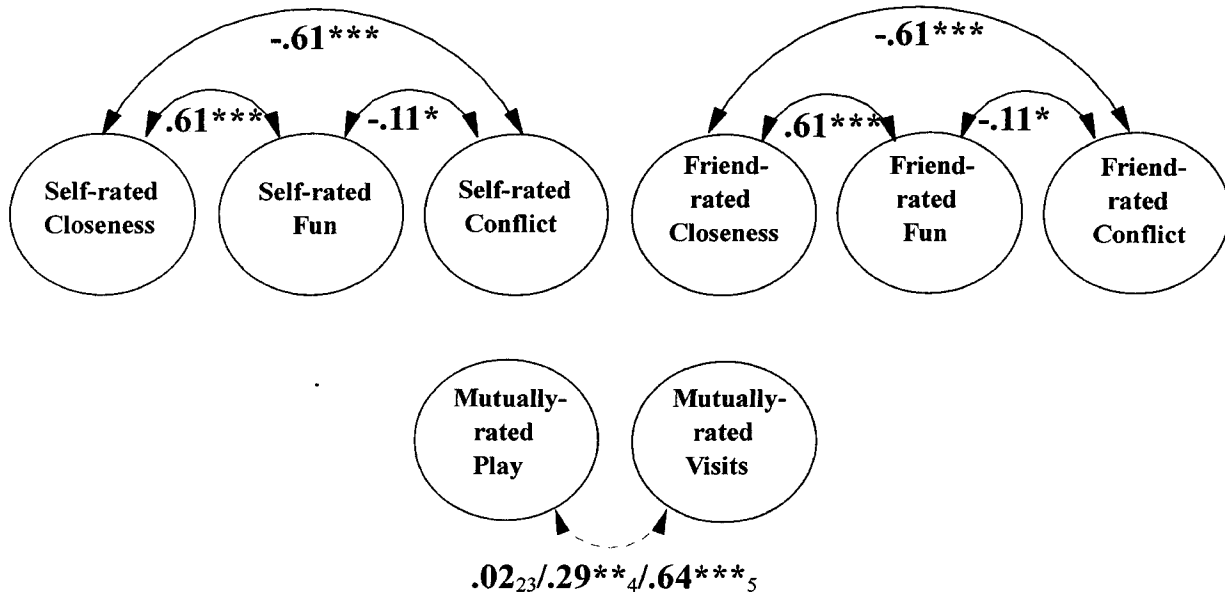
Figure 3a. Correlations among the separately-rated aspects of friendship and among the mutually rated aspects of friendship. Solid lines indicate equal relations in all grade groups, dashed line indicates different relations in grade groups.*** p<=.001, ** p<=.01, * p<=.05. 2 = grade 2; 3 = grade 3; 4 = grade 4; 5 = grade 5.

As was the case in the overall model, all subjective aspects of friendship were related to each other and these relations were the same from both the children's self-rated perspective and their friends' perspective. Moreover, these relations were invariant across age-cohorts. Specifically, friendship closeness was highly and positively related with perceived fun, $r = .61$, SE = .03, p<=.001, but negatively related with conflict in the children's friendships, $r = -.61$, Se = .03, p<=.001. The more fun the friends had with each other the greater was their perceived friendship closeness, but friendship closeness decreased the more conflicts the friends experienced. The negative correlation between fun and conflict was very weak, however, $r = -.11$, SE = .04, p<=.05; that is, fun with friends had a slight tendency to decrease as friendship conflicts increased. In contrast to the correlations among the subjective aspects of friendship, there was a grade-related difference in the correlations among the mutually rated aspects of friendship. While in grades 2 and 3, the frequency of after-school play encounters was not

related to the frequency of the friends' mutual visits at home, there was a positive relation in grades 4 and 5 which increased with grade level. Specifically, the more frequently friends played with each other after school the more often they also visited each other at home, r = .29, SE = .11, p<= .01, in grade 4, and r = .64, SE = .13, p<= .001, in grade 5.

	Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict
Mutually rated Play	.20***234/ .43***5 (.05/.07)	.28*** (.05)	-.04 (.05)	.20***234/ .43***5 (.05/.07)	.28*** (.05)	-.04 (.05)
Mutually rated Visits	.23*** (.04)	.37*** (.04)	.12** (.04)	.23*** (.04)	.37*** (.04)	.12** (.04)

Table 8. LISREL maximum likelihood estimates of the correlations among the subjective and objective factors. 2 = grade 2; 3 = grade3; 4 = grade4; 5 = grade 5. The standard errors are depicted in brackets. ** p<= .01; *** p<= .001.

The correlations among the subjectively rated and the mutually rated friendship aspects are in consistence with those obtained for the overall sample (Table 6). Also, these correlations were the same from the self-rated and the friend-rated perspective. Moreover, with the exception of one estimate, the correlations did not vary with grade level. Specifically, the closer their friendship was, the more frequently did the friends play with each other, but this relation was stronger in grade 5, r = .43, p<=.001, than in the lower grade groups, r = .20, p<=.001. Equally across grade levels, with increasing friendship closeness the friends also visited each other's homes more often, r = .23, p<= .001. Furthermore, the friends more often visited each other and played with each other, the more fun they had together, r = .37, p<= .001, and r = .28, p<= .001. Frequent visits also slightly increased the conflicts among friends, r = .12, p<= .01. No relation emerged between the amount of conflict in friendship and the frequency of the friends after school play encounters.
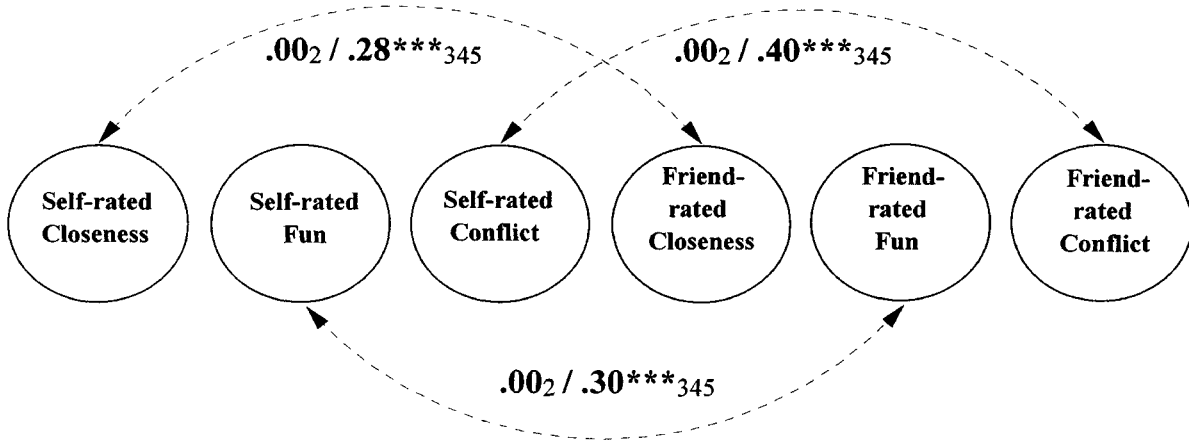
Figure 3b. Correlations among corresponding self-rated and friend-rated aspects. Dashed lines indicate different relations in grade groups.*** p<=.001. 2 = grade 2; 3 = grade 3; 4 = grade 4; 5 = grade 5.

Like in the overall sample, the children's self-rated perspective and their friends' perceptions did not correlate very highly. Moreover, these correlations varied with children's grade level. In grades 3 through 5, the self-rated and the friend-rated perceptions of the subjective friendship aspects showed moderately positive and significant correlations. Specifically, the correlation for perceived friendship closeness was r = .28, SE = .05, p<=.001, for perceived fun it was r = .30, SE = .08, p<=.001, and for perceived conflict r = .40, SE = .06, p<=.001. These correlations suggest, that in grades 3 through 5 a high evaluation of friendship quality from one perspective was usually linked with a high evaluation of friendship quality from the other perspective. In grade 2, however, a different picture emerged. Here, the correlations between the self-rated and the friend-rated perceptions of the subjective friendship aspects were essentially zero. This indicates, that for the younger children, the evaluation of friendship quality from one perspective was not related to the evaluation of friendship quality from the other perspective.

2.2.2.4. Testing the equality of the latent mean levels

In the next set of nested model tests, the means of the latent constructs were tested for equivalence across perspectives and grade levels. First, in Model 15, the latent means of the self-rated aspects of friendship were equated to the means of the corresponding friend-rated constructs. [25] No cross-group equality constraints were set at this point. This model was not different from the metrically invariant model, $\Delta\chi2(12) = 4.81$, $p = .964$, indicating that, on average, and for all grade groups, friendship quality was perceived to be the same from both the self-rated and the friend-rated perspective. Thus, in Model 16, I additionally constrained the means of all latent friendship constructs in grades 3 through 5 to be equal to the mean parameters in grade 2 (i.e., they were all fixed to zero). When compared to the previous one, this model revealed a significant loss in fit, $\Delta\chi2(15) = 180.04$, $p = .000$, suggesting that one or more of the latent means differed across grade levels. Nine mean parameters had to be successively freed to achieve a non-significant difference in fit as compared to Model 15, $\Delta\chi2(6)$ = 6.18, $p = .403$, (Model 17). Table 9 presents the LISREL estimates of the latent mean levels as well as the corresponding standard errors. These estimates are consistent with the regression estimates of the grade effects presented in Table 5.

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[25] In grade 2, which served as the comparison group, the means of the friend-rated constructs were equated to the corresponding self-rated constructs by fixing them to zero.

	Grade 2	Grade 3	Grade 4	Grade 5
Self-rated Closeness	0.00	0.25 (0.06)	0.25 (0.06)	0.00
Self-rated Fun	0.00	0.23 (0.12)	0.46 (0.10)	0.46 (0.10)
Self-rated Conflict	0.00	0.00	0.00	0.45 (0.09)
Friend-rated Closeness	0.00	0.25 (0.06)	0.25 (0.06)	0.00
Friend-rated Fun	0.00	0.23 (0.12)	0.46 (0.10)	0.46 (0.10)
Friend-rated Conflict	0.00	0.00	0.00	0.45 (0.09)
Mutually-rated Play	0.00	0.00	- 0.69 (0.22)	- 1.16 (0.27)
Mutually-rated Visits	0.00	0.28 (0.13)	0.86 (0.16)	1.15 (0.16)

Table 9. LISREL maximum likelihood mean level estimates of the latent friendship constructs, separately shown for grades 2 through 5. The standard errors are depicted in brackets. In grade 2, the mean levels are zero as a point of reference. Thus, mean level values do not indicate raw mean values, but only relative differences across groups.

In every aspect of friendship perception, the mean levels showed either a linear or non-linear developmental trend. Also, for the subjective aspects of friendship, these developmental trends in friendship perception were the same for both the self-rated and the friend-rated perspective, indicating that no specific over- or underestimation of friendship quality occurred on either side. The only explicitly curvilinear trend emerged for perceived friendship closeness, which showed a slight rise in grades 3 and 4 and dropped again in grade 5 to the mean level obtained in the second grade. However, although these mean levels could not be equated without a significant loss in model fit, the relative differences are quite small. A general linear increase with grade level can be seen with the children's average perception of fun within their friendships. Specifically, Self-rated and Friend-rated Fun showed an increase from grade 2 to grade 4 and stayed at an even value in the fifth grade. In contrast, the amount of conflict perceived in friendship did not show any variability from second to fourth grade, yet exhibited a sharp increase in grade 5. Regarding the frequency of mutual after-school play encounters, no difference emerged between second and third grade, while a clear decrease occured from

the fourth grade on. A similarly large, yet positive linear developmental trend was observed for the frequency of the friends' mutual visits at home, starting with third grade.

2.2.3. Summary

In the second part of the analyses, I tested the developmental influences on the general structure of reciprocal friendship perception and, specifically, on the amount of agreement between the friends' perceptions of the subjective aspects of friendship. As expected, the general distinction between subjectively perceived aspects and objectively perceived aspects of friendship was also valid for children of differing grade levels. Furthermore, the general pattern of results obtained for the overall group remained largely consistent for the various grade groups, too. Regarding the correlations among the corresponding self-rated and friend-rated factors, though, a noteworthy -- yet expected -- pattern emerged. Specifically, in grade 2, the children's evaluations of closeness, fun, and conflict in friendship showed no concordance with their friends' evaluations. In contrast, from grades 3 through 5, the degree of agreement between the friends' evaluations reached a stable, yet moderate level. The developmental trends on the various aspects of friendship basically reflected those of the previous analyses. Only one interactive gender effect was found in the grade group comparisons, but, in general, gender did not notably influence friendship perception, so that there was no necessity for a specific gender comparison.

2.3. Effects of sociometric status on reciprocal friendship perception -- A comparison among popular, average and rejected children

2.3.1. Theoretical considerations and specifications of the general hypotheses concerning the influences of sociometric status on reciprocal friendship perception

In the previous section, the general distinction between subjectively and objectively perceived aspects of friendship also held for children of differing ages. These results suggest that, with regard to the more objectively perceived aspects of friendship, interpersonal agreement of

perceptions is influenced by the strong visibility of the perceived aspect, irrespective of the various personal characteristics of the perceiver. Regarding the more subjectively perceived aspects of friendship, though, the degree of interpersonal agreement seems to be clearly influenced by the personal characteristics of the perceiver. In the previous analyses, these characteristics referred to the children's grade level, which can be viewed as a proxy of their level of socio-cognitive development. Obviously, children who are more mature in their socio-cognitive development, exhibit a greater concordance with their friends' evaluations of the subjectively perceived aspects of their friendship than less mature children. Consequently, the degree of agreement between friends' evaluations on the quality of their friendship reflects the level of interpersonal understanding reached by the partners involved, and thus is another indicator of relationship quality.

Like younger children, rejected children also have been found to have difficulties in interpersonal understanding, and they generally display a lack of age-appropriate socio-cognitive skills. Hence, as I outlined in the General Hypothesis 3, they can also be expected to show a greater lack of concordance with their friends' evaluations of the subjective aspects of their friendship than their non-rejected peers. With regard to the specific model of reciprocal friendship perception used in this study, this assumption can be translated into the following specifications of the general hypotheses concerning the influences of sociometric status.

Specification of the General Hypothesis 3:
As compared to average and popular children, rejected children should show a lower degree of agreement with their friends' perceptions of Closeness, Fun, and Conflict in Friendship.

As outlined above, social perception is not only influenced by the perceiver's socio-cognitive skills, but also by other characteristics like his or her motivations and stereotyped beliefs. Thus, on the one hand, rejected children may perceive their friendships in an especially favorable light. On the other hand, rejected children are likely to be perceived in a more negative way, due to their sociometric status. It is therefore assumed that, as compared to their friends, rejected children generally 'overestimate' the quality of the subjective aspects of their friendships. Therefore, referring to the specific model of reciprocal friendship perception used here, the following specification of the General Hypothesis 3a can be made.

Specification of the General Hypothesis 3a:

As compared to their friends' ratings, rejected children should give higher ratings of Close-ness and Fun, and lower ratings of Conflict.

2.3.2. Description of model tests and results

In Table 10 of the Appendix, I present the various steps of the model testing procedure for comparing popular, average, and rejected children with respect to their reciprocal friendship perception. As had been done in Phases 1 and 2, the effects of gender as well as the linear and quadratic effects of grade level were controlled for in the following analyses.

2.3.2.1. Testing the measurement structure

Again, I started with the Null-Model (Model 0), which was rejected with χ^2 (900) = 4054.26. In the freely estimated model (Model 1), I tested the same pattern of factor loadings for the indicators, that had been supported by the previous analyses. This model showed a fit of NNFI =.856, $\chi^2(708)=1065.60$. This model was accepted, because (a) the Incremental Fit Index of .893 was approaching the .900-level, (b) the Root Mean Square Error of Approxima-tion, RMSEA = .037, was well below the .05-level, (c) the proposed factorial structure has been found to be tenable in the previous analyses on the same sample, and (d) no alterations to the measurement model were suggested by the data. Furthermore, the relative contribution to the χ^2-value provided by the three groups was approximately equal (36 % for the average group, 32 % for the popular group, and 32 % for the rejected group). This suggests, that no misfit of the proposed factorial structure existed in a specific group.

In the next step (Model 2), metric invariance of the measurement space in the three sociomet-ric groups was tested. The fit of this model, NNFI = .856, $\Delta\chi^2(30)$ = 44.28, significantly dif-fered from the freely estimated model, p = .045, but no difference in practical fit emerged. Therefore, the metrically invariant model was used as the comparison base for the following

nested hypotheses tests. [26] As in the previous analyses, the first nested test in Model 3 referred to the equality of the variances of the latent constructs both across perspectives and across the three sociometric groups. When compared to the metrically invariant model, this model revealed a significant difference in fit, $\Delta\chi2(19) = 36.08$, $p = .010$; however, only 2 of the 24 latent variances had to be freed to achieve a model fit that did not differ from the metrically invariant model, $\Delta\chi2(17) = 24.21$, $p = .114$ (Model 4). Specifically, as depicted in Table 11 of the Appendix, the latent variances of Self-rated and Friend-rated Closeness and of Self-rated and Friend-rated Fun were slightly lower in the popular group than in the other two groups. [27]

2.3.2.2. Testing the effects of gender

In the next two models, the effects of gender on the latent friendship constructs were tested for invariance across perspectives and across sociometric status. Specifically, these models examined the possible gender x peer status interactions. First, in Model 5, the effects of gender on the self-rated aspects of friendship were constrained to be equal to the gender effects on the corresponding friend-rated aspects. As in the previous analyses, no cross-group equality constraints were set at this point. As expected, this model was not significantly different from the metrically invariant model, $\Delta\chi2(9) = 9.06$, $p = .432$. In the following Model 6, I additionally tested the equivalence of the gender effects on friendship perception in all three sociometric groups. Again, this model did not show a significant difference in fit as compared to the previous model, $\Delta\chi2(10) = 12.40$, $p = .259$. Table 10 presents the effects of gender on all latent friendship constructs as well as the corresponding standard errors.

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[26] In several instances, nested tests within a major hypothesis framework will be reported that did not use the metrically invariant model as the comparison base. In every case the reference model will be explicitly stated.

[27] Thus, for the interpretation of possible differences among the groups with respect to these aspects of friendship, the differences in variance may have substantive importance, but equality of variances is not an assumption of MACS model comparisons.

Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict	Mutually rated Play	Mutually rated Visits
0.02	0.05	- 0.04	0.02	0.05	- 0.04	- 0.12	0.01
(0.04)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.07)	(0.06)

Table 10. LISREL maximum likelihood estimates of the gender effects on the latent friendship constructs; all equal for popular, average, and rejected children. The standard errors are depicted in brackets.

As was the case in the previous analyses, all gender effects on the subjective aspects of friendship were the same for both the self-rated and the friend-rated perspective. No gender x peer status interactions were shown. Again, no significant effect of gender occured regarding the perception of any of the friendship aspects.

2.3.2.3.   Testing the effects of grade

In the next step, I tested the invariance of the grade effects on the latent friendship constructs across perspectives and sociometric status. Specifically, these models examined the possible grade x peer status interactions. First, in Model 7, the effects of grade on the self-rated aspects of friendship were constrained to be equal to the grade effects on the corresponding friend-rated aspects. [28] No equality constraints were set across groups, yet. This model was not significantly different from the metrically invariant model, $\Delta\chi2(9) = 4.91$, $p = .842$. In the following Model 8, I additionally tested the equivalence of the grade effects on friendship perception in all three sociometric groups. Again, this model did not show a significant difference in fit as compared to the previous model, $\Delta\chi2(12) = 8.21$, $p = .769$. Table 11 presents the effects of grade on all latent friendship constructs and the direct grade effects on self-rated and friend-rated ideas, as well as the corresponding standard errors. These subgroup estimates of the grade effects largely correspond with those in the overall group presented in Table 5.

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[28] The direct effects of grade on the idea-indicators of Self-rated and Friend-rated Fun had already been equated in the freely estimated model.

Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict	Mutually rated Play	Mutually rated Visits
0.09 (0.04)	0.40*** (0.07)	0.05 (0.05)	0.09 (0.04)	0.40*** (0.07)	0.05 (0.05)	- 0.36*** (0.08)	0.43*** (0.07)

	Self-rated Ideas			Friend-rated Ideas			
	-.28** (.05)			-.28** (.05)			

Table 11. LISREL maximum likelihood estimates of the grade effects on the latent friendship constructs and the direct effects of grade on the idea-indicators of Self-rated and Friend-rated Fun; all equal for popular, average, and rejected children. The standard errors are depicted in brackets. ** $p<= .01$, *** $p<= .001$.

As with the effects of gender, all grade effects on the subjective aspects of friendship were the same for both the self-rated and the friend-rated perspective. No grade x peer status interaction was shown. As in the overall sample, many aspects of friendship were affected by the children's grade level, irrespective of the children's sociometric status. However, of the subjective aspects of friendship, only the amount of fun perceived in friendship varied with grade level, $\beta = .40$, $p <= .001$. Contrary to this, a specific aspect of fun, namely the amount of good and new ideas developed with a friend, only slightly increased with the children's grade level, β (.40-.28) = .12. Neither friendship closeness nor the amount of conflict within the children's friendships were influenced by grade level in any of the three sociometric groups, though. In contrast, the mutually rated aspects of friendship were modified by grade level in each sociometric group. Specifically, the frequency of after-school play encounters decreased with grade level, $\beta = -.36$, $p <= .001$, while the frequency of mutual visits at home increased, $\beta = .43$, $p <= .001$.

2.3.3.4. Testing the correlations among the latent friendship constructs

In the next set of models, the correlational pattern among the latent friendship constructs was tested for invariance both across perspectives and sociometric status. First, in Model 9, I examined whether the correlations among the subjective aspects of friendship were the same from the self-rated and the friend-rated viewpoint. No equality constraints were set across groups, though. This model showed no significant difference in fit, $\Delta\chi2(9) = 10.00$, p = .351. In the next step, Model 10, I additionally equated the correlations among the subjectively rated and the mutually rated friendship aspects across perspectives. Again, no equality constraints were set across groups, yet. When comparing this model to the previous one, no significant difference in fit emerged, $\Delta\chi2(18) = 24.01$, p = .155. Thus, in Model 11, the previously constrained correlations, as well as the correlation among Visits and Play, were equated across the three sociometric groups. Again, this test did not reveal a significant difference in fit, $\Delta\chi2(20) = 11.84$, p = .922.

While keeping the constraints made in Model 11, in Model 12, I investigated the equality of the three correlations among the corresponding self-rated and friend-rated aspects of friendship across sociometric status. This model revealed a significant drop in fit, $\Delta\chi2(6) = 22.85$, p = .001, suggesting that one or more of the correlations between the self-rated and the friend-rated perception of the subjective aspects of friendship varied with peer status. As is shown in Model 13, the correlations between Self-rated and Friend-rated Closeness and between Self-rated and Friend-rated Fun could only be equated in the popular and average group. For the rejected group, these correlations had to be freely estimated in order to avoid a significant loss in fit, $\Delta\chi2(4) = 8.20$, p = .085 (Model 13). However, the LISREL estimates of these parameters in Model 13 suggested that these two correlations were of similar size as in the average and popular groups, only in the negative direction. Therefore, the corresponding constraints were made in Model 14. This model was not significantly different from Model 13, $\Delta\chi2(2) = 0.34$, p = .844. [29] In Figure 4a, the correlations among the subjective aspects and among the

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[29] A additional model was run to explicitly test, whether the friends' perceptual concordance on the objective aspects was similarly high in all sociometric groups. In this model, only the loadings of the variables constituting the objective factors were equated across groups while all other parameters were specified as in the freely estimated model. No significant loss in fit occured between the freely estimated and this new model, $\Delta\chi2(4) = 1.51$, p = .825, indicating that perceptual concordance regarding the objective aspects of friendship was indeed equally high in the three sociometric groups.

objective aspects of friendship are depicted. In Table 12, the correlations among subjective and objective aspects are presented. In Figure 4b, the correlations among the corresponding self-rated and friend-rated aspects are shown.
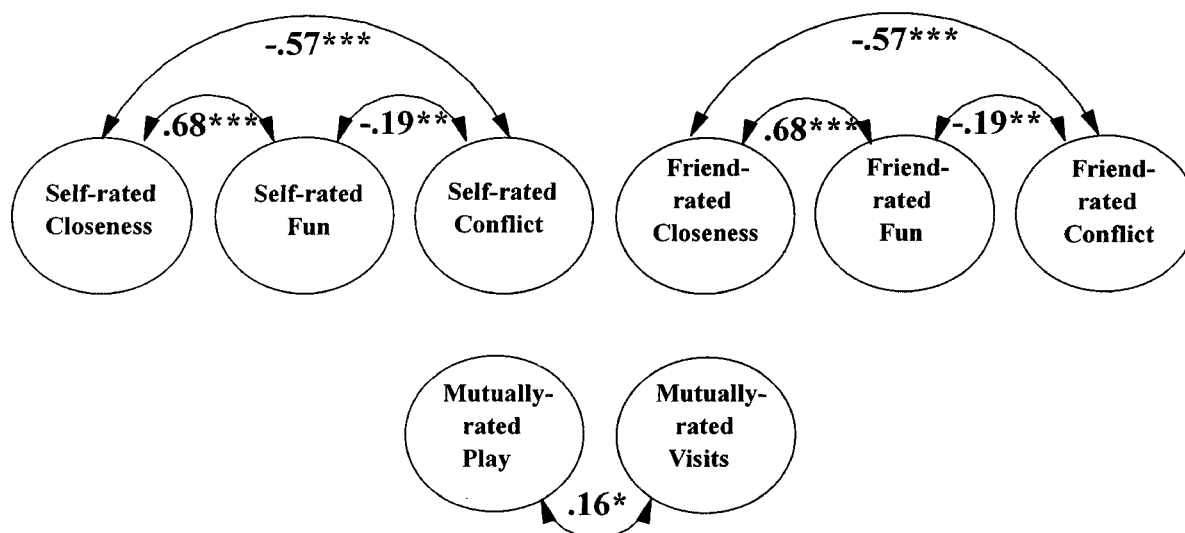
Figure 4a. Correlations among the separately-rated aspects of friendship and among the mutually rated aspects of friendship. All equal for popular, average, and rejected children. *** p<=.001, ** p<=.01, * p<=.05.

As in the previous analyses, all subjective aspects of friendship were related to each other and these relations were the same from both the children's self-rated perspective and their friends' perspective. Moreover, these relations were independent of the children's sociometric status. Also, despite the reduced sample size, these correlations very much resembled those obtained in the overall sample (see Figure 2a). Specifically, friendship closeness was highly and positively related with perceived fun, r = .68, SE = .04, p<=.001, but negatively related with conflict in the children's friendships, r = -.57, SE = .04, p<=.001. The more fun the friends had with each other the closer their friendship got, but friendship closeness decreased the more conflicts the friends experienced. Also, fun with friends decreased as friendship conflicts increased, r = -.19, SE = .05, p<=.01. With respect to the correlation among the mutually rated aspects of friendship, too, no difference between the sociometric groups emerged. Again, this correlation very much resembled that for the overall sample. Specifically, the

more frequently the friends played with each other after school the more often they visited each other at home, r = .16, SE = .08, p <=.05.

	Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict
Mutually rated Play	.34*** (.06)	.36*** (.06)	-.04 (.07)	.34*** (.06)	.36*** (.06)	-.04 (.07)
Mutually rated Visits	.25*** (.05)	.34*** (.05)	.12* (.05)	.25*** (.05)	.34*** (.05)	.12* (.05)

Table 12. LISREL maximum likelihood estimates of the correlations among the subjective and objective factors; all equal for popular, average, and rejected children. The standard errors are depicted in brackets. * p<= .05; *** p<= .001.

As was the case in the validation study for the overall sample and the grade group comparisons, except for Conflict, all subjective aspects of friendship were significantly related to every objective aspect of friendship. These correlations were the same from the self-rated and the friend-rated perspective. Moreover, no differences occured among the sociometric groups in this respect, and thus, the correlations were consistent with those presented in Tables 6 and 8. With growing friendship closeness, the friends more frequently played with each other and visited each other's homes, r = .34, p<= .001, and r = .25, p<= .001. Furthermore, the friends more often visited each other and played with each other, the more fun they experienced in their relationship, r = .34, p<= .001, and r = .36, p<= .001. Friends who often visited each other also showed a slight tendency to quarrel more often, r = .12, p<= .05. The amount of conflict in friendship and the frequency of the friends' after school play encounters were not correlated, though.
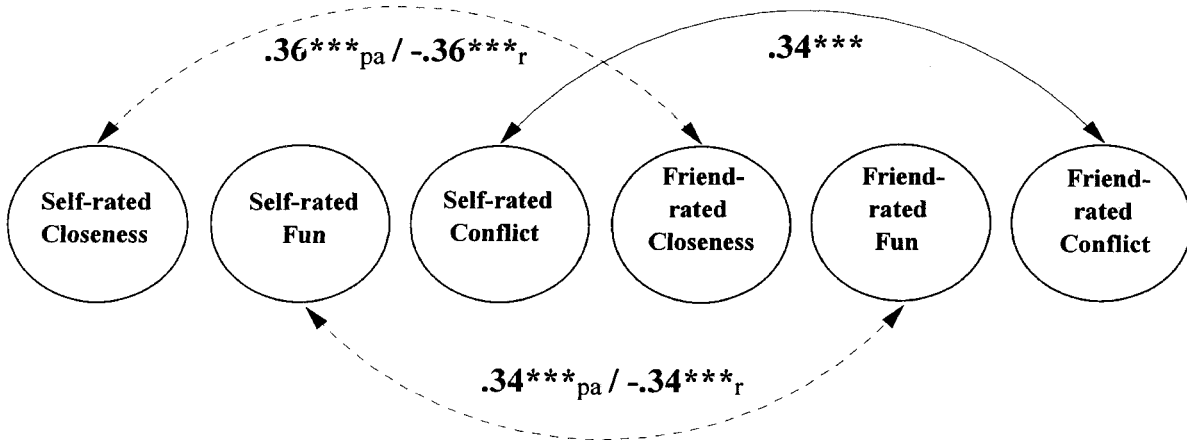
Figure 4b. Correlations among corresponding self-rated and friend-rated aspects. Dashed lines indicate different relations in sociometric groups. *** p<=.001. p = popular children; a = average children; r = rejected children.

As in the previous analyses, the children's self-rated perspective and their friends' perceptions did not correlate highly. Even more importantly, these correlations notably varied for rejected children. While the popular and average children showed a moderate, yet positive correlation between their own and their friends' perceptions of friendship closeness, $r = .36$, $SE = .05$, $p<=.001$, the same relation was negative for the rejected children, $r = -.36$, $SE = .05$, $p<=.001$. Similarly, the correlation between Self-rated and Friend-rated Fun was positive for both popular and average children, $r = .34$, $SE = .07$, $p<=.001$, while it was negative for the rejected group, $r = -.34$, $SE = .07$, $p<=.001$. This finding indicates that for popular and average children a high evaluation of friendship closeness or fun was linked with a high evaluation by their friends; however, the opposite was true for rejected children. With rejected children, a high evaluation of friendship closeness or fun was linked with a low evaluation by their friends. A somewhat different picture emerged for the correlation between Self-rated and Friend-rated Conflict. Here, all sociometric groups showed the same positive relation, $r = .34$, $SE = .06$, $p<=.001$. Thus, irrespective of the children's peer status, the perception of conflict in friendship from one perspective was linked with a similar view from the other perspective. [30]

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[30] In some studies (e.g., Patterson et al, 1990; Dodge et al., 1984; Coie & Dodge, 1988), the unclassified children were combined with the average group. In order to assess, whether the unclassified children behaved like the average group with respect to the degree of accordance in friendship perception, I used regression modeling

2.3.2.5. Testing the equality of the latent mean levels

In the last set of models, the means of the latent constructs were tested for equivalence across perspectives and sociometric status. First, in Model 15, the latent means of the self-rated aspects of friendship were equated to the means of the corresponding friend-rated constructs. [31] This model was significantly different from the metrically invariant model, $\Delta\chi2(9) = 34.40$, p = .000, indicating that at least in one of the sociometric groups, average friendship quality was perceived differently from the self-rated as compared to the friend-rated perspective. Thus, in the next Model 16, I freed up the equality constraints for the rejected group, while keeping them for the average and popular group. However, this model was still significantly different from Model 2, $\Delta\chi2(6) = 22.82$, p = .001. In fact, the cross-perspective equality constraints imposed in Model 15 could only be kept for the average group and for the Fun factor in the popular group in order to avoid a significant loss in fit (Model 17), $\Delta\chi2(4) = 4.00$, p = .406. This suggests, that both rejected and popular children displayed different perceptions of average friendship quality than their friends. In contrast, average-status children did not show any specific bias in friendship perception as compared to their friends.

In the next step, the means of the self-rated friendship constructs in the popular and the rejected group were constrained to be equal to the mean parameters of the self-rated constructs in the average group (i.e., they were all fixed to zero) (Model 18). This model did not differ from Model 17, $\Delta\chi2(6) = 6.11$, p = .411, suggesting that, on average, both popular and average as well as rejected children perceived the quality of their friendships in the same way. However, considering the previously found difference between the self-rated and friend-rated average perceptions of friendship quality in both the popular and the rejected group, this finding has another implication. It additionally proposes, that popular, average and rejected children's friends seemed to have quite different perceptions of the subjective aspects of their relationships. In order to specifically test this assumption, in Model 19, also the latent means of the friend-rated aspects of friendship were constrained to be equal across groups (i.e., all set to the zero value of the average group). As expected, this model showed a significant loss in

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techniques for nested comparisons (Widaman, 1995). As shown in Table 12 of the Appendix, the unclassified children did not significantly differ from the average group.

[31] In the average group, which served as the comparison group, the means of the friend-rated constructs were equated to the corresponding self-rated constructs by fixing them to zero.

fit, $\Delta\chi2(5) = 64.53$, p = .000. All constrained friend-rated mean parameters had to be freely estimated again in order to avoid a significant loss in fit. In other words, as had been already suggested in Model 17, the only friend-rated mean value that could be equated in the sociometric groups was Friend-rated Fun in the average and the popular group. This indicates that, although the three sociometric groups did not differ in their average self-ratings of the subjective friendship aspects, their friends' average ratings notably varied. Thus, in the next step (Model 20), in addition to the constraints of the previously accepted Model 18, the mutually rated aspects (Play and Visits) were also equated across the three sociometric groups. This model was not significantly different from Model 18, $\Delta\chi2(4) = 7.37$, p = .118, indicating that with respect to the frequency of Mutual Play and Mutual Visits, no difference existed among the three sociometric groups. Table 13 presents the LISREL estimates of the latent mean levels as well as the corresponding standard errors for popular, average and rejected children.

	Average	Popular	Rejected
Self-rated Closeness	0.00	0.00	0.00
Self-rated Fun	0.00	0.00	0.00
Self-rated Conflict	0.00	0.00	0.00
Friend-rated Closeness	0.00	0.38 (0.09)	- 0.94 (0.16)
Friend-rated Fun	0.00	0.00	- 0.52 (0.20)
Friend-rated Conflict	0.00	-0.56 (0.10)	0.72 (0.20)
Mutually-rated Play	0.00	0.00	0.00
Mutually-rated Visits	0.00	0.00	0.00

Table 13. LISREL maximum likelihood mean level estimates of the latent friendship constructs, separately shown for average, popular, and rejected children. Standard errors are depicted in brackets. In the average group, the mean levels have been fixed to zero as a point of reference. Thus, mean levels do not indicate raw mean values, but only relative differences across groups.

With respect to the average self-rated aspects of friendship, rejected children did not differ from either average or popular children. That is, rejected children, on average, perceived their friendships to comprise just as much closeness, fun, and conflicts as did average and popular children. However, the friend-rated perceptions of rejected, average, and popular children showed a significant variability with the children's peer status. Specifically, when compared to average children's friends, popular children's friends believed their friendships had more closeness and less conflicts. In contrast, rejected children's friends perceived their friendships to be less close, less fun, and more quarrelsome. [32] With respect to the mutually rated aspects of friendship, no difference was found in the mean ratings of the three sociometric groups.

2.3.3. Summary

In the third part of the analyses, I tested the influence of sociometric status on the general structure of reciprocal friendship perception. Similar to the previous subgroup comparisons, the general distinction between subjectively perceived aspects and objectively perceived aspects of friendship was also valid for children of differing sociometric status. Again, there was a considerable difference between the friends' evaluations of the subjective aspects of their friendship. As predicted, rejected children's perceptions of friendship quality showed less concordance with their friends' perceptions than did average or popular children's perceptions, at least with respect to the evaluation of Closeness and Fun. This lack of concordance was so large for the rejected children, that it emerged as negative correlations. Average and rejected children did not differ from each other with regard to the moderately positive correlation between their own and their friends' evaluations. In every aspect, the three sociometric groups evaluated the average quality of their friendships in the same way. However, as compared to their friends' evaluations, rejected children showed a general tendency to overestimate the quality of their friendships in every subjective aspect, while popular children tended to underestimate it in two of the three subjective aspects. No difference was found among the three sociometric groups with respect to the mean evaluations of the mutually rated

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[32] I conducted additional analyis of variance tests and a posteriori univariate mean comparisons (see Table 13 of the Appendix) to assess, whether the unclassified children behaved like the average group with respect to the means of the separately rated constructs. With the exception of Self-rated Conflict, no difference was found between the two groups.

aspects of friendship. Apart from that, the general pattern of results (i.e, correlations among the subjective and the objective aspects, gender and grade effects) was the same in the three sociometric groups and very much resembled the findings previously achieved for the overall group and the various grade groups.

3.   GENERAL SUMMARY, DISCUSSION, AND CONCLUSION

3.1.   General summary and discussion

Especially in middle childhood, satisfying peer contact is a fundamental factor for children's development. Conversely, children who are rejected by their peers are at risk for maladjustment in later life (Asher & Coie, 1990). Yet, the question remains, whether rejected children's problems in group acceptance are also mirrored by problems in their dyadic friendships. Although they are disliked by the majority of their peer group, these children may nevertheless maintain a close dyadic friendship the same way as accepted children do. Because of the enormous compensatory benefits that a close dyadic friendship may have for rejected children (Sullivan, 1980), studying this question seemed to be of specific importance.

So far, only very few studies have investigated the relation between elementary-school children's peer acceptance and the perceived quality of their dyadic friendships. Unfortunately, though, these studies contain methodological limitations which impede any valid conclusions on the quality of rejected children's friendships. Moreover, the results obtained in these studies are rather contradictory. Thus, McGuire and Weisz (1982) found only a very weak positive correlation between a global measure of friendship closeness and children's popularity. A much stronger relation was found by Parker and Asher (1993). They reported, that low-accepted children's mutual best friendships were inferior to better-accepted children's friendships in almost every measured qualitative aspect. In contrast, Patterson et al. (1990) found that rejected children's impressions of the quality of their best friendship were not different from those of accepted children in any aspect.

The variability of results obtained in these studies may, at least in part, be due to methodological reasons. Thus, in the McGuire and Weisz study (1982), the sociometric measurement was based on positive friendship nominations only, so that rejected children could not be accurately isolated from neglected children. Furthermore, friendship nominations were not checked for reciprocity, and friendship quality was only assessed by means of a global score

which does not allow any differentiation among various aspects of friendship. Although Parker and Asher (1993) used a very thorough and multifarious assessment of friendship quality and checked for reciprocity of friendship nomination, they also did not distinguish between rejected and neglected children. In contrast, Patterson et al. (1990) clearly differentiated between neglected and rejected children, but they did not check the friendship nominations for reciprocity. In summary, then, it was still unclear, whether there was a relation between peer rejection and friendship quality, and what this relation was like. Therefore, the present study was aimed at contributing to the solution of this question.

As a part of trying to assess the above question, the present study has also been aimed at assessing a specific aspect of friendship quality, namely the amount of agreement between the friends' perceptions of the quality of their friendship. As has been emphasized by peer researchers (e.g. Bukowski & Hoza, 1989; Parker & Asher, 1993), a shared social reality reflects a shared understanding of the meaning of each other's behavior as an expression of each other's emotions. In contrast, a great lack of concordance in the friends' perceptions of their relationship indicates poor understanding of each other's behavior (Parker & Asher, 1993). Moreover, when based on just one perspective, this lack of correspondence could confound conclusions about friendship quality. Despite these theoretical coniderations, though, the examination of reciprocity was mostly restricted to mutual friendship nomination and did not include the question whether the friends also perceive the quality of their relationship concordantly. However, the few existing studies (Buhrmester, 1990; Parker & Asher, 1993) indicate that the friends' perceptions of the quality of their relationship may not necessarily correspond. Unfortunately, no approach has yet been undertaken in order to sytematically examine the factors associated with perceptual concordance, or the lack thereof, on the various aspects of friendship quality. Therefore, as one goal in the present study, I tried to assess whether there is a relation between peer rejection and the degree of perceptual agreement on friendship quality, and what this relation is like.

3.1.1. Reciprocal friendship perception

Examining the degree to which friends agree in their perceptions of the different aspects of their friendship raises the question of how easily and objectively different qualities of friendship can be perceived among friends. Social perception is influenced by various personal characteristics of the persons involved (e.g., the perceivers' social skills, motivations, or prior experiences). Therefore, as was demonstrated by Funder and Dobroth (1987), interpersonal concordance between perceptions is more likely when an aspect is more easily visible. As they could show, some aspects are more objectively perceivable and therefore facilitate agreement of perceptions, while others refer to a more subjective reality.

Based on Funder and Dobroth's findings, I proposed a model of friendship perception, that (a) simultaneously includes both friends' views, and (b) differentiates between more objectively and more subjectively perceived aspects of friendship. Specifically, in the General Hypothesis 1, I suggested that, " Regarding the qualitative characteristics of friendship, a general factorial pattern should emerge whereby some features are identified that refer to a shared 'objective' reality and others that refer to a non-shared 'subjective' reality". Irrespective of the characteristics of the persons involved, perceptual agreement should always be high on the objectively perceivable aspects. In contrast, the degree of agreement on the subjectively perceived aspects was expected to be considerably lower and notably influenced by the characteristics of the persons involved. When tenable, this model was then intended to serve as a basis for examining the relation between peer rejection and friendship quality.

The results obtained in the first part of the analyses strongly support the proposed model of reciprocal friendship perception. Compelling evidence was found that, although both friends' perspectives relate to the same mutually confirmed friendship, very often the friends' perceptions do not correspond, depending on the visibility of the perceived aspect.

Foremost, then, these results confirm previous findings by Parker and Asher (1993) and Buhrmester (1990). Even more importantly, the results support Funder and Dobroth's (1987) findings, that interpersonal agreement of perceptions is significantly influenced by the visibility of the perceived aspect. Moreover, because this basic structure has been valid for all tested

subgroups, the visibility of the perceived aspect seems to be the principal influential factor. Thus, when simultaneously investigating both friends' views on the quality of their friendship, a conceptual distinction can be made between (a) those aspects of friendship that are more objectively perceivable and thus part of a shared social reality (i.e., in this case, Play Encounters and Visits), and (b) other aspects that belong to a more subjective, non-shared reality (i.e., in this case, Closeness, Fun, and Conflict). The more objective characteristics of friendship refer to more overt behavioral aspects where the appearing information is very clear-cut and does not leave much room for differential interpretation. Here, the friends' perceptions correspond so highly that they formed a common "objectively"-perceived factor in the present model. Conversely, the more subjective characteristics of friendship refer to more intrapsychic aspects where many different pieces of information are needed for evaluation. Often those pieces of information are not even very clear-cut and therefore are open to various differential interpretations. That is, correspondence of views is not so easily obtained and therefore the friends' perceptions differ to a considerable extent.

These differences in friends' evaluations of the subjective aspects of their friendship are not only underlined by the basic factorial structure of friendship perception. They are also supported by the moderate correlations between the corresponding self-rated and friend-rated factors. However, because in general these correlations were positive, already in middle childhood friendships seem to be shaped by at least a certain degree of mutuality in thoughts and emotions (Youniss, 1994). Thus, children who very favorably evaluate the subjective qualities of their friendships usually have friends who also perceive these friendships in a favorable way. This suggests, that, already at this age, children seem -- at least to some degree -- to be aware of the meaning of each other's behavior as an expression of each other's emotions. As a consequence, they are already able to recognize and to distinguish among friendships of differing quality. At the same time, however, the moderateness of agreement between the friends' perceptions of the subjective friendship aspects underlines the considerable influence of personal characteristics (e.g., their motivations or sociocognitive skills) on the perception of these aspects. The possible diversity of the friends' motivations and/or sociocognitive skills obviously leads to a situation, where the friends' perceptions always differ to a certain extent.

Taken together, the results obtained in the first part of the analyses support the notion, that already in middle childhood, friendships seem to be shaped by mutuality of thoughts and emotions and a shared interactional experience as a mutually confirmed expression of each other's emotions. At the same time, though, the results emphasize that mutuality in friendship does not imply a strict reciprocity of thoughts and emotions. Obviously, children's perceptions of the subjective aspects of their friendships always differ to a considerable extent from their friends' perceptions. As mentioned, perceptual discrepancy of friendship quality may be a potential source of problems within the relationship. First, they may indicate general difficulties in interpersonal understanding and thus in recognizing and differentiating among friendships of high and not so high quality. Moreover, because differing perceptions can lead to differing expectations regarding the provision of emotional or other types of support, they might result in anger and frustrations, if the expectations are not met. Also, a person's self-esteem may be violated if feelings of liking are not reciprocated to the same extent, which can also lead to frustrations. As a result of these irritations, conflicts might arise between the friends, which, in the long run, may damage the relationship. Therefore, the degree of concordance between the friends' perceptions of the subjectively perceived aspects of their friendship may indeed serve as a valuable indicator of the amount of interpersonal understanding reached by the partners, and, thus, on the quality of their friendship (Parker & Asher, 1993).

3.1.2. Children's grade level and reciprocal friendship perception

If perceptual agreement on friendship quality truly reflects the amount of interpersonal understanding reached by the partners, then it should be significantly influenced by the friends' level of sociocognitive development, and thus, by age. Children's perspective-taking skills increase with age (Piaget, 1986). Thus, older children have been found to better understand other people's social signals (i.e., their underlying emotions or intentions and the resulting actions) than younger children (e.g., Dodge et al., 1984; Dodge & Frame, 1982; Goldman et al., 1980). In accordance with this, there has been some evidence, that the correspondence between the friends' perceptions of the quality of their friendship increases with age (Buhrmester, 1990). However, very obvious behavior (e.g., frequent mutual visits) does not

pose too many demands on children's perspective-taking skills in order to understand it. Therefore, I expected the age-related differences to occur primarily when the partners' social signals refer to intrapsychic processes that are not very obvious. As a consequence, it was suggested in the General Hypothesis 2 that "As compared to older children, younger children should show a lower degree of agreement with their friends' perceptions of the same subjective aspect of friendship".

The results of the second part of the analyes well support this hypothesis. In second grade, the friends' evaluations of the subjective aspects of their friendship were not correlated with each other. In contrast, from third to fifth grade, the friends' evaluations showed a moderate agreement, similar to that found by Buhrmester (1990) for fifth- and sixth-graders. In other words, while the second graders did not seem to have developed sufficient interpersonal understanding to accurately judge their friends' social signals, there obviously occured an increase in mutual understanding from second to third grade. This developmental trend in perceptual consensus supports the notion that the mutual concordance of perspectives may indeed depend on the level of interpersonal understanding reached by the two partners.

Notably, the increase in interpersonal understanding as reflected by the partners' perceptual consensus resembles the development of the children's interpersonal understanding as reflected by their friendship concept (Selman, 1984). As is maintained by Selman, when children develop an awareness of interpersonal perspectives, and thus, a sense of reciprocity, this corresponds to the second stage of the friendship concept. Before, children unreflectively set up their own perspective as a standard, which, as a consequence, impedes the development of a shared perspective on the social reality of their relationship. Results by Krappmann (1990) have shown that children begin to reason about friendship according to the friendship concept level 2 at about the age of nine, which is the mean age of the third graders in the present sample. This correspondence between the development of the children's friendship concept and their perceptual concordance on the subjective aspects of their actual friendships is a further support for the age-relatedness of children's ability to construe a shared social reality. Only when the children's perspective-taking skills have developed far enough to enable them to look beyond their own position, a shared social reality, and thus, a truly reciprocal relationship begins to evolve.

As outlined, a large lack of concordance may be a potential source of problems that may threaten relationships in the long run. At first glance, then, this suggests, that younger children's friendships seem to be more in danger of early termination than older children's friendships. However, the qualitative aspects that children focus on in their friendships also seem to change (Bigelow, 1977; Damon, 1982; Selman, 1984). Thus, younger children primarily emphasize frequent and undisturbed play interactions in their friendships. Qualities like intimacy, trust, and mutual understanding only become important as the salient elements of a high quality friendship as the children grow older. Consequently, if younger children do not so strongly emphasize intimacy and mutual understanding, a lacking correspondence of views on such subjectively perceived aspects is not very likely to truly threaten their relationships. Moreover, the younger children strongly agree on those aspects that they primarily emphasize in their friendships, namely the behaviorally overt and thus easily visible aspects like the frequency of mutual play encounters.

In summary, the findings of the age-related trend in perceptual agreement suggests that a lack of agreement between the friends' perceptions indeed seems to reflect a lack of interpersonal understanding (Parker & Asher, 1993). As outlined, however, these grade-related differences in the amount of perceptual concordance should not necessarily pose a threat to the relationships of the younger children. A rather different effect on friendship maintenance may emerge from the differences in the amount of perceptual concordance that are related to differences in peer-status. Before talking about this point, though, I will discuss the general results regarding the amount of perceptual concordance that were found in the different sociometic groups.

3.1.3. Peer status and reciprocal friendship perception

So far, there seems to be some evidence that the amount of agreement on friendship quality is influenced by at least one personal characteristic of the partners involved, namely, their level of sociocognitive development (i.e., at least as far as it is associated with grade level). As outlined above, rejected children have been found to exhibit notable deficits in sociocognitive skills (Dodge, 1986; Kupersmidt et al., 1990; Crick & Dodge, 1994). Thus, rejected children

appear to be less skillful at interpreting social cues, to be negatively biased in their attributions toward others, to generate more deviant responses to social dilemmas, and to behaviorally express social responses less competently than accepted children. This situation led to the assumption that there should be more misunderstandings of each other's social signals in rejected children's friendships than in accepted children's friendships. However, as was the case for the children of differing grade levels, very obvious behavior was not expected to hold many demands on the children's sociocognitive skills. Therefore, I also expected a large lack of perceptual concordance in rejected children's friendships to primarily occur when the friends' social signals refer to intrapsychic processes. As a consequence, it was suggested in the General Hypothesis 3, that " As compared to average and popular children, rejected children should show a lower degree of agreement with their friends' perceptions of the same subjective aspect of friendship".

In contrast to the previously discussed subgroups, I also expected a specific bias in the friendship perceptions of rejected children and their friends. As outlined above, rejected children are likely to have fewer friends than accepted children (Ladd, 1983; Feltham et al., 1985; Rizzo, 1988). This means, that rejected children have fewer sources to turn to for emotional support than accepted children. As a consequence, they are considered to more strongly depend on their (few) friends than accepted children. It has been shown, that the perception and interpretation of another person's behavior is the more positive, the more the perceiver is dependent on the perceived person (Berscheid et al., 1976). Therefore, rejected children were expected to evaluate the subjectively perceived aspects of their friendships in a favorable way. In contrast to this positive evaluation on the rejected children's side, their friends' evaluations were expected to be more in the opposite direction. As mentioned, a significantly negative reputational bias exists regarding the interpretation and evaluation of unpopular children's behavior (Hymel et al., 1990), which may shift their friends' evaluations in a more downward direction. Taken together, these considerations induced Hypothesis 3a: "As compared to their friends, rejected children should express a more positive view on the subjective aspects of their friendships."

Both hypotheses were supported by the results obtained in the third part of the analyses. With two of the three subjective aspects of the present study, accepted children (i.e., average and

popular children) showed considerably more agreement with their friends' evaluations than rejected children. As was the case for the overall group, accepted children showed a moderately positive correlation between their own and their friends' perceptions of closeness, fun, and conflict in friendship. In other words, a high friendship evaluation on the accepted children's side was usually accompanied by a high evaluation on their friends' side. [33] A rather different picture emerged for the rejected children. As mentioned, the correspondence between rejected children's and their friends' perceptions of Friendship Closeness and Fun was so low that it emerged as negative correlations in the present study. Obviously, rejected children and their friends had rather contrasting views of these aspects of their friendships. Before discussing the implications of this result, though, I will first focus on the possible conclusions that can be drawn from the children's and their friends' average ratings.

3.1.3.1. Peer status and the average ratings of friendship quality

As reported, rejected children's average ratings did not differ from accepted children's average ratings in any aspect of friendship quality. Thus, this finding supports the results obtained by Patterson et al. (1990), suggesting that rejected children consider their dyadic friendships to be similarly satisfying as accepted children do. At the same time, this result suggests, that Parker and Asher's (1993) finding of low-status children's more negative view of friendship quality may refer to the neglected rather than the rejected children. When considering the friend-rated perspective, though, several differences between the sociometric groups emerged with regard to the subjective aspects of friendship. As compared to the mean ratings of average children's friends, which were equal to the average children's own ratings, popular children's friends evaluated two of the three subjective qualities of their school friendships to be

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[33] The fact, that there was no difference between average and popular children is consistent with the finding, that, in general, average children do not lag behind popular children in their sociocognitive skills (e.g., Goldman et al, 1980; Feldman & Dodge, 1987). There is the possibility that the low variance in Self-rated and Friend-rated Closeness and in Self-rated and Friend-rated Fun of popular children might have prevented higher correlations, and thus a higher correspondence between the friends' perceptions of these aspects. However, the degree of correspondence between popular children's self-rated and friend-rated evaluations of Closeness and Fun are very similar to their degree of correspondence with regard to the third subjective aspect, Conflict. Therefore, the results are quite likely to reflect a true similarity between average and popular children regarding the amount of agreement in the perception of the subjectively perceived aspects of friendship.

significantly higher. In contrast, rejected children's friends evaluated all of the subjective qualities of their friendships with these children to be considerably lower.

First, these results support the reputational bias hypothesis put forth by Hymel et al. (1990). As outlined by Hymel et al., the knowledge about another child's peer status contributes to a biased interpretation and evaluation of this child's behavior. Specifically, rejected children are less favorably evaluated than average children. In contrast, popular children are granted a positivity bonus. As is suggested by the results of this study, this pattern of stereotyped processing of social signals is apparently also valid within the children's dyadic friendships in school. Especially in friendships within class, the partners are supposedly very aware of each others' social status among the classmates, because they can observe each other's interaction with others. As mentioned above, rejected children's peer interactions are characterized by various forms of negative social behavior, such as disruptiveness, aggression, a lack of cooperativeness, or oversensitivity (Coie et al., 1982; Cantrell & Prinz, 1985; Coie & Dodge, 1988; Newcomb & Bukowski, 1984; Carlson et al., 1984). It can be assumed, that a person's impressions about his or her friends are not only based on the dyadic friendship interaction, but also on the friends' behavior toward other people. Thus, although rejected children are not likely to exhibit mainly negative behavior in their dyadic friendship interaction, a primarily negative behavior toward others can cause their friends to develop specific expectations concerning rejected children's behavior in general. This, in turn, may lead to a negatively-biased perception and interpretation of rejected children's behavior, and thus, to a more negative evaluation of friendship quality. The reverse pattern may be true for the popular children. Here, the children's generally very positive interaction with their classmates may create a lasting impression in their friends' minds, so that any occuring negative behavior is merely attributed to external causes (Butler, 1984). This, in turn, may lead to a positively-biased perception and interpretation of popular children's behavior, and thus, to a more positive evaluation of friendship quality.

A second explanation for the contrasting evaluations of friendship with rejected and accepted children may be, that friendship interaction with rejected children is simply less satisfying for the friends than is friendship interaction with accepted children, because rejected children behave differently as friends than do accepted children. For example, although rejected chil-

dren can be expected to act in a more positive manner toward their friends than toward other peers, they still may show more aggressive, disruptive or otherwise inappropriate friendship behavior than accepted children. In other words, the inadequate social competencies often displayed by rejected children (e.g., Coie et al., 1982; Cantrell & Prinz, 1985; Coie & Dodge, 1988) may also emerge in their friendship interactions.

Another possible reason for the lower quality of rejected children's friendships may be that some of the rejected children (i.e., probably the less agressive, more shy and withdrawn ones) appear to adopt a rather passive role in their friendships, leaving the majority of responsibilites to their friends (Rizzo, 1988). Thus, they may not be the ones to suggest or direct the activities within the friendship, but they rather seem to take over the "follower"-part. In contrast, popular children are more likely to play the leading role in their friendships, suggesting and directing the activities. Rizzo argues, that children who adopt the more active role in a friendship may be viewed as providing many benefits for their friends, while more passive children may be considered as rather unimaginative. Thus, Rizzo expects that friendships with popular (i.e., the more active) children are valued more positively, while friendships with rejected (i.e., the more passive) children are valued more negatively, and this assumption is supported by the results of the present study.

3.1.3.2. Peer status and the relative differences in the average self-rated and friend-rated evaluations of friendship

When looking at the relative difference between the target children's and their friends' mean ratings on the subjective aspects of their school friendships, the results confirm Hypothesis 3a. Specifically, rejected children clearly overestimated the subjective qualities of their friendships, while popular children tended to underestimate them. On the one hand, rejected children's overestimation of the quality of their friendships obviously reflects the relatively negative evaluation on their friends' side. This presumably results from the negative reputational bias held against rejected children. On the other hand, the overestimation may also reflect rejected children's positively-biased perception of their friendships. This probably results

from the extreme importance their friends have for them. Taken together, these biases most likely enhance the skewed relation between rejected children's and their friends' perceptions.

With regard to the underestimation of friendship quality displayed by the popular children, the reverse influential pattern may be in effect. Popular children are likely to establish many dyadic friendships (Ladd, 1983; Rizzo, 1988). Such a large friendship network has two implications: First, given a limited amount of time available, the absolute amount of time spent with each friend probably decreases as the number of friends increases. Second, the relative importance of each individual friend as a provider of emotional support probably also decreases with an increasing number of available alternatives. Because with decreasing importance of a person, the positivity-bias in evaluating this person is also reduced, this might lead to a more negative general evaluation of their friendships from the popular children's perspective. In contrast, being friends with a popular child might be a very valuable, and thus valued, experience for his or her friends. Furthermore, the afore-mentioned reputational bias in social perception may cause their friends to perceive popular children in an especially favorable light. Taken together, these slightly opposing influences on the popular children's and their friends' side may contribute to popular children's relative underestimation (or their friends' relative overestimation) of certain subjective aspects of their friendships. Does this mean that popular children and their friends have severe problems of mutual understanding? And even more importantly, does this imply a serious threat to popular children's friendships? Strictly speaking, popular children's views about closeness and conflict in their friendships are not as positive as their friends' views. Therefore, the high expectations that may result from the friends' overly positive views might lead to frustrations, which in turn might disturb friendship interaction. It is also possible, though, that popular children's friends put up with the difference in friendship evaluation, because it is so highly desirable to be friends with a popular child. The crucial point may be, that there was still a certain degree of *relative* concordance between the friends' evaluations of closeness and conflict in their relationships. In other words, a high evaluation on the friends' side was usually connected with a high evaluation from the popular children's side, although the absolute value may have differed. Thus, although popular children and their friends showed differing tendencies of general friendship evaluation, which might bear some conflict potential, they still mutually recognized and dif-

ferentiated among friendships of higher and lower quality. This, however, was not the case in rejected children's friendships.

3.1.3.3. Rejected children and their friends: Contrasting views of the relationship

As mentioned above, the lack of agreement between rejected children's and their friends' evaluations of closeness and fun in their friendships was so large, that some of them even displayed contrasting views. While it seems unlikely that very low evaluations on the rejected children's side were related to very high evaluations by their friends, occurences of the opposite case may well have caused the moderately negative correlations. In other words, there obviously were some cases where especially positive evaluations on the rejected children's side were linked with especially negative evaluations by their friends. How can this extreme difference in perception be explained?

With regard to the Fun factor, this question may be readily answered. As mentioned, many rejected children have a disposition toward rather aggressive styles of social interaction (e.g., Coie et al., 1982; Cantrell & Prinz, 1985). Especially with regard to the children's fun behavior, this aggressive tendency may lead to rather extreme forms of 'fun' (e.g., physical violence as part of the practical jokes against others) that are generally not acceptable within the peer group. Thus, while the rejected children may believe to engage in particular funny activities, perhaps in an attempt to impress their friends, these friends acknowledge the inadequacy of this behavior. This, in turn, may cause a discrepancy in the evaluation of fun, where rejected children still highly value certain (probably aggressive) forms of fun, while their friends have a rather doubtful feeling in this issue.

The causes of the contrasting views on friendship closeness displayed by rejected children and their friends are less clear. However, a possible explanation may be found in rejected children's disadvantaged friendship status. As outlined above, rejected children have a lower chance of establishing friendships than accepted children (Ladd, 1983; Austin, 1985; Feltham et al., 1985; Parker & Asher, 1993). Furthermore, rejected children probably endure considerable hardships in their daily peer experience. Therefore, those who are lucky enough to have

established dyadic friendships are especially likely to depend on these friendships for emotional support. Moreover, at least theoretically, rejected children well understand the behavioral requirements of a satisfying dyadic friendship (Bichard et al, 1988). Unfortunately, though, probably because they so much depend on their friends, some rejected children seem to overinvest and exaggerate in their friendship interactions (Austin, 1985). Thus, as maintained by Austin, maybe in an attempt to compensate for the distress in other peer experiences, rejected children (i.e., probably the less aggressive ones) try to develop especially harmonious dyadic friendships by being overly attentive and submissive toward their friends. For example, Austin found that rejected children much more frequently acknowledge their friends' opinions and actions than non-rejected children. It may be possible, that these rejected children, in an attempt to be liked by their friends and to create an especially harmonious atmosphere in their friendships, try to avoid conflicts at any cost. However, the negotiation of contrasting ideas can be a very stimulating experience which is an important factor in children's interactions with peers (Piaget, 1986; Youniss, 1982). Therefore, the overattentive behavior that is possibly displayed by some of the rejected children has a rather different effect on their friends than is intended in the first place. After a while, the friends may be rather enervated or bored by the overly compliant behavior, and this seems to be the more so, the more the rejected children exaggerate their efforts. As a consequence, the rejected children's efforts may produce an increasing emotional gap between themselves and their friends, rather than keeping them close. In turn, this can create a situation, where a rejected child, based on the motivations for his or her own behavior, considers a friendship to be specifically close, while the friend holds the opposite view.

The question arises, why the extreme diversity between rejected children's and their friends' perceptions only occurred with regard to closeness and fun in friendship, but not with regard to the aspect of conflicts. Although rejected children generally tended to underestimate the amount of conflict in their friendships, they did show a moderately positive correlation with their friends' evaluations of this aspect. That is, a high rating of conflict from the rejected children's perspective was more likely to be linked with a high than with a low rating from the friends' perspective. Even more notably, accepted children's perceptions did not show a higher correlation with their friends' perceptions than did rejected children's perceptions of this aspect. How can this somewhat surprising accuracy of social perception be explained?

Conflict is an inevitable part of social interation, even within close friendships. A situation of interpersonal conflict is defined by two individuals disagreeing or opposing one another (Shantz & Hobart, 1989). In this context it is important to note, that conflict and aggression are not the same, but most actions of aggression or even hostility occur during conflict (Hartup, 1989). Also, conflicts are emotionally aversive. Thus, it is not surprising that children at all ages recognize that conflicts can disrupt a relationship (Laursen, 1993). However, the awareness that conflicts do not necessarily have to terminate the friendship but can even strengthen it, does not develop before adolescence (Selman, 1984). Therefore, for elementary school children, conflicts are likely to represent a particularly critical component of friendship experience. This should be even more the case for rejected children. As mentioned, they have fewer chances than accepted children to find a friend. Consequently, probably more than accepted children, they can be assumed to strongly depend on their friendships, and be thus very attentive toward everything that might endanger the relationship. For this reason, and also because these children experience so many frustrations in their general peer relations, it might be the case that they also react in a very sensitive way upon even minor irritations in their friendships. Apart from that, as mentioned above, rejected children have been found to be quite accurate in identifying truly offensive acts (Dodge et al., 1984), which may also accompany conflicts among friends. Considering this, although rejected children tended to rose-tint their friendship world in this aspect, too, it does not seem surprising any more that they were relatively 'accurate' (i.e., in the sense of interpersonal agreement) in evaluating conflict within their friendships.

3.1.3.4. Discrepant friendship evaluations -- A risk factor for rejected children's friendships?

As outlined above, a large lack of correspondence between the friends' perceptions can be considered to be a potential threat to the relationship. However, as was explained for the grade-related differences in the amount of perceptual concordance, this does not have to be necessarily so in every case. Thus, at least as long as certain subjectively perceived affective aspects do not play a major role in friendship, any difference in the perceptions of these aspects are not likely to jeopardize the relationship. For the older ones of the rejected children,

though, one cannot assume that these subjectively perceived aspects of friendship are of only secondary importance. What might be the possible implications of the large discrepancy in the friendship perceptions of rejected children and their friends for the maintenance of their relationships, then? In an attempt to answer this question, I will separately look at the possible implications of rejected chilḍen's self-rated perspective and their friends' perspective, and then discuss any potential conclusions that might be drawn from this.

When only looking at the rejected children's self-rated perspective, these children seem to be fairly content with the quality of their friendships, because they do not evaluate them more negatively than average or popular children. This satisfaction obviously reflects a rather optimistic view of their friendships, which can be expected to enhance the children's general psychological well-being (Taylor & Brown, 1994). In turn, psychological well-being is likely to promote the children's positive social functioning. As is argued by Taylor and Brown (1988), such a positive view also fosters social functioning and bonding by creating a positive mood, which, in turn, generates positive feedback by others. Of course, rejected children's evaluations of the quality of their friendships reflect a strong positivity-bias as opposed to their friends' evaluations. This at least raises some doubts about the appropriateness of rejected children's positive view. However, as maintained by Taylor and Brown (1988), positive illusions with regard to a certain aspect of one's social world are usually not maladaptive, but they rather seem to be essential for successful functioning in this world. Thus, at least when looking from the rejected children's side, the situation does not suggest any posssible danger to the continuity of the friendship.

Unfortunately, the specific issue that rejected children apparently hold a positive illusion about, namely the quality of their friendship, does not consist of only one subjective reality. Because per definition friendship is a mutual construct, it consists of two subjective realities which together form the specific social reality of a friendship (Bukowski & Hoza, 1989). Thus, even if a friendship is considered as being of high quality from one partner's point of view, it cannot be 'objectively' called so if this opinion is not shared by the other partner. This is obviously the case in rejected children's friendships, because their friends do not share their positive evaluation of the subjective aspects of their friendship. Apparently, friendships with rejected children do not seem to be as rewarding for the partners as friendships with ac-

cepted children. And this seems to be the more so, the more the rejected children need their friends and impose on them. This, however, represents a potential threat to rejected children's friendships. For example, a rejected child's friend, expecially if he or she is not rejected by the peer group, might lose interest when establishing a new and more rewarding friendship with another non-rejected child. It is also possible that a rejected child is so dependent on a friend, that he or she fosters the emotional gap between him- or herself and the friend by continuous overcharge, until the friend withdraws (Krappmann & Oswald, 1983). Indeed, there is some evidence that children who less favorably rate their friendships with regard to intimacy and liking will have terminated these friendships half a year later (Berndt et al., 1986).

Before too readily drawing a conclusion about the quality of rejected children's friendships, though, the mutually rated aspects of friendship shall be considered, because they represent another important aspect of friendship quality. Besides the perceptual discrepancy regarding the subjectively perceived aspects of their friendships, rejected children and their friends agreed on the quality of the easily visible aspects that refer to very overt friendship behavior. Notably, the quality of these aspects was not different than with accepted children's friendships. For example, rejected children play with their friends just as often as average and popular childen do. It may be possible, of course, that the strict organization of after-school day-care for the children in the present sample accounted for this similarity between accepted and rejected children who otherwise might differ in this respect. On the other hand, though, rejected children and their friends claim to visit each other at home as much as accepted children and their friends. Hence, at least judging from these two important aspects of friendship, rejected children's friendships are not of lower quality than those of accepted children. However, at least for older children, the more subjectively perceived affective qualities of friendship become of increasing importance, possibly even more than aspects like the frequency of visits or play encounters (Selman, 1984). Consequently, if one took the average of both perspectives as an indicator of friendship quality, rejected children would be at a clear disadvantage as compared to accepted children. Therefore, considering the substantial difference between rejected children's and their friends' perceptions of the subjectively perceived quality of their friendships, this may introduce an aspect of considerable instability to their friendships. As suggested by Patterson et al. (1990), the overestimation of their social situation may undermine rejected children's motivation to adapt to the specific requirements within their

friendships. This, in turn, might threaten the friendships of rejected children in the long run, and there is, indeed, some evidence that rejected children's friendships are less stable than those of accepted children (Krappmann & Oswald, 1983; Ogawa et al., 1995).

In summary, the results of the present study indeed propose a relation between peer rejection and friendship quality. In most aspects, rejected children's friendships appear to be more problematic than accepted children's friendships. This suggests, that rejected children are prone to difficulties not only in their relations toward the peer group as a whole but also in their dyadic relationships. One important issue should be mentioned at this point, though. The relation that has been found between peer rejection and friendship quality, as well as the hypotheses underlying it, seemingly suggest a specific causal relationship. Thus, rejected children's personal characteristics (i.e., their sociocognitive skills and their motivations) and the fact that their being rejected is known to their friends, have been assumed to contribute to the quality of their friendship. However, because the results were not based on longitudinal data, they cannot, and are not intended to, reflect a strict causal relationship between peer rejection and friendship quality. Thus, it may be possible that rejected children's friends talk to other children (i.e., other friends in their class) about the problems in their friendships with rejected children, thereby contributing to rejected children's low reputation in the peer group. Therefore, it can be expected, that rejected children's situation in the peer group and their situation in dyadic friendships mutually influence each other, which might aggravate their difficulties in peer relations.

Besides peer rejection, which is apparently related to friendship quality, but does not allow any definite statement about the direction of causality, there is another related factor where the causal direction is more obvious. This factor, that has also shown some impact on friendship quality in the present study, is the children's age or grade level. Therefore, before turning to the implications of the findings discussed above and the possible suggestions for future research, the results concerning the effects of grade level shall be discussed. In addition, I will briefly turn to the results on the general relations among the various aspects of friendship.

3.1.4. Effects of grade level on the qualitative aspects of friendship

It has previously been mentioned, that younger children focus more on frequent play interactions in their friendships, while older children more emphasize intimacy, trust, and emotional support as the salient elements of friendship (Damon, 1982; Selman, 1984; Berndt & Perry, 1986; Furman & Buhrmester, 1992). However, no grade-related increase occured in friendship closeness, which closely reflects the aforementioned qualities. There was a marked decrease in the frequency of the friends' after-school play encounters, though. Importantly, because at the same time, the frequency of the friends' mutual visits at home increased, this cannot simply be interpreted as a decreasing importance of play meetings. It rather reflects that most older children do not attend the day-care facilities any more, and therefore more often see their friends at each other's homes. In addition, parents can be expected to more frequently allow visits at the friend's home as their children grow older, a notion that is also reflected by the gradual age-related increase of the correlation between the frequency of play encounters and mutual visits.

Other developmental trends occured with respect to the amount of fun and conflict in the children's friendships, which support several of the findings obtained in other studies. First, children in fifth grade perceived significantly more conflict in their friendships than younger children. This possibly mirrors older children's marked increase in friendship understanding with respect to the meaning of conflict in friendships (Selman, 1984; Krappmann, 1990). Thus, while for younger children, friendship and conflicts seem to be still incompatible, older children are obviously more able to acknowledge conflicts in their friendships. Second, the overall fun the children experienced in their friendships increased with age, although a specific attribute of fun, namely the children's ability to develop new and exciting ideas with their friends, showed no substantial grade-related variability. The increase in general fun can be explained by the decrease in adult control for older children. In the day-care centers, which were attended by almost all of the younger children, the children's activities are often restricted with regard to time schedule (e.g., homework has to be done first) and content (e.g., common activities with the whole group). This is quite likely to limit the amount of fun the children can experience with their friends. In contrast, most older children do not attend day-care any more, and thus have more opportunities to pursue their own ideas and interests.

What, then, might be the reason of the lacking effect of age on the development of new and exciting ideas? One explanation may be, that the major concern in younger children's friendship interaction is the maximization of excitement through adventure and fantasy play, which already requires the continual development of new and exciting ideas (Parker & Gottman, 1989).

3.1.5. The relations among the qualitative aspects of friendship

Overall, the results regarding the relations among the qualitative aspects of friendship were in concordance with the general understanding of friendship held by children in middle childhood (e.g., Selman, 1984). Moreover, these relations were concordant across the self-rated and the friend-rated perspective. This suggests that, although the partners may considerably differ in their perceptions of specific aspects of friendship, their understanding of friendship as a complex and interrelated conceptual system of various subaspects is essentially the same. Friendship closeness seemed to have a lot to do with the amount of fun experienced among friends, supporting the notion that fun is a major element of friendship (Furman & Robbins, 1985). As maintained by Oswald et al. (1994), with the prospect of fun, children try to restrict their quarrels and mutually support each other, thereby developing their friendships. The prominent role of fun in the children's friendships was also reflected by its positive relation the friends' after school play encounters and mutual visits at home. In turn, these latter aspects were positively related to friendship closeness. This is in line with the notion that intimacy and closeness among friends develops through continuous and cooperative interaction (Sullivan, 1980), which takes place when the friends meet each other. Close friendships were also determined by a relatively low degree of conflict, again indicating that these two aspects are apparently hard to reconcile, especially for elementary school children (Krappmann, 1990). Fun and conflicts did not seem to strongly contradict each other, though. This obviously reflects the difficulties that are often connected with negotiating diverging interests and ideas of fun. Accordingly, this rather ambiguous role of conflict was evident in its general unrelatedness to the friends' after school play encounters and even their mutual visits at home. Again, this indicates that conflicting ideas and interests, although they may be problematic at times, are an inevitable part of social interactions even among friends (Laursen, 1993).

In summary, the results referring to the grade-related effects as well as the relations among the qualitative aspects of friendship not only largely confirm previous findings. By doing so, they also provide further support for the quality of the data, and thus, for the tests of the general hypotheses put forth in this study. Even more important, though, is the finding that rejected children did not differ from accepted children in these respects. On the one hand, this is in accordance with Bichard et al.'s (1988) finding, that at least rejected children's cognitive conception of friendship (specifically, their understanding of the various subaspects of friendship and their interrelatedness) does not differ from that of accepted children. On the other hand, the similarity in this respect even more emphasizes the considerable difference between rejected and accepted children in perceptual concordance with their friends regarding the subjectively perceived aspects of their friendships. With this in mind, in the following section I will discuss the findings of this study on (a) the reciprocity of friendship perception as another aspect of friendship quality, and (b) the relation between peer rejection and this aspect of friendship quality with respect to their implications for future research.

3.2.   Conclusion

In this study, further evidence was obtained that even children, who nominate each other as friends, do not necessarily agree when asked about the quality of their relationship. Importantly, though, the amount of perceptual concordance obviously depends on the visibility of the perceived aspect. Thus, it is the more affective and less obvious aspects of friendship which are the major focus of the perceptual discrepancy among friends. Furthermore, the amount of perceptual agreement regarding these aspects obviously reflects the degree of interpersonal understanding reached between the partners involved. Thus, these findings not only underline the necessity of considering both friends' perspectives when studying the reciprocity of children's friendships and the various qualitative aspects of these friendships. In addition, they provide support for the notion that the degree of perceptual agreement on the subjectively perveived aspects of friendship can serve as an important indicator of the quality of the relationship.

In the light of this, it seems pertinent for future research to further examine the circumstances contributing to agreement or disagreement in friendship perception, that is, when and why friends agree or disagree on the quality of their relationship. Even more important, though, are the possible consequences of non-concordant perceptions of friendship quality. Thus, the question should be studied, whether the amount of perceptual concordance is indeed predictive of friendship stability of older children, and whether there is a certain amount of disagreement in perceptions that can be tolerated without actually harming the friendship. Also, disagreements in the evaluations of different subjective aspects may have different implications for friendship stability. In addition, the question arises, whether the children are aware of the lacking concordance between their own and their friends' evaluations of the quality of their relationship. Thus, the awareness of a discrepancy between their own and their friends' evaluation of the friendship may influence the children's emotional well-being and/ or their general self-esteem.

What do these suggestions mean for the investigation of the link between peer rejection and friendship quality? As was suggested by this study, besides the children's level of sociocognitive development, one condition that contributes to the amount of agreement in friendship perception is peer-status. Considering the potential risks related to a negative peer-status, investigating the above-mentioned questions with rejected versus accepted children seems especially pertinent. In this respect it is important, though, to consider the substantial heterogeneity within the rejected group in future studies of the link between peer rejection and friendship quality. Thus, at least among rejected boys, about 50 % of the children have been identified as being especially aggressive and disruptive, while between 10% and 20% of the children are characterized by extreme shyness and social withdrawal (e.g., French, 1988; Cillesen et al., 1992). Notably, the rest of the rejected children differ little from accepted children in these behavioral aspects. This considerable variability among peer-rejected children may also be reflected in the quality of their dyadic friendships, especially in the amount of concordance with their friends' perceptions of friendship quality. For example, aggressive-rejected children not only overestimate their actual social acceptance, but they generally tend to display extremely positive and self-serving self-evaluations (Boivin & Begin, 1989; Parkhurst & Asher, 1992). In contrast, withdrawn-rejected children generally have a rather negative self-perception. Therefore, aggressive-rejected children might also evaluate the quality of

their friendships in a rather positive manner, while withdrawn-rejected children might evince more negative, yet more realistic perceptions of their friendship quality.

Further research on the links between peer status and friendship quality should also consider the potential differences between the friendships maintained within and outside the school context. As mentioned, the results of the present study only refer to the children's classroom-friendships and may not necessarily generalize to their out-of-school-friendships. Importantly, the children's rejected peer status is only based on their classmates' votes and might not even be known to their out-of-school-friends. Consequently, the negative reputational bias, which may contribute to the lower rating of friendship quality of rejected children's friends, might only be effective within the classroom. In addition, the social situations within and outside school are essentially different. While the children's peer activities in the classroom are necessarily more group-related, they are mainly dyadic outside the school (Krappmann & Oswald, 1989). The group-focused situation in the classroom may, in turn, foster rejected children's dominant, inappropriate behavior more than the private context outside of school (Zajonc, 1965; Zajonc & Sales, 1965), which could also aggravate the children's friendship interactions in class. Taken together, these context differences might lead to more mutual understanding and agreement between rejected children and their out-of school-friends than with their classroom-friends.

Given the fundamental role that dyadic friendship experience plays especially for rejected children's sociocognitive and emotional development, further research on this topic, both with regard to possible differences among the various types of friendship maintained and with regard to possible differences among the various subgroups of rejected children, is certainly of merit.

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APPENDIX

Figure 1

Friendship Interview Items, Parceled Factor Indicators, and Model Factors

SELF-RATED FACTORS

SELF-RATED ITEMS   INDICATORS / PARCELS   FACTORS

Taking on Trip		I-Close 1	
Defense			

Evaluation of Relationship		I-Close 2	Self-rated Closeness
Encouragement			

Sharing Secrets		I-Close 3	
Reconciliation			
Liking			

Fooling around		I-Fun 1	
Practical Jokes		I-Fun 2	Self-rated Fun
Good Ideas		I-Fun 3	

Quarreling		I-Conf 1	
Being Mad		I-Conf 2	Self-rated Conflict
Calling Names			
Disagreement		I-Conf 3	

Figure 1 - continued

FRIEND-RATED FACTORS

FRIEND-RATED ITEMS   INDICATORS / PARCELS   FACTORS
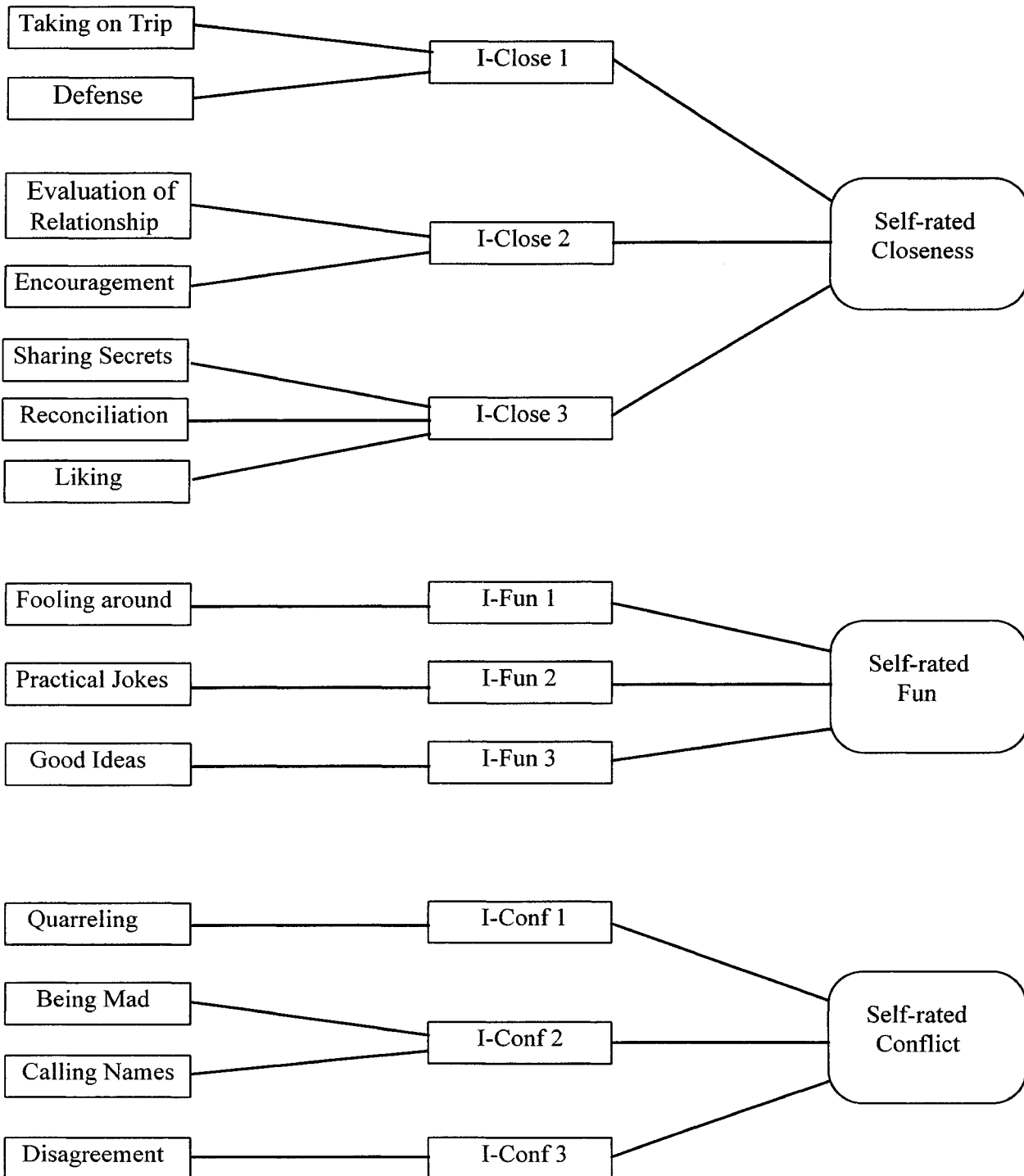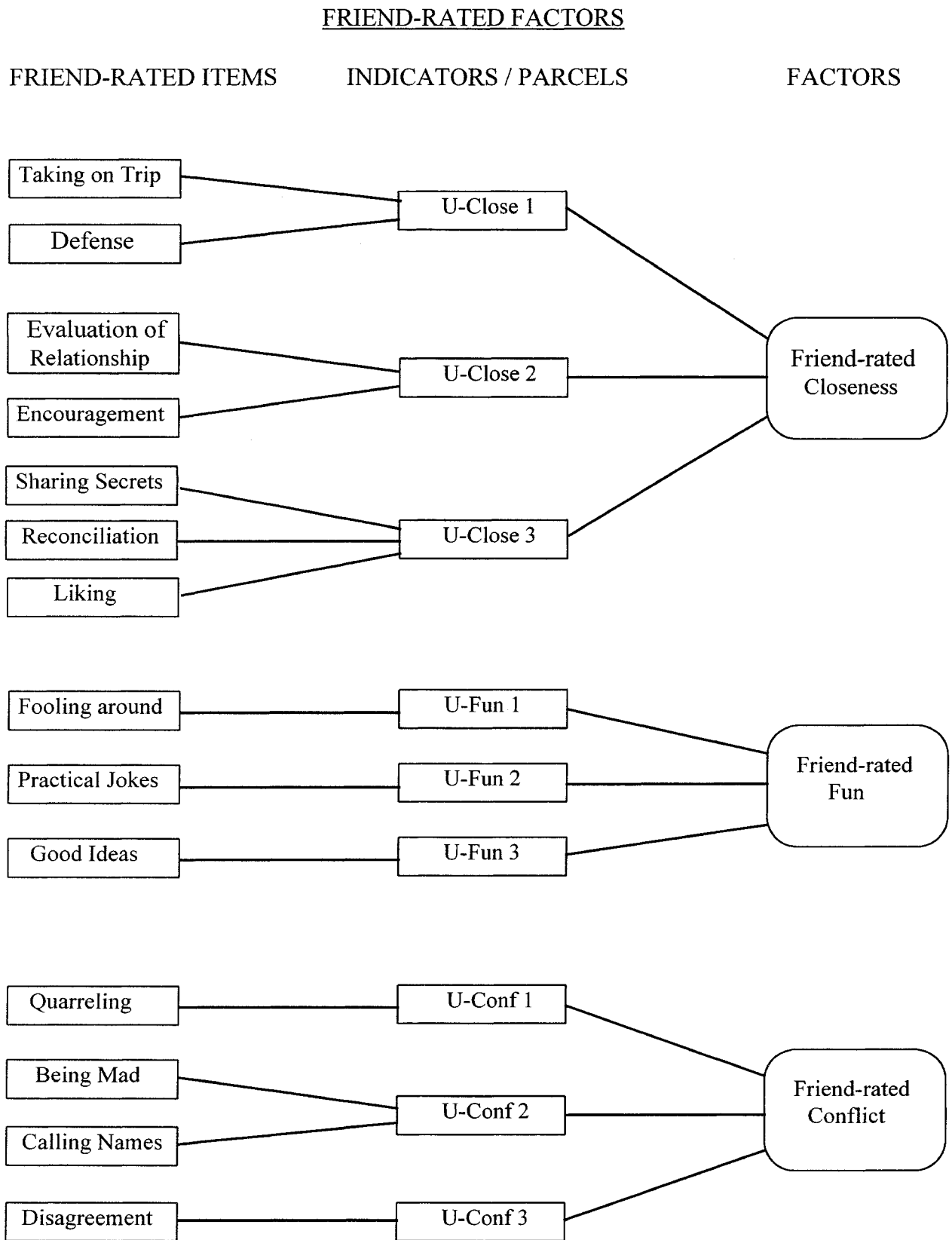
Figure 1 - continued

MUTUALLY RATED FACTORS

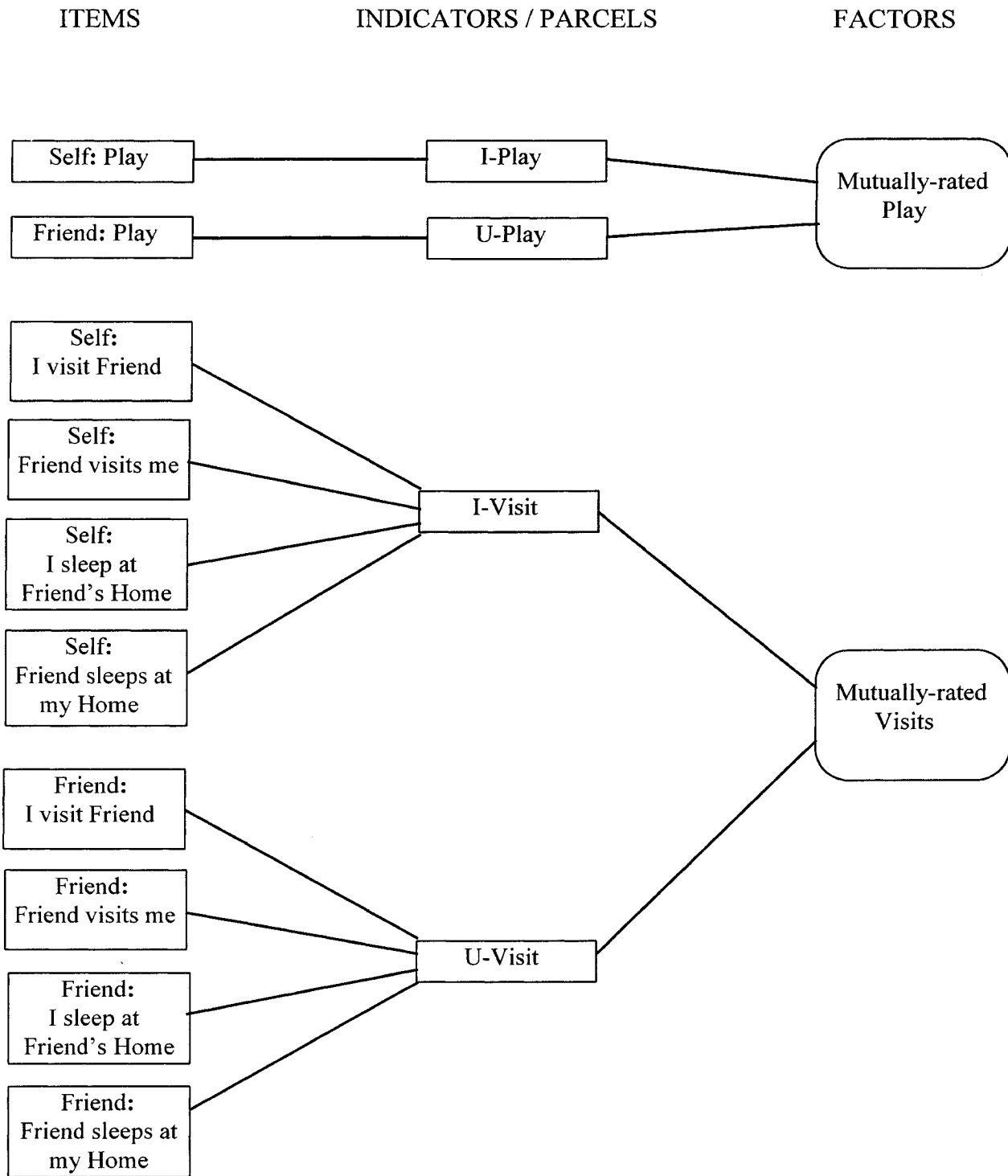ITEMS   INDICATORS / PARCELS   FACTORS

Figure 2

Identification of Reciprocal Friendships

673 children with Friendship Interview data

from these

573 with at least one reciprocal friendship

(from these 525 with valid sociometric data)

from these

44 with exclusiv mutual nominations

after random exclusion of one partner

=

551 children

Figure 3

Identification of Reciprocal Friendships by Peer Status

746 children with valid sociometric data

from these

110 (15%) popular
90 (12%) rejected
29 (4%) neglected
20 (3%) controversial
335 (45%) average
162 (21%) unclassified

from these with Friendship Interview data

92 popular children
64 rejected children
22 neglected children
15 controversial children
284 average children
130 unclassified children

= 607

from these with at least one reciprocated friendship

85 (92%) popular
44 (69%) rejected   (6 with exclusive mutual nominations)
14 (64%) neglected
15 (100%) controversial
253 (89%) average   (20 with exclusive mutual nominations)
114 (88%) unclassified   (14 with exclusive mutual nominations)

= 525

Table 1

Item Means, Standard Deviations, Skewness, Kurtosis

Item	Mean	Standard Deviation	Skewness	Kurtosis
I-Evaluation	3.128	0.740	-0.659	-0.027
U-Evaluation	3.061	0.764	-0.765	0.230
I-Liking	3.249	0.671	-0.858	0.506
U-Liking	3.199	0.686	-0.817	0.360
I-Sharing Secrets	0.677	0.359	-0.739	-0.749
U-Sharing Secrets	0.643	0.360	-0.555	-0.957
I-Reconciliation	0.815	0.300	-1.532	1.300
U-Reconciliation	0.796	0.303	-1.361	0.864
I-Encouragement	0.679	0.362	-0.715	-0.838
U-Encouragement	0.672	0.352	-0.675	-0.792
I-Taking on Trip	0.716	0.356	-0.888	-0.571
U-Taking on Trip	0.682	0.357	-0.735	-0.745
I-Fooling around	2.960	0.835	-0.552	-0.377
U-Fooling around	2.938	0.758	-0.459	-0.225
I-Practical Jokes	1.997	0.933	0.659	-0.594
U-Practical Jokes	1.972	0.805	0.595	-0.244
I-Good Ideas	3.193	0.736	-0.752	-0.036
U-Good Ideas	3.157	0.703	-0.806	0.362
I-Quarreling	2.156	0.637	0.468	0.442
U-Quarreling	2.137	0.641	0.347	0.257
I-Being Mad	2.078	0.696	0.233	-0.259
U-Being Mad	2.145	0.722	0.418	-0.180
I-Calling Names	1.996	0.778	0.493	-0.320
U-Calling Names	2.032	0.735	0.522	-0.095
I-Disagreement	2.313	0.733	0.241	-0.191
U-Disagreement	2.334	0.702	0.345	0.007
I-Defend	0.701	0.363	-0.829	-0.707
U-Defend	0.698	0.349	-0.842	-0.523
I-Play	4.439	0.596	-0.841	-0.167
U-Play	4.456	0.544	-1.007	1.146
I-I visit Friend	0.558	0.394	-0.215	-1.429
I-Friend visits me	0.521	0.407	-0.080	-1.545
U-I visit Friend	0.554	0.381	-0.200	-1.342
U-Friend visits me	0.519	0.389	-0.062	-1.428
I-I sleep at F.'s H.	0.104	0.248	2.526	5.625
I-F. sleeps at my H:	0.096	0.228	2.521	5.894
U-I sleep at F.'s H.	0.091	0.216	2.554	6.328
U-F. sleeps at my H.	0.100	0.236	2.537	5.919

Note. N=551. I = self-rated, U = friend-rated. Mean Levels are raw values referring to the children's typical (i.e., average) evaluations of their most salient friendships.

Table 2

Description of Friendship Status in School by Sociometric Group Membership

	Rejected	Neglected	Average	Controversial	Popular	*Total*
N	44	14	253	15	85	411
Mean number of mutual friends	2.1	2.4	2.4	3.2	3.9	2.8
Mean number of same-status friends	0.1 (4.8%)	0.3 (12.5%)	0.9 (37.5%)	0	0.7 (18%)	0.4 (14.3%)

Note. Group sizes include all members before random exclusion of exclusive (single) friendship nominations (see text, chapter 2.1.3.3.2.).

Table 3

**Rotated Factor Patterns (Varimax Rotation Loadings and Communalities)
for Parcelling**

Two Factor Solution for Items comprising Self-rated-Closeness and Friend-rated Closeness

Items	Factor 1	Factor 2	Communality
Self: Evaluation of Relation	.670	.005	.450
Self: Liking	.530	.060	.305
Self: Taking on Trip	.653	-.053	.415
Self: Reconciliation	.498	-.066	.234
Self: Sharing Secrets	.583	.035	.352
Self: Encouragement	.504	.072	.272
Self: Defense	.487	.068	.218
Friend: Evaluation of Relation	.026	.735	.549
Friend: Liking	-.001	.649	.423
Friend: Taking on Trip	-.040	.797	.621
Friend: Reconciliation	.056	.496	.262
Friend: Sharing Secrets	-.010	.646	.414
Friend: Encouragement	.114	.477	.267
Friend: Defense	.060	.473	.220

Two Factor Solution for Items comprising Self-rated-Conflict and Friend-rated Conflict

Items	Factor 1	Factor 2	Communality
Self: Being Mad	.725	-.016	.518
Self: Disagreement	.600	-.047	.298
Self: Calling Names	.582	.035	.353
Self: Quarreling	.699	.023	.500
Friend: Being Mad	-.041	.781	.591
Friend: Disagreement	-.062	.562	.297
Friend: Calling Names	.051	.557	.331
Friend: Quarreling	.070	.681	.499

Note. N=551. Self: Averaged ratings by the target child about his or her most salient friendships. Friend: Averaged ratings by the target child's most salient friends about their friendship with the target child.

Table 4

Indicator Skewness and Kurtosis

Indicator	Skewness	Kurtosis
I-close 1	-0.649	-0.368
I-close 2	-0.539	-0.118
I-close 3	-0.721	0.306
I-fun 1	-0.502	-0.400
I-fun 2	0.656	-0.575
I-fun 3	-0.662	-0.234
I-conf 1	0.443	0.387
I-conf 2	0.319	-0.290
I-conf 3	0.145	-0.232
U-close 1	-0.756	-0.110
U-close 2	-0.607	0.048
U-close 3	-0.641	-0.075
U-fun 1	-0.397	-0.294
U-fun 2	0.542	-0.310
U-fun 3	-0.687	0.045
U-conf 1	0.294	0.162
U-conf 2	0.439	0.031
U-conf 3	0.248	-0.037
I-play	-0.745	-0.340
U-play	-0.791	0.179
I-visit	0.330	-0.264
U-visit	0.421	0.251

Note. N=551. I = self-rated, U = friend-rated.

Table 5

Summary of the Model Fit Statistics for the Validation Analyses
A Comparison between two Random Groups

Model	comp	DF	$\chi2$	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi2$	p
Model 0: Nullmodel		600	4673.70							
Tests of Factor Pattern										
Model 1: Freely estimated model		474	867.59	1.830	.039	.878	.906			
Model 2: Freely estimated model with additional loadings	2 : 1	472	806.99	1.710	.036	.895	.920	2	60.60	.000
Model 3: Metrically invariant model	3 : 2	493	822.71	1.669	.035	.901	.921	21	15.72	.785
Test of variances										
Model 4: variances equal across groups	4 : 3	504	836.08	1.659	.035	.903	.920	11	13.37	.270
Tests of covariate effects										
Model 5: gender effects invariant across perspectives and groups	5 : 3	504	831.98	1.651	.035	.904	.921	11	9.27	.597
Model 6: grade and grade2 effects invariant across perspectives and groups	6 : 3	516	855.90	1.659	.035	.903	.918	23	33.19	.078

(continued)

Table 5 - continued

Model	comp	DF	$\chi 2$	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi 2$	p
Tests of correlations										
Model 7: correlations among subjective aspects invariant across perspectives	7 : 3	499	831.66	1.667	.035	.902	.920	6	8.95	.176
Model 8: correlations among subjective and mutually rated aspects invariant across perspectives	8 : 7	511	851.80	1.667	.035	.902	.918	12	20.14	.065
Model 9: all correlations equal across perspectives and groups	9 : 8	524	863.43	1.648	.034	.905	.918	13	11.63	.558
Model 9a: correlation iclose-uclose = ifun-ufun = iconf-uconf	9a : 9	526	865.47	1.540	.034	.920	.926	2	2.04	.361
Tests of means										
Model 10: means invariant across perspectives	10 : 3	499	829.62	1.663	.035	.902	.921	6	6.91	.329
Model 11: means equal across perspectives and groups	11 : 10	504	830.61	1.648	.034	.905	.922	5	0.99	.963

Note. N for group 1 = 275, N for group 2 = 276. comp: first number defines the current model, second number defines the model used as the comparison reference for the current model. DF = degrees of freedom. $\chi 2$ = chi-square-value. Ratio = ratio between $\chi 2$ and DF. RMSEA = Root Mean Square Error of Approximation. NNFI = Non-Incremental Fit Index. IFI = Incremental Fit Index. ΔDF = difference between the degrees of freedom of the current model and the reference model. $\Delta\chi 2$ = difference between the chi-square-values of the current model and the reference model. p = significance level of the nested $\chi 2$-test.

Table 6

Factor Loadings, Standard Errors, Residual Variances and Explained Variances

Indicator	λ	se	r^2 1	r^2 2	θ 1	θ 2	Cronbach's Alpha
Self-rated Closeness							.786
I-close 1	.67	.04	.48	.50	.53	.50	
I-close 2	.74	.04	.64	.65	.33	.33	
I-close 3	.74	.04	.63	.61	.34	.38	
Self-rated Fun							.522
I-fun 1	.48	.05	.31	.28	.68	.87	
I-fun 2	.34	.04	.12	.15	1.08	.93	
I-fun 3	.61	.06	.39	.45	.61	.60	
Self-rated Conflict							.739
I-conf 1	.76	.05	.59	.51	.41	.50	
I-conf 2	.80	.05	.62	.60	.40	.39	
I-conf 3	.59	.04	.34	.32	.69	.69	
Friend-rated Closeness							.826
U-close 1	.67	.04	.60	.59	.41	.40	
U-close 2	.74	.04	.70	.65	.32	.37	
U-close 3	.74	.04	.69	.68	.33	.33	
Friend-rated Fun							.655
U-fun 1	.48	.05	.45	.43	.46	.55	
U-fun 2	.34	.04	.24	.24	.61	.66	
U-fun 3	.61	.06	.60	.62	.37	.37	
Friend-rated Conflict							.749
U-conf 1	.76	.05	.58	.57	.41	.43	
U-conf 2	.80	.05	.65	.61	.34	.39	
U-conf 3	.59	.04	.36	.35	.60	.64	

(continued)

Table 6 - continued

Indicator	λ	se	r² 1	r² 2	θ 1	θ 2	Cronbach's Alpha
Mutually-rated Play							.566
I-play	.56	.05	.33	.38	.73	.69	
U-play	.56	.05	.42	.47	.51	.49	
Mutually-rated Visits							.780
I-visit	.66	.04	.52	.66	.48	.39	
U-visit	.66	.04	.67	.71	.26	.31	

Note. i = self-rated, u = friend-rated. λ = the LISREL lambda loadings. se = the standard error of the λ loadings. r² = the variance explained in each indicator by the latent factor. θ = theta, the LISREL maximum likelihood estimate for the residual variance explained in each indicator by the latent factor; 1 is the first random subsample chosen for model-testing, 2 is the second random subsample chosen for validation of the factor model.

Table 7a

**Summary of the Model Fit Statistics for the Validation Analyses
A Comparison between two Random Groups
(Based on the Perception of One Friendship Only)**

Model	comp	DF	χ^2	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi^2$	p
Model 0: Nullmodel		600	4510.58							
Tests of Factor Pattern										
Model 1: Freely estimated model		472	842.29	1.785	.037	.880	.908			
Model 2: Metrically invariant model	2 : 1	493	852.99	1.730	.036	.888	.910	21	10.70	.968
Test of variances										
Model 3: variances equal across groups	3 : 2	504	867.78	1.722	.036	.889	.909	11	14.79	.192
Tests of covariate effects										
Model 4: gender effects invariant across perspectives and groups	4 : 2	504	859.55	1.705	.035	.892	.911	11	6.56	.834
Model 5: grade and grade2 effects invariant across perspectives and groups	5 : 2	516	871.72	1.689	.035	.894	.911	23	18.73	.717
Tests of correlations										
Model 6: correlations among subjective aspects invariant across perspectives	6 : 2	499	858.40	1.720	.036	.889	.910	6	5.41	.492

(continued)

Table 7a - continued

Model	comp	DF	χ^2	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi^2$	p
Model 7: correlations among subjective and mutually rated aspects invariant across perspectives	7 : 6	511	867.95	1.699	.035	.893	.911	12	9.55	.655
Model 8: all correlations equal across perspectives and groups	8 : 7	524	875.98	1.672	.034	.897	.912	13	8.03	.842
Model 9: correlations iclose-uclose= ifun-ufun= iconf-uconf	9 : 8	526	878.11	1.669	.034	.897	.912	2	2.13	.345
Tests of means										
Model 10: means invariant across perspectives	10 : 2	499	869.91	1.743	.036	.886	.908	6	16.92	.010
Model 11: one mean free *	11 : 2	497	854.18	1.719	.035	.890	.911	4	1.19	.880
Model 12: means equal across groups	12 : 11	503	857.04	1.704	.035	.892	.912	6	2.86	.826

Note. N for group 1 = 286, N for group 2 = 287. Corresponding duplicate cases (i.e., the same friendship being rated twice from either perspective) have been separatedly assigned to one of the two groups. comp: first number defines the current model, second number defines the model used as the comparison reference for the current model. DF = degrees of freedom. χ^2 = chi-square-value. Ratio = ratio between χ^2 and DF. RMSEA = Root Mean Square Error of Approximation. NNFI = Non-Incremental Fit Index. IFI = Incremental Fit Index. ΔDF = difference between the degrees of freedom of the current model and the reference model. $\Delta\chi^2$ = difference between the chi-square-values of the current model and the reference model. p = significance level of the nested χ^2-test. * Mean of Closeness factor is higher from the self-rated perspective than from the friend-rated perspective.

Table 7b

Factor Loadings and Standard Errors for the Model Structure, Correlations among the Friendship Factors, and Covariate Effects (Analyses based on only one Friendship)

Self-rated Closeness				Friend-rated Closeness		
I-close 1	.66	.04		U-close 1	.66	.04
I-close 2	.79	.04		U-close 2	.79	.04
I-close 3	.76	.04		U-close 3	.76	.04

Self-rated Fun				Friend-rated Fun		
I-fun 1	.42	.05		U-fun 1	.42	.05
I-fun 2	.30	.04		U-fun 2	.30	.04
I-fun 3	.62	.06		U-fun 3	.62	.06

Self-rated Conflict				Friend-rated Conflict		
I-conf 1	.68	.05		U-conf 1	.68	05
I-conf 2	.73	.05		U-conf 2	.73	.05
I-conf 3	.49	.04		U-conf 3	.49	.04

Mutually-rated Play			Mutually-rated Visits		
I-play	.61	.05	I-visit	.77	.04
U-play	.61	.05	U-visit	.77	.04

	Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict	Mutually-rated Play	Mutually-rated Visits
	A.	B.	C.	D.	E.	F.	G.	H.
A.	1.0							
B.	.66	1.0						
C.	-.59	-.23	1.0					
D.	.39	.20	-.11	1.0				
E.	.18	.25	-.05	.66	1.0			
F.	-.28	.01	.33	-.59	-.23	1.0		
G.	.36	.37	-.14	.36	.37	-.14	1.0	
H.	.26	.35	.07	.26	.36	.07	.29	1.0

Table 7b - continued

	Self-rated Closeness	Self-rated Fun	Self-rated Conflict	Friend-rated Closeness	Friend-rated Fun	Friend-rated Conflict	Mutually rated Play	Mutually rated Visits
Gender Effects	-.01 (.04)	-.01 (.05)	-.03 (.04)	-.01 (.04)	-.01 (.05)	-.03 (.04)	-.05 (.06)	.09 (.05)
Grade Effects	.01 (.06)	.37 *** (.07)	.13 ** (.04)	.01 (.06)	.37 *** (.07)	.13 ** (.04)	-.27 *** (.06)	.38 *** (.05)

	Self-rated Ideas		Friend-rated Ideas
	-.27*** (.06)		-.27*** (.06)

Note. N = 573. Corresponding duplicate cases (i.e., the same friendship being rated twice from either perspective) have been separatedly assigned to one of the two groups.

Table 8

Summary of the Model Fit Statistics for the Grade Comparisons

Model	comp	DF	χ^2	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi^2$	p
Model 0: Nullmodel		1012	5532.62							
Tests of factor pattern										
Model 1: Freely estimated model		836	1246.29	1.491	.030	.890	.913			
Model 2: Metrically invariant model	2 : 1	881	1412.04	1.603	.033	.865	.886	45	165.75	.000
Tests of variances										
Model 3: standard deviations invariant across perspectives and groups	3 : 2	908	1464.36	1.613	.033	.863	.880	27	52.32	.002
Model 4: 2 variances freely estimated	4 : 2	906	1449.52	1.600	.033	.866	.883	25	37.48	.052
Tests of gender effects										
Model 5: gender effects invariant across perspectives	5 : 2	893	1415.49	1.585	.033	.869	.887	12	3.45	.991
Model 6: gender effects equal across groups	6 : 5	908	1443.74	1.590	.033	.868	.884	15	28.25	.020
Model 7 1 gender effect freely estimated	7 : 5	907	1432.12	1.579	.033	.870	.886	14	16.63	.276

(continued)

Table 8 - continued

Model	comp	DF	χ2	Ratio	RMSEA	NNFI	IFI	ΔDF	Δχ2	p
Tests of correlations										
Model 8: correlations among the subjectively rated aspects equal across perspectives	8 : 2	893	1428.83	1.600	.033	.866	.885	12	16.79	.158
Model 9 correlations among subjectively and mutually rated aspects equal across perspectives	9 : 8	917	1454.58	1.586	.033	.869	.884	24	25.75	.366
Model 10: above correlations and correlation among mutually rated aspects equal across groups	10 : 9	947	1517.28	1.602	.033	.865	.876	30	62.70	.000
Model 11: 3 correlations freely estimated across groups	11 : 9	944	1493.58	1.582	.033	.870	.880	27	39	.063
Model 12: correlations among corresponding self-rated and friend-rated aspects equal across groups	12 : 11	953	1514.41	1.589	.033	.868	.877	9	20.83	.013
Model 13: correlations among corresponding self-rated and friend-rated aspects free in 2nd grade	13 : 11	950	1505.29	1.585	.033	.869	.879	6	11.71	.069
Model 14: correlations among corresponding self-rated and friend-rated aspects fixed to zero in 2nd grade	14 : 13	953	1510.73	1.585	.033	.869	.878	3	5.44	.142

Table 8 - continued

Model	comp	DF	χ2	Ratio	RMSEA	NNFI	IFI	ΔDF	Δχ2	p
Tests of means										
Model 15: means of subjective aspects invariant across perspectives	15 : 2	893	1416.85	1.587	.033	.869	.887	12	4.81	.964
Model 16: all means equal across groups	16 : 15	908	1596.89	1.759	.037	.830	.851	15	180.04	.000
Model 17: nine means freely estimated	17 : 15	899	1423.03	1.583	.033	.870	.887	6	6.18	.403

Note. N for grade 2 = 132, N for grade 3 = 134, N for grade 4 = 133, N for grade 5 = 152. comp: first number defines the current model, second number defines the model used as the comparison reference for the current model. DF = degrees of freedom. χ2 = chi-square-value. Ratio = ratio between χ2 and DF. RMSEA = Root Mean Square Error of Approximation. NNFI = Non-Incremental Fit Index. IFI = Incremental Fit Index. ΔDF = difference between the degrees of freedom of the current model and the reference model. Δχ2 = difference between the chi-square-values of the current model and the reference model. p = significance level of the nested χ2-test.

Table 9

Latent Standard Deviations across Grade Levels

	Grade 2	Grade 3	Grade 4	Grade 5
Self-rated Closeness	1.0	1.0	1.0	1.0
Self-rated Fun	1.0	1.0	1.0	1.0
Self-rated Conflict	1.0	1.0	1.0	1.0
Friend-rated Closeness	1.0	1.0	1.0	1.0
Friend-rated Fun	1.0	1.0	1.0	1.0
Friend-rated Conflict	1.0	1.0	1.0	1.0
Mutually-rated Play	1.0	1.42 (.20)	1.42 (.20)	1.0
Mutually-rated Visits	1.0	1.0	1.0	.75 (.08)

Note. Standard deviation estimates have been fixed to unity in grade 2 for model identification purposes and as a point of reference (see Anderson & Gerbing, 1988). For the freely estimated parameters, i.e., those that differ from one, the standard error of estimation is depicted in brackets.

Table 10

Summary of the Model Fit Statistics for the Sociometric Group Comparisons
A Comparison among Popular, Average, and Rejected Children

Model	comp	DF	χ^2	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi^2$	p
Model 0: Nullmodel		900	4054.26							
Tests of Factor Pattern										
Model 1: Freely estimated model		708	1065.60	1.505	.037	.856	.893			
Model 2: Metrically invariant model	2 : 1	738	1109.88	1.504	.037	.856	.888	30	44.28	.045
Tests of variances										
Model 3: variances invariant across perspectives and groups	3 : 2	757	1145.96	1.514	.037	.853	.882	19	36.08	.010
Model 4: 2 variances freely estimated	4 : 2	755	1134.09	1.502	.037	.857	.885	17	24.21	.114
Tests of gender effects										
Model 5 : gender effects invariant across perspectives	5 : 2	747	1118.94	1.498	.037	.858	.888	9	9.06	.432
Model 6: gender effects invariant across perspectives and groups	6 : 5	757	1131.34	1.495	.037	.859	.886	10	12.40	.259

(continued)

Table 10 - continued

Model	comp	DF	χ^2	Ratio	RMSEA	NNFI	IFI	ΔDF	$\Delta\chi^2$	p
Tests of grade effects										
Model 7: grade effects equal across perspectives	7 : 2	747	1114.79	1.492	.037	.860	.889	9	4.91	.842
Model 8: grade effects invariant across perspectives and groups	8 : 7	759	1123.00	1.480	.036	.863	.890	12	8.21	.769
Tests of correlations										
Model 9: correlations among subjective aspects invariant across perspectives	9 : 2	747	1119.88	1.499	.037	.858	.887	9	10	.351
Model 10: correlations among subjectively and mutually rated aspects invariant across perspectives	10 : 9	765	1143.89	1.495	.037	.859	.885	18	24.01	.155
Model 11: above correlations and correlation among mutually rated aspects equal across groups	11 : 10	785	1155.73	1.472	.036	.865	.887	20	11.84	.922
Model 12: correlations among corresponding self-rated and friend-rated aspects equal across groups	12 : 11	791	1178.58	1.490	.037	.860	.881	6	22.85	.001

Table 10 - continued

Model	comp	DF	χ2	Ratio	RMSEA	NNFI	IFI	ΔDF	Δχ2	p
Model 14: 2 correlations among the corresponding self-rated and friend-rated aspects constrained in opposit directions	14 : 13	.791	1164.27	1.472	.036	.865	.886	2	0.34	.844
Tests of means										
Model 15: means invariant across perspectives	15 : 2	747	1144.28	1.532	.038	.848	.880	9	34.40	.000
Model 16: means invariant across perspectives only with average and popular children	16 : 2	744	1132.70	1.522	.038	.851	.883	6	22.82	.001
Model 17: means invariant across perspectives only with average children	17 : 2	742	1113.88	1.501	.037	.857	.888	4	4.00	.406
Model 18: only means of self-rated aspects equal across groups	18 : 17	748	1119.99	1.497	.037	.858	.887	6	6.11	.411
Model 19: means of friend-rated aspects equal across groups	19 : 18	753	1184.52	1.573	.040	.836	.869	5	64.53	.000
Model 20: also means of mutually rated aspects equal across groups	20 : 18	752	1127.36	1.499	.037	.858	.886	4	7.37	.118

Note. N for average group = 243, N for popular group = 85, N for rejected group = 41. comp: first number defines the current model, second number defines the model used as the comparison reference for the current model. DF = degrees of freedom. χ2 = chi-square-value. Ratio = ratio between χ2 and DF. RMSEA = Root Mean Square Error of Approximation. NNFI = Non-Incremental Fit Index. IFI = Incremental Fit Index. ΔDF = difference between the degrees of freedom of the current model and the reference model. Δχ2 = difference between the chi-square-values of the current model and the reference model. p = significance level of the nested χ2-test.

Table 11

Latent Standard Deviations across Sociometric Groups

	Average	Popular	Rejected
Self-rated Closeness	1.0	.81 (.06)	1.0
Self-rated Fun	1.0	.71 (.09)	1.0
Self-rated Conflict	1.0	1.0	1.0
Friend-rated Closeness	1.0	.81 (.06)	1.0
Friend-rated Fun	1.0	.71 (.09)	1.0
Friend-rated Conflict	1.0	1.0	1.0
Mutually-rated Play	1.0	1.0	1.0
Mutually-rated Visits	1.0	1.0	1.0

Note. Standard deviation estimates have been fixed to unity in the average group for model identification purposes and as a point of reference. For the freely estimated parameters, i.e., those that differ from one, the standard error of estimation is depicted in brackets.

Table 12

Nested Regression Analyses for the Correlations between Self-rated and Friend-Rated Friendship Aspects:
Incremental F-Test Results for the Comparison of Unclassified Children with the three Sociometric Groups (Popular, Average, Rejected)

Comparisons of the Correlations between Self-rated and Friend-rated Closeness

	Nested R^2	Comp R^2	Nested p	Comp p	ΔR^2	Δp	N	F	Prob F
Unclassified vs. Popular	.1880	.1890	6	7	.0010	1	476	0.577	.448
Unclassified vs. Average	.1836	.1890	6	7	.0054	1	476	3.116	.078
Unclassified vs. Rejected	.1764	.1890	6	7	.0126	1	476	7.271	.007

Comparisons of the Correlations between Self-rated and Friend-rated Fun

	Nested R^2	Comp R^2	Nested p	Comp p	ΔR^2	Δp	N	F	Prob F
Unclassified vs. Popular	.0467	.0522	6	7	.0055	1	476	2.716	.100
Unclassified vs. Average	.0489	.0522	6	7	.0033	1	476	1.630	.202
Unclassified vs. Rejected	.0521	.0522	6	7	.0001	1	476	.049	.824

(continued)

Table 12 - continued

Comparisons of the Correlations between Self-rated and Friend-rated Conflict

	Nested R^2	Comp R^2	Nested p	Comp p	ΔR^2	Δp	N	F	Prob F
Unclassified vs. Popular	.1156	.1191	6	7	.0035	1	476	1.860	.173
Unclassified vs. Average	.1189	.1191	6	7	.0002	1	476	0.106	.745
Unclassified vs. Rejected	.1180	.1191	6	7	.0011	1	476	0.584	.445

Note. N unclassified = 107, N average = 243, N popular = 85, N rejected = 41. For comparing the groups with regard to the correlations between the corresponding self-rated and friend-rated aspects, I specified regression models, wherein the self-rated construct served as the predictor and the friend-rated construct served as the criterion. The construct values were created from the average of their z-standardized indicators. I first specified a comparison model, wherein a unique intercept of the predictor variable was created for each of the four groups (i.e., popular, average, rejected, and unclassified) as a simple 0-1 coded variable. Also, a unique predictor was created for each group by setting the predictor values to zero for every other group. This regression model formed the basis, against which the loss in explained variance (R^2-difference test) in the following nested comparison tests could be assessed. Specifically, each nested comparison was conducted by creating a constrained predictor (i.e., by summing the unique predictors of the two groups to be compared; see Widaman, 1995, for details of this technique). Any difference between the groups with regard to the correlations between the corresponding self-rated and friend-rated constructs would then emerge as a significant F-test in the nested comparisons.

Table 13

Analyses of Variance and Tukey-Tests for the Comparisons of the Construct Means of Popular, Average, Rejected, and Unclassified Children

Self-rated Closeness

Source	DF	SQ	MS	F	Prob F
Model	3	0.295	0.098	1.10	.347
Error	472	42.052	0.089		
Corrected Total	475	42.347			

Self-rated Fun

Source	DF	SQ	MS	F	Prob F
Model	3	0.854	0.285	0.84	.472
Error	472	160.102	0.339		
Corrected Total	475	160.957			

Self-rated Conflict

Source	DF	SQ	MS	F	Prob F
Model	3	2.885	0.962	3.69	.012
Error	472	122.858	0.260		
Corrected Total	475	125.743			

Tukey's Studentized Range Test at Alpha = 0.05

Comparison	Difference between Means
unclassified vs. average	-0.195 *
unclassified vs. popular	-0.111
unclassified vs. rejected	-0.146

(continued)

Table 13 - continued

Friend-rated Closeness

Source	DF	SQ	MS	F	Prob F
Model	3	4.468	1.489	15.99	.000
Error	472	43.965	0.093		
Corrected Total	475	48.433			

Tukey's Studentized Range Test at Alpha = 0.05

Comparison	Difference between Means
unclassified vs. average	-0.016
unclassified vs. popular	-0.138*
unclassified vs. rejected	0.263*

Friend-rated Fun

Source	DF	SQ	MS	F	Prob F
Model	3	2.271	0.757	2.46	.062
Error	472	144.998	0.307		
Corrected Total	475	147.269			

Friend-rated Conflict

Source	DF	SQ	MS	F	Prob F
Model	3	8.207	2.736	11.03	.000
Error	472	117.095	0.248		
Corrected Total	475	125.302			

(continued)

Table 13 - continued

Tukey's Studentized Range Test at Alpha = 0.05

Comparison	Difference between Means
unclassified vs. average	-0.019
unclassified vs. popular	0.223*
unclassified vs. rejected	-0.309*

Note. N unclassified = 107, N average = 243, N popular = 85, N rejected = 41. These tests were performed on construct values that were created by averaging the z-standardized values of the constituting indicators.

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