



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>



ELSEVIER

Contents lists available at ScienceDirect

Developmental Review

journal homepage: www.elsevier.com/locate/dr

Friendship stability and change in childhood and adolescence

François Poulin *, Alessandra Chan

Department of Psychology, Université du Québec à Montréal, Montreal, Que., Canada

ARTICLE INFO

Article history:

Received 24 September 2008

Available online 23 May 2010

Keywords:

Friendship

Peer relations

Networks

Stability

ABSTRACT

The objective of this review is to focus on a neglected aspect of children's and adolescents' friendships: the level of temporal stability. First, a rationale for examining stability as a distinct friendship dimension is presented. Next, the different levels of friendship experiences are distinguished. Friendship stability is also discussed across developmental periods. Factors affecting friendships stability and individual correlates associated with friendship stability are then covered. Finally, the methodological issues pertaining to the study of friendship stability are addressed. The authors conclude by emphasizing the importance of pursuing future research that aims to demonstrate the pertinence of the friendship stability construct as an individual difference variable. Further, on a methodological level, the assessment of stability needs to be based on longitudinal designs that include multiple measurement waves. Ultimately, such detailed analysis of stability will allow a better understanding of the dynamic processes by which friendships change over time and affect children's and adolescents' psychosocial development.

© 2009 Published by Elsevier Inc.

Introduction

The establishment of friendship relations with peers constitutes a major developmental task of childhood and adolescence. In the 1950s, Sullivan (1953) posited that friendships play a key role in the development of personal competence and identity, and that the acquisition of these features may have a long-term impact on youths' adjustment. Contemporary researchers have also emphasized the importance of friendship relations for development (e.g., Berndt, 2002; Hartup, 1996; Rubin, Bukowski, & Parker, 1998; Schneider, 2000; Vitaro, Boivin, & Bukowski, 2009). Notably, friends afford

* Corresponding author. Address: Département de psychologie, Université du Québec à Montréal, C.P. 8888, succursale Centre-Ville, Montreal (Que.), Canada H3C 3P8. Fax: +1 514 987 7953.

E-mail address: poulin.francois@uqam.ca (F. Poulin).

different types of social support (e.g., emotional, instrumental; Berndt, 1989). In addition, they represent an important source of influence on youths' behaviors, goals and attitudes through modeling or peer pressure (Berndt, 1999, 2002; Berndt & Murphy, 2002), influence that can lead to both positive and negative consequences for their psychosocial development. Finally, friends provide a unique socialization context for the acquisition of essential social skills (e.g., sharing, conflict resolution; Epstein, 1986; Hartup, 1996; Youniss, 1980) which are likely to be generalized to other relationships, such as romantic or work relationships (Bagwell, Newcomb, & Bukowski, 1998).

Given their developmental significance, several dimensions of friendships have captured researchers' attention. Indeed, the presence or absence of friendships (Ladd & Troop-Gordon, 2003), the characteristics of friends (Rubin, Wosjlawowiz, Rose-Krasnor, Booth-LaForce, & Burgess, 2006; Vitaro, Tremblay, & Bukowski, 2001) and the features of friendships (Demir & Urberg, 2004; Nangle, Erdley, Newman, Mason, & Carpenter, 2003) were all found to contribute significantly and independently to children's and adolescents' psychosocial adjustment. The purpose of this review is to focus on another aspect of friendship relations in childhood and adolescence: their level of temporal stability. The notion of stability is defined by the maintenance of a relationship over time, whereas instability refers to modifications observed in friendship bonds (either friendship termination or formation). To date, approximately 35–40 published studies have examined friendship stability in childhood and adolescence, but in only about one-third of them was stability the study's primary variable. Furthermore, these studies are scattered throughout the literature. As a result, it is important at this point to organize the empirical research on the subject of friendship stability in order to establish a framework for further research in this area.

This review is divided into several sections. First, the rationale for examining stability as a distinct friendship dimension is presented. Second, the different levels of friendship experiences referred to in the literature are described. These include best friendships, friendship networks and friendship cliques. Third, friendship stability is discussed across developmental periods, from the preschool years through adolescence. Fourth, numerous relational and contextual factors affecting friendships stability are described. Fifth, a review of the individual correlates associated with friendship stability is provided. Finally, the methodological issues pertaining to the study of friendship stability are addressed.

Rationale for examining stability as a friendship dimension

Several arguments could be made to justify the importance of friendship stability in childhood and adolescence. First, friendships represent unique relationships that differ from other relationships (e.g., parent–child, sibling). Indeed, they are voluntary and more egalitarian in nature than other relationships. As a result, friendships are more likely to end than familial relationships, which are considered permanent and are therefore more difficult to dissolve (Hartup, 1989; Laursen & Bukowski, 1997).

Second, as mentioned above, friendships play a distinct role in youth development (e.g., providing social support, promoting social skills). It is likely that friendships must be enduring in order for them to provide the closeness, intimacy and companionship that constitute the major benefits of having friends. Indeed, it has been shown that friendships are influential only if they are both high in quality and stability (Berndt, 1989). In other words, friendship stability may have an impact on youths' adjustment by amplifying the specific functions provided by friendships (Berndt, 1999) or by reinforcing youths' behavior patterns (Degirmencioglu, Urberg, Tolson, & Richard, 1998).

Third, a meta-analysis conducted by Newcomb and Bagwell (1995) revealed that most studies on friendship relations examined friendships as static entities measured at a single time point, rather than across time. However, friendships, like any other form of relationship, are likely to adapt to an individual's changing needs and goals (Cairns, Leung, Buchanan, & Cairns, 1995). Some friendships are stable and last for years, some end temporarily or permanently after several weeks or only a few days, and some others are newly-formed. Hence, friendships evolve through a temporal perspective. Yet, the changing nature of friendships has largely been neglected by researchers.

Finally, individual differences may be observed in the level of friendship stability experienced by youths. Indeed, some may have very stable friendships, whereas others' friendships are primarily unstable. Still others may exhibit a level of stability in between these two extremes, with some longstanding friendships and other shorter-term friendships. These individual variations may not be

random, but instead reflect something specific about the individual (Wojslawowicz, Rubin, Burgess, Booth-LaForce, & Rose-Krasnor, 2006). It has been reported that children who have difficulties in forming and maintaining friendships are likely to experience psychosocial maladjustment (Hartup, 1989). Approximately 5–10% of children exhibit peer difficulties (Asher, 1990) and these rates are higher among children referred to guidance clinics (Achenbach & Edelbrock, 1981). Referred children have fewer friends, their conception of friendships is less mature and their friendships are less stable over time (Asher, 1990). Consequently, individual differences in friendship stability may be associated to certain personal characteristics that contribute uniquely to the quality of children's psychosocial adjustment.

Levels of friendship experiences

Studies on friendship stability could be categorized according to three levels of friendship experiences: (a) best friendships, (b) ego friendship networks or (c) friendship cliques. The great majority of studies on friendship stability have focused on children's best friendships. Best friendships are typically examined within a dyad (the participant and his/her best friend) or a small number of friends (most frequently the participant's three closest friends) (e.g., Berndt, Hawkins, & Hoyle, 1986; Bowker, 2004; Branje, Frijns, Finkenauer, Engels, & Meeus, 2007; Eder & Hallinan, 1978; Lee, Howes, & Chamberlain, 2007; Rubin et al., 2006; Schneider, Fonzi, Tani, & Tomada, 1997; Wojslawowicz et al., 2006). Other studies have been conducted on youths' ego friendship networks (e.g., Chan & Poulin, 2007; Degirmencioglu et al., 1998; Ellis & Zarbatany, 2007; Hardy, Bukowski, & Sippola, 2002). Ego measures of friendships refer to participants who provide information about their own friendship network. In other words, participants report on all the friendships they have in their network (including their best friendships as well as other secondary friendships). In such studies, the nominated friends do not necessarily know each other. Ego friendship networks thus provide important information about participants' own perceptions of their relationships (Cairns, Leung, & Cairns, 1995). Finally, a few researchers have examined friendship cliques (e.g., Cairns et al., 1995; Degirmencioglu et al., 1998; Ennett & Bauman, 1996; Neckerman, 1996), which include a small group of friends (from 3 to 9) who select each other in an interlocking network and who spend considerable and exclusive time with each other (Ennett & Bauman, 1996; Epstein, 1986).

Network size constitutes a related issue when considering the different levels of friendship experiences. Research indicates that friendship stability is inversely correlated to the size of youths' ego friendship network (Chan & Poulin, 2007). This finding supports the idea that as friendship networks get larger, they tend to be less cohesive, which can then lead to a lower level of stability (Degirmencioglu et al., 1998). As such, investment in too many friendships at the same time may contribute to a decrease in the quality and stability of these bonds, whereas maintaining a small circle of friends may enhance friendship intimacy, thereby increasing stability over time. Similarly, the literature on friendship cliques suggests that group density and cohesiveness are likely to increase stability (Degirmencioglu et al., 1998). Consequently, it is essential to distinguish the different types of friendship relations, as stability in one type of friendship does not necessarily co-occur with stability in other types of friendships (Cairns et al., 1995; Degirmencioglu et al., 1998).

Developmental age

There are theoretical reasons to believe that friendship stability should increase as a function of developmental age. Sullivan (1953) proposed a model of social development in which specific social needs emerge during certain stages of development. As such, he theorized that the need for companionship appears in childhood, while the need for intimacy emerges in early adolescence. In this way, children carry a conception of friendship based on actions, situations or other overt characteristics (Newcomb & Bagwell, 1995). When asked about the meaning of friendships, they mention characteristics such as sharing common activities or helping one another (McDougall & Hymel, 2007).

Conversely, early adolescence is marked by biological, cognitive and social changes that bring about the emergence of concepts of reciprocity, loyalty, and skills related to problem solving (Epstein, 1986). Therefore, adolescents acquire a deeper and more mature conception of friendship that

includes psychological constructs (Furman, 1982). Notions of intimacy, self-disclosure and emotional support become the hallmark of adolescent friendships (Berndt, 1986). Furthermore, although parental influences on youths' selection of friends are highly directive in childhood (e.g., parents may refuse to allow the child to go to the park with a friend), parents tend to be less directive during adolescence (Claes, 2003; Mounst, 2000). Indeed, as he or she grows older, an adolescent gains more autonomy and participates more actively in building his or her own social universe. For example, an adolescent can meet with his or her friends outside of home or school. Consequently, adolescents may have more control over the selection and maintenance of their friendships compared to children (Claes, 2003). In sum, the developmental shifts occurring in adolescence may help to consolidate friendships over time. Supporting this view, dynamic systems theory posits that as people grow older, they generally strive for stability in different areas of their lives (Granic & Hollenstein, 2006). Accordingly, one can expect that friendship stability is likely to increase with age.

Indeed, research suggests that friendship stability appears to increase over time. Among school-age children, it has been found that first graders keep about 50% of their friendships across a school year and that fourth graders maintain approximately 75% of their friendships during the same period (Berndt & Hoyle, 1985; Berndt et al., 1986; Hallinan & Tuma, 1978). Moreover, children's friendship networks tend to expand during a school year. Children tend to make more new friends than lose old ones during the year (Berndt & Hoyle, 1985). Still, a considerable level of fluidity and change have also been observed in children's social networks over a short 3-week period (Cairns et al., 1995) and over a 1 year period, with only about 30% of friendship cliques remaining stable over time (Neckerman, 1996).

Studies examining the period of early adolescence have reported a substantial level of friendship instability. It has been found that approximately one-third to one-half of friendships are unstable (Berndt, 1989; Berndt, Hawkins, & Jiao, 1999; Bowker, 2004; Cantin & Boivin, 2004; Chan & Poulin, 2007), with youths regularly losing old friendships and forming new ones with previously unfamiliar peers (Hardy et al., 2002). Friendship instability thus appears to be a relatively common phenomenon in early adolescence. Investigators have proposed that friendship instability may be more pronounced during this time because this period coincides with the transition to high school, along with numerous developmental changes at the biological, cognitive, and social levels (Berndt, 1982; Eccles, Lord, & Buchanan, 1996). Nevertheless, a few studies converge in showing that the same level of stability is found in the period preceding the transition and the one following the transition (Berndt, 1989; Berndt et al., 1999; Cantin & Boivin, 2004). Therefore, it seems that changes in friendships may not be linked solely to the transition to high school, but may reflect the unstable nature of social relationships in early adolescence.

After a period of social turmoil during the early adolescent years, friendship stability appears to increase again during the remaining period of adolescence (Degirmencioglu et al., 1998; Horrocks & Thompson, 1946). Research demonstrates that adolescents keep between 50% and 75% of their friendships over a school year (Berndt & Hoyle, 1985; Berndt et al., 1986; Degirmencioglu et al., 1998). Additionally, they tend to lose more old friends than to gain new ones (Berndt & Hoyle, 1985) and the number of close friendships decreases significantly during this period, perhaps reflecting the growing importance of intimacy over time (Claes, 2003). Finally, moderate to high levels of stability have also been found in adolescent social networks, with approximately 50% to 80% of cliques remaining intact over a year (Degirmencioglu et al., 1998; Ennett & Bauman, 1996).

Taken together, developmental changes in friendship stability appear to be present among children and adolescents. However, the data reviewed above were based on independent studies considering different levels of friendship experience and using various methodologies which make findings difficult to compare. Therefore, an important direction for future research would be to examine friendship stability by comparing different age groups but using the same methodology. It would also be interesting to invest in longitudinal studies covering all developmental periods and identify possible developmental trajectories in friendship stability.

Factors affecting friendship stability

Several factors have been proposed to account for friendship stability. These can be grouped into relational and contextual factors. The former refers to factors associated with the friendship relation itself, in terms of its composition (e.g., gender, age, and race composition) and features (e.g., quality),

whereas the latter represents factors linked to youths' social context or environment. Each of these factors is discussed in the following section.

Relational factors

A first group of factors that can play a role in friendship stability is the composition of friendships, i.e. the congruence between the child and his/her friends on various attributes. As such, friendships are most likely to be formed and maintained over time between youths who are similar to one another in terms of personal characteristics such as gender, age or race.

Same- and cross-sex friendships

The majority of studies have been conducted on same-sex friendships, probably because they are the most prevalent type of friendships across ages (Epstein, 1986). During adolescence, however, many youths begin to form friendships with the other gender (Maccoby, 1998). Such cross-sex friendships may promote the development of unique abilities, such as perspective-taking and communication (McDougall & Hymel, 2007). Evidence suggests that youths experience a significant growth in the proportion of cross-sex friendships beginning in early adolescence (Connolly, Furman, & Konarski, 2000; Feiring, 1999; Pelligrini, 1994; Poulin & Pedersen, 2007). These friendships tend to be short-lived at first (Claes, 2003) and less stable than same-sex friendships (Tuma & Hallinan, 1979).

In addition, there are important gender differences in the emergence and stability of cross-sex friendships. For example, the increase in cross-sex friendships is more pronounced for girls than boys (Epstein, 1986; Poulin & Pedersen, 2007). Also, girls report greater cross-sex friendship instability than boys (Chan & Poulin, 2007). These gender differences may be explained, in part, by the characteristics of boys' and girls' cross-sex friends. Girls' other-sex friends tend to be older than the girls and from outside of school, characteristics that do not apply to boys' other-sex friends (Poulin & Pedersen, 2007). These characteristics may influence friendship stability over time.

Same- and mixed-age friendships

One can also wonder about the stability of friendships composed of same- vs. mixed-age partners. According to a review by Rubin, Fredstrom, and Bowker (2008), very little is known about mixed-age friendships. These types of friendships, however, become increasingly frequent and available as adolescents enter high school (Rubin et al., 2008). Younger children may benefit greatly from the relationship with an older and more experienced friend (Vygotsky, 1978). On the other hand, the level of contribution or satisfaction of each partner may not be equal within a mixed-age friendship, creating more conflict and instability in the relationship compared to same-age friendships. Such a hypothesis will need to be tested in future work.

Same- and cross-race friendships

Friendship stability may also vary according to the similarity between children's and their friends' race or ethnicity. Generally, studies report that cross-race friendships are less stable than same-race friendships over the course of a school year (Aboud, Mendelson, & Purdy, 2003; Lee et al., 2007). Cross-race friendships typically decline over time, especially after the transition to high school (Aboud & Janani, 2007; Epstein, 1986). Interestingly, it has been shown that cross-race friendships do not differ significantly from same-race friendships in terms of friendship functions, except that they are rated lower on intimacy (Aboud & Janani, 2007). Since intimacy represents an important friendship quality arising in early adolescence, the lower intimacy in cross-race friendships may explain the higher level of instability in this type of friendship compared to same-race friendships (Aboud & Janani, 2007).

Friendship features

Several reviews point to the idea that various friendship features affect friendship stability in childhood and adolescence. First, research attests clearly that the quality of a friendship predicts its stability. High quality friendships include high levels of positive features (e.g., intimacy, self-disclosure, prosocial behavior, self-esteem support) and low levels of negative features (e.g., conflicts,

dominance attempts, rivalry) (Berndt, 2002). A number of studies have reported a positive link between high friendship quality and stability (Berndt et al., 1986; Branje et al., 2007; Bukowski, Hoza, & Boivin, 1994; Schneider et al., 1997). For example, compared to children with stable friendships, those with unstable friendships give lower ratings for intimacy, have lower frequency of interaction, and comment less often on their liking for their partners and more often on their partners' disloyalty or unfaithfulness (Berndt et al., 1986). Therefore, children who have trouble establishing a high quality friendship are likely to experience a great deal of turnover in their friendships (Bukowski et al., 1994).

Negative dimensions of friendship may also influence stability. For instance, high levels of conflict have been linked to lower stability (Bukowski et al., 1994). Other researchers have suggested the frequency of conflicts within a friendship may not be problematic *per se*, but rather the approach used by friends to resolve conflicts may be more critical to determining stability. Indeed, the use of specific conflict resolution strategies has been found to predict stability (Bowker, 2004). As such, the use of confrontational and assertive strategies in response to friendship conflict has been found to help girls maintain their friendships, whereas the tendency to minimize problems has been positively related to friendship stability for boys (Bowker, 2004).

Contextual factors

The social context and environment of children and adolescents may play a role in affecting friendship stability. As such, the context in which friendships take place, changes in the environment itself, and cultural factors have all been found to influence the degree to which friendship relations are maintained over time.

Friendship context

The majority of studies examined peer relationships within one context only: the school. Research has established that the organizational and structural characteristics of the school environment, including the school's architectural features, the organization of students, and instructional methods, can influence youths' opportunities for interactions with friends (Epstein, 1989). Neckerman (1996) demonstrated that when schools promoted classrooms as a unit from 1 year to another, 55% of social networks remained stable, whereas only 7% of the networks were stable when schools did not promote classrooms as a unit. These results illustrate the importance of stability in the school environment in sustaining stable relationships (Neckerman, 1996).

In addition to the school context, mounting evidence shows that youths can have significant friendship relations in nonschool contexts, such as the neighborhood, leisure activities, etc. (Kiesner, Poulin, & Nicotra, 2003; Mahoney, 2000). This is particularly true in adolescence given that youths gradually spend more time with their peers outside of home and school (Larson & Verma, 1999). More importantly, recent research has demonstrated that each context (school *and* nonschool) plays a unique role in the child's development. Indeed, a child is exposed to distinct behaviors in each of these experiential niches and, as a result, each friendship network offers a differing learning experience (Kiesner et al., 2003).

Interestingly, a large proportion of friendships may also be taking place both in school *and* outside of school. Therefore, in addition to the initial school-only and nonschool-only contexts, adolescent friendship networks are likely to include "multicontext" friendships defined as the simultaneous involvement in both school *and* nonschool contexts. A recent study has shown that stability varies according to the different contexts in which friendships take place. Findings revealed that multicontext friendships tend to be more stable than single-context friendships (school-only *or* nonschool-only) (Chan & Poulin, 2007). Therefore, the simultaneous involvement in diverse friendship contexts may represent a crucial factor in influencing stability. Other researchers have recognized that extending school-based friendships to nonschool settings could enhance friendship quality and intimacy, thereby reinforcing its stability. The inverse is also plausible: Friendships that are already stable in one context may extend to other contexts over time (Dubois & Hirsch, 1990; Thomas & Berndt, 2005). Overall, it is important to consider the ecology of friendship relations because each context may bring its unique experience for the youth and affect their level of friendship stability.

Changes in the environment

Several researchers have been interested in assessing friendship stability among students facing a transition to high school (Berndt, 1989; Cantin & Boivin, 2004; Hardy et al., 2002). Findings from these studies indicate that on average, the level of friendship stability decreases as students move to a new school, with students concurrently losing friends and forming new ones immediately after the transition. Thus, a great level of instability seems to characterize youths' friendships following a school transition. In the same vein, the work of Vernberg, Greenhoot, and Biggs (2006) examined the effect of relocation to a new community on intimacy and companionship in adolescent friendships. Their results provide strong evidence that, compared to youths who remained residentially stable, youths who relocate experience a lower level of intimacy and companionship in their friendships. Future studies could extend on Vernberg et al.'s work and examine the link between relocation and friendship stability among children and adolescents.

Culture

As a final point, friendship stability is likely to be influenced by cultural factors. A study comparing the friendships of Italian and Canadian children observed a higher level of friendship stability among the Italian children than among the Canadians over the school year (Schneider et al., 1997). The higher stability among Italian children may be attributed to the lower levels of conflict reported by the children in the Italian sample than in Canada. On the whole, little attention has been devoted to cultural factors in the friendship literature and the scope of research remains large (Chen, French, & Schneider, 2006). For example, it will be interesting to compare different patterns in friendship stability between countries that value individualism as opposed to collectivism.

Individual correlates of friendship stability

Research concerned with friendship stability raises important questions about individual differences. Indeed, significant variations in friendship stability may be observed from one individual to another, in that some people may maintain very stable friendships, others may carry very unstable ones and still others may present a level of stability in between. More importantly, these individual differences may not be random, but instead be associated to specific personal characteristics that contribute to influence youths' psychosocial adjustment. In the following section, three individual variables have been related to friendship stability: (1) youths' gender, (2) behavioral characteristics, such as internalizing and externalizing behavior, and (3) psychosocial adjustment.

Gender

Research has established that boys' and girls' interpersonal relationships differ from each other in many respects (Rose & Rudolph, 2006). As such, boys and girls vary in their conception of friendships. Boys tend to engage in activities with larger groups, which may consist of peers who are acquaintances or playmates and not necessarily friends. Their interactions tend to be activity-based and involve sports and games requiring multiple participants (Claes, 2003; Rose, 2007). In contrast, girls are inclined to be more exclusive in their friendships and are more likely to interact in dyads or in small groups of friends (Eder & Hallinan, 1978). Because girls are more relationship-oriented, girls' friendships are also typically based on intimacy and disclosure of personal thoughts and feelings (Bukowski, Newcomb, & Hoza, 1987; Claes, 2003; Rose, 2007). Consequently, gender differences in friendship patterns may lead girls to react more negatively when faced with interpersonal stress. It has been shown that girls tend to be more distressed than boys when imagining the potential termination of their friendships (Benenson & Christakos, 2003). Girls also more easily change friends when they perceive a violation of friendship norms (Degirmencioğlu et al., 1998).

The extent to which such gender differences extend to friendship stability, in particular, is unclear. Several empirical studies did not find gender differences in friendship stability among children (Berndt et al., 1986; Cairns et al., 1995) and adolescents (Degirmencioğlu et al., 1998; Horrocks & Thomp-

son, 1946). Such findings support the notion that girls' preference for exclusive relationships may serve to maintain their friendships over time compared to boys (Berndt, 1982; Eder & Hallinan, 1978). However, in studies where gender differences in friendship stability were found, the balance consistently leaned in favor of boys. In other words, evidence suggests that girls' friendship stability tends to be lower than boys'. Benenson and Christakos (2003) have shown that compared to males, females' friendships tended to be of a shorter duration (i.e., they were formed more recently) and they reported more former friendships, i.e., friendships that had ended. These writers noted that girls' need for intimacy could make them extremely sensitive to potential distress within their friendships, and this could lead to intense conflicts that possibly contribute to lowering girls' levels of friendship stability compared to boys.

Behavioral characteristics

Internalizing behavior

In the literature, different indicators of internalizing behavior have been linked to friendship stability, notably depressive symptoms, shyness/withdrawal and peer victimization. Theoretical models of depression based on cognitive-interpersonal approaches have recently received heightened attention in research and theoretical literature conceptualizing the link between youths' friendship relations and depressive symptoms (Rudolph & Clark, 2001; Rudolph, Hammen, & Burge, 1997). On one hand, cognitive models of depression (Baldwin, 1992; Safran, 1990) presume that individuals who carry a negative perception of their relationships may be at risk for depressive symptoms. Brendgen, Vitaro, Turgeon, and Poulin (2002) have documented that, compared with well-adjusted children, depressed children maintain a negatively biased view of their peer relationships. In other words, they perceive lower friendship quality with their best friends and lower levels of peer group acceptance. On the other hand, interpersonal models of depression (Coyne, 1976a, 1976b) illustrate a bidirectional link between depressive behaviors and interpersonal difficulties. This model has been tested in a sample of youth and findings have shown that depressive symptoms were associated with self-report measures of interpersonal problems, such as loneliness and rejection (Joiner, 1999). Moreover, in one recent study, elevated depressive symptoms at one time point significantly predicted an increase in friendship instability by the following month among an early adolescent sample. Specifically, participants' depressed mood appeared to be associated with instability in their best friendships (but not secondary friendships) and in their school friendships (but not nonschool and multicontext friendships) (Chan & Poulin, 2009). Last, several reviews have stressed that significant gender differences in depression are evident by the middle of adolescence (i.e., between ages 15 and 18). At this age, females are twice as likely to be depressed as males (Nolen-Hoeksema & Girgus, 1994; Wichstrom, 1999). Future studies should investigate if gender moderates the link between depression and friendship instability among an older sample of adolescents. In this respect, it can be hypothesized that adolescent girls who experience high levels of friendship instability would show higher levels of depressive feelings compared to boys with similarly high levels of instability.

In addition to depression, investigators have also examined friendship stability among shy/withdrawn children. Shy/withdrawn children seem to be as likely as nonwithdrawn children to have stable best friendships over a school year, despite the lower quality of their friendships (Rubin et al., 2006). It would be interesting to examine in future research stability in the friendship network of shy/withdrawn children (not only their best friendship) as well as friendship stability among shy/withdrawn adolescents. As Rubin et al. (2006) noted, social withdrawal may become more salient and negative to peers with age, so that shy adolescents may experience greater difficulty in maintaining friendships.

Finally, experiences of peer victimization may be linked to friendship stability. A study has shown that victimized children experience difficulty forming new friendships (Ellis & Zaratany, 2007). When both girls were victimized, the friendship remained relatively stable; when only one girl was victimized, the friendship was more likely to be terminated (Ellis & Zaratany, 2007). Another study has documented that children who maintain stable friendships displayed low levels of victimization (Wojslawowicz et al., 2006). Conversely, children who lost friendships became more victimized over time, whereas those who gained friendships over time became less victimized (Wojslawowicz et al., 2006). Overall, these studies point to the idea that friendship stability may be associated with low

levels of peer victimization in important ways—although the direction of such associations remain unclear. Another aspect peer victimization that would be relevant to examine in the future in link with friendship stability could be the qualitative nature or the dynamics of bully/victim friendship dyads.

Externalizing behavior

Friendship stability is influenced by externalizing behavior in children and adolescents. On a theoretical level, the coercion model (Patterson, Reid, & Dishion, 1992) posits that aggressive children are often rejected by their peer group, which can lead them to be deprived of positive social experiences with prosocial peers. Such deprivation may have an impact on the stability of the rejected children's friendships because they have fewer opportunities for developing the social skills required for sustaining their relationships.

Overall, research established that the friendship stability of youths who display externalizing behavior is lower compared to well-adjusted youths. A study comparing girls with attention deficit/hyperactivity disorder (ADHD) and girls without ADHD revealed that the former exhibited difficulties in making and maintaining friendships in contrast to the comparison group. Moreover, girls with ADHD were more likely to have no friends and less likely to have multiple friends than the girls without ADHD. Finally, it appeared that girls with ADHD had higher levels of negative friendship features (e.g., conflict, relational aggression) than the comparison group, which may contribute to their friendship difficulties (Blachman & Hinshaw, 2002). Another study suggested that both relational and overt aggression predicted friendship instability among youths who had aggressive friends (Ellis & Zarbata-ny, 2007). This study's findings also suggested that aggressive children did not necessarily have difficulty making new relationships, but had difficulty sustaining their friendships.

Similarly, research among antisocial adolescents reveals that although they have friends and are central members of their social networks, their friendships tend to be lower in quality (Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988), of short duration, and end inappropriately (Dishion, Andrews, & Crosby, 1995). More specifically, their friendships are more conflictual (Giordano, Cernkovich, & Pugh, 1986) and are characterized by the use of directives and negative exchanges (Dishion et al., 1995). Research evidence also suggests the presence of a bidirectional link between antisocial behavior and friendship instability. In one study, friendship instability predicted an increase in antisocial behavior and, in return, antisocial behavior led to greater friendship instability among youths (Poulin, Dishion, & Medici, 1998).

Psychosocial adjustment

Friendship stability has been found to be related to several indicators of social adjustment in childhood and adolescence. Friendship stability has been associated with higher levels of prosociality and popularity (Berndt, 1989; Berndt et al., 1999), lower levels of loneliness (Parker & Seal, 1996), and lower levels of aggression and victimization (Wojslawowicz et al., 2006). Parker and Seal (1996) conducted a study in which they identified four different trajectories for friendship stability and formation. They found that children with different trajectories presented distinct behavioral profiles. For example, children who rotated through friendships over time (i.e., low stability, high formation) had both positive qualities that allowed them to attract others to them (e.g., sense of humor) and negative qualities that contributed to their difficulty sustaining relationships (e.g., aggressiveness). Alternatively, children who experienced a decline in the size of the friendship network (i.e., low stability, low formation) exhibited prosocial characteristics, such as caring, sharing and honesty. Consequently, children differed in the rate at which they lost friendships and formed new ones, and these individual differences were associated with children's personal characteristics (Parker & Seal, 1996). Along the same lines, a study conducted by Wojslawowicz et al. (2006) examined the behavioral characteristics associated with different patterns of friendship stability among children. Their findings suggest that the stability of having *any* best friendship across time may be as important to children's adjustment as maintaining the same friendship over time and that best friendship loss is linked to increased adjustment difficulties (Wojslawowicz et al., 2006).

Finally, friendship stability has been associated with school adjustment among young children. Research among preschoolers has demonstrated that those who maintained their friendships liked

school better as the year progressed and that making new friends in the classroom was associated with gains in school performance (Ladd, 1990; Ladd & Price, 1987). Stable friendships thus allowed children to view school in a favorable light, especially during the stressful school transition period (Ladd & Price, 1987). In sum, friendship stability appears to contribute to school adjustment among young children. Therefore, it would be pertinent to examine if friendship stability would be predictive of higher academic achievement among school-age children and adolescents.

Future research

This review opens the door to other important questions that remain unanswered and that could be the focus of future studies. More research needs to be conducted on friendship stability in order to provide further support for the validity of this construct and to demonstrate its value in predicting child and youth adjustment. An important question to keep in mind is whether friendship stability is a good or a bad thing for development. Is it preferable to change friends on a frequent basis and hence experience different friendship relations over time, or to keep the same friendships for a long time? For instance, future work could assess the unique contribution of friendship stability to psychosocial development, independent of other friendship dimensions, such as friendship quality or friends' characteristics. At this point, it is unclear from the existing literature whether friendship stability is a meaningful contributor to youth functioning even after controlling for other relationship dimensions. It would also be useful to collect data covering several developmental periods (e.g., childhood *and* adolescence) in order to distinguish the immediate, short-term and long-term outcomes of friendship stability. In addition, it would be interesting to examine the effects of stability according to the different levels of friendships (e.g., best friends vs. members of the larger friendship network). Answers to these important questions will be obtained by examining not only the negative, but also the positive outcomes related to friendship stability.

Methodological issues

Three methodological issues require careful considerations in the assessment of friendship stability: (1) the procedures used to collect friendship information, (2) the criteria used to define friendships, and (3) the number of measurement waves and time intervals used in the assessment of stability.

Procedures used to collect friendship information

Different procedures for collecting friendship data have been used in the literature. The most frequently used methodology is the friendship nomination procedure in which participants are asked to write down their friends' names on a questionnaire (Degirmencioglu et al., 1998; Rubin et al., 2006), to name their friends during an individual face-to-face interview (Benenson & Christakos, 2003; Cairns et al., 1995) or to name their friends in a telephone interview (Chan & Poulin, 2007).

A related aspect of friendship research methodology to consider when using friendship nominations concerns the limit to the number of friendships. Some studies suggest that when an arbitrary limit is imposed on the number of friends that participants can nominate (e.g., maximum of 3 or 10 friends), participants may feel constrained to nominate more (or fewer) friends than they actually have (Berndt et al., 1986; Degirmencioglu et al., 1998; Rubin et al., 1998). By imposing a limit to the number of friends, one may underestimate the actual level of stability because participants who have, for example, more than three friends may not nominate the same three friends on different assessment occasions.

Another friendship procedure involves sociometric nominations in which list of names are provided to participants and they choose a limited or unlimited number of friends from the list (Aboud et al., 2003; Bowker, 2004; Ellis & Zabatany, 2007; Parker & Seal, 1996; Schneider et al., 1997). Observations in school settings have also been used in few studies, mostly among kindergarten children (Barbu, 2003; Martin & Fabes, 2001), but also among young adolescents (Pelligrini, 1994). However,

these procedures may be limited in measuring the actual level of friendship stability since only school friends can be assessed.

As for the assessment of friendship cliques, Cairns and his team have typically used the social-cognitive map procedure. This technique involves the construction of a composite social map by combining information obtained across multiple respondents of the social networks in each classroom and school (Cairns et al., 1995; Neckerman, 1996). Consequently, this procedure allows participants to provide information about the entire social network without being limited to describing their own personal circle of friends (Cairns et al., 1995). Taken as a whole, the choice of the procedure used to obtain friendship data must be carefully considered because it may have an impact on the level of friendship stability obtained.

Criteria in defining friendships

One important issue to consider in the study of friendship stability involves the criteria used to define “friendship”. Some experts claim that reciprocity is an inherent condition in defining a friendship (Rubin et al., 1998). Indeed, reciprocity suggests that the friendship is genuine since its existence is acknowledged by both sides, the child and the nominated friend. However, the reciprocity criterion also has several shortcomings. Indeed, students who do not have reciprocated nominations in the classroom could nonetheless have friendships in other classrooms or out of school. Therefore, the use of reciprocal nominations does not allow the study of both school and nonschool friendships (Kiesner et al., 2003; Schneider, Wiener, & Murphy, 1994). Additionally, in the context of a longitudinal study that includes multiple assessment waves, the probability that two participants nominate each other at *all* waves is relatively low, considering the fact that most youths usually have more than one friend in their network (Cairns et al., 1995). Consequently, the real level of stability may be underestimated when using reciprocal nominations.

Other investigators argue that subjective or self-reported friendships (i.e., acknowledged by the child, but not necessarily by the friend) are important in their own right because they reflect an individual's own perception of his or her relationships. These perceived relationships may be influential in the life of that individual, even if they do not fully correspond with objective interactions (Furman & Buhrmester, 1985). Indeed, given that friendships are affective bonds by definition, it has been proposed that the subjective importance of these relationships may affect youths' attitudes or behaviors. Perceptions of relationships may therefore constitute the most valid indices of their quality (Furman, 1996).

Evidence supporting this view is provided by a study showing that, regardless of friendship reciprocation, feelings of identification with peers were found to influence adolescents' behavior and adjustment (Kiesner, Cadinu, Poulin, & Bucci, 2002). Further, another study demonstrated that, over a 1-year interval, teens without any reciprocated friendships were more influenced by the actions of their self-reported friends than were teens who had reciprocated friendships (Aloise-Young, Graham, & Hansen, 1994). Therefore, there is compelling evidence to suggest that the subjective importance of a friendship exerts a strong influence on youths' psychosocial adjustment.

Some studies have compared the stability of reciprocal and subjective friendships among children and adolescents. When subjective criteria for stability were employed, high stability was generally found in children's friendships and social networks. In contrast, when reciprocal criteria were employed, only modest stability was observed in friendships and social networks (Cairns et al., 1995). Indeed, it has been noted that if two participants were mutual friends in T1, their chances of being mutual friends again 3 weeks later were low. But this does not mean that the relationship was entirely ruptured. In fact, there is a high probability that at least one participant in a mutual friendship would again nominate the other participant as a friend 3 weeks later, even when the choice was not reciprocated in T2 (Cairns et al., 1995). Another study conducted among an adolescent sample found few differences between the reciprocated and nonreciprocated friendships with respect to perceived friendship quality and use of conflict resolution strategies (Bowker, 2004). Therefore, it appears that among adolescents, the distinction between unilateral and reciprocal friendships may be less critical. The authors suggest that both types of friendships are important social ties and may represent friendships at different stages of development.

Number of measurement waves and time intervals in the assessment of stability

Some studies evaluated stability based on one wave of measurement by asking youths retrospectively about the duration of their friendships (e.g., Benenson & Christakos, 2003; Dishion et al., 1995). Yet, the majority of studies examining friendship stability have assessed friendships twice within a 6-month interval (typically in the fall and spring over the course of a school year) (Aboud et al., 2003; Berndt & Hoyle, 1985; Bowker, 2004; Degirmencioglu et al., 1998; Rubin et al., 2006; Schneider et al., 1997; Wojslawowicz et al., 2006). Similarly, studies examining friendship cliques have defined group stability as at least 50% of the members of the original group remaining together between two time points (Cairns et al., 1995; Neckerman, 1996). In this way, only few studies have measured stability by using three or more waves over a school year: (a) three waves (Berndt, 1989; Berndt et al., 1999; Lee et al., 2007); (b) five waves (Bukowski & Newcomb, 1984; Chan & Poulin, 2007; Tuma & Hallinan, 1979); (c) six waves (Hardy et al., 2002); (d) seven waves (Eder & Hallinan, 1978).

In prior studies, the measure of stability is generally obtained by calculating the proportion of friendships existing across two waves of measurement (e.g., T1–T2; T3–T4). One exception is found in Chan and Poulin's (2007) study in which the stability index attempted to capture the total amount of change in adolescents' friendship network over the 5-month period covered by the study. This index was calculated by summing the total number of friendships renominated across the 5 months divided by the total number of friendships. This index was then transformed into a proportion varying on a continuum between 0 (no stability in the network) and 1 (perfect stability in the network) (Chan & Poulin, 2007). Other investigators have defined friendship stability as a categorical variable instead of a continuous one. For example, Parker and Seal (1996) distinguished four group patterns of friendship stability and formation: (a) expansion (high stability, high formation); (b) decline (low stability, low formation); (c) stable (high stability, low formation); (d) rotation (low stability, high formation). Likewise, Wojslawowicz et al. (2006) included four friendship groups: (a) stable with the same best friend, (b) stable with a different best friend, (c) friendship loss, and (d) friendship gain.

Finally, it is important to keep in mind that friendship instability is a common phenomenon, particularly in adolescence, whether it is over a short 3-week period (Cairns et al., 1995) or over a long-term period of 1 year (Degirmencioglu et al., 1998). Therefore, children's and adolescents' friendships are likely to change within intervals shorter than 6 months and hence, yearly longitudinal assessments might not be able to track fluctuations in youth friendships (Dishion & Medici Skaggs, 2000). For these reasons, it may be more adequate to assess temporal variations by including more than two waves of measurement and using shorter time frames. Only rarely have studies assessed friendship stability over several weeks (e.g., Cairns et al., 1995; Horrocks & Thompson, 1946; Parker & Seal, 1996) or a few months (e.g., Chan & Poulin, 2007; Ellis & Zarbatany, 2007). Indeed, short interval measurements are challenging to researchers and participants due to methodological limitations such as cost and intrusion.

In sum, the study of stability and change in friendships constitutes a large theoretical and methodological challenge. Clearly, innovative methodologies are needed in order to deal with past constraints. One recent study has demonstrated that monthly telephone interviews constitute an effective method for collecting friendship data (Chan & Poulin, 2007). These interviews were structured, brief (approximately 15 min in duration) and had a low level of intrusiveness for participants. A low attrition rate (only 6%) was obtained during the period covered by the study. As such, short interval measurements remain a promising avenue for future research. Indeed, it would be interesting to capture youths' friendship stability across weekly or even daily intervals, applying methods such as the experience sampling method in which participants are paged at random times of the day (Csikszentmihalyi & Larson, 1987). In this method, participants are asked to answer a series of brief questions related to their activities, their emotional states and their companions immediately upon being paged (Richards, Crowe, Larson, & Swarr, 1998). The approach of studying change using short interval assessments is likely to contribute greatly to an understanding of the short-term interactional processes by which children's and adolescents' friendships evolve over time and affect their development.

Conclusion

This review emphasizes the importance of the temporal parameters of children's and adolescents' friendships. In past research, friendships have tended to be considered to be static entities that are fixed across time, yet friendship relations represent dynamic systems in constant evolution that change even over very short time intervals. Therefore, friendship research would greatly benefit from examining stability as an individual difference variable and assessing stability through a short-term framework.

References

- About, F. E., & Janani, S. (2007). Friendship and identity in a language-integrated school. *International Journal of Behavioral Development*, 31, 445–453.
- About, F. E., Mendelson, M. J., & Purdy, K. T. (2003). Cross-race peer relations and friendship quality. *International Journal of Behavioral Development*, 27, 165–173.
- Achenbach, T. M., & Edelbrock, C. S. (1981). Behavioral problems and competencies reported by parents of normal and disturbed children aged 4 through 16. *Monographs of the Society for Research in Child Development*, 46(1), 188.
- Aloise-Young, P. A., Graham, J. W., & Hansen, W. B. (1994). Peer influence on smoking initiation during early adolescence: A comparison of group members and group outsiders. *Journal of Applied Psychology*, 79, 281–287.
- Asher, S. R. (1990). Recent advances in the study of peer rejection. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 3–13). New York: Cambridge University Press.
- Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development*, 69, 140–153.
- Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, 112, 461–484.
- Barbu, S. (2003). Stability and flexibility in preschoolers' social networks: A dynamic analysis of socially directed behavior allocation. *Journal of Comparative Psychology*, 117, 429–439.
- Benenson, J. F., & Christakos, A. (2003). The greater fragility of females' versus males' closest same-sex friendships. *Child Development*, 74, 1123–1129.
- Berndt, T. J. (1982). The features and effects of friendship in early adolescence. *Child Development*, 53, 1447–1460.
- Berndt, T. J. (1986). Children's comments about their friendships. In M. Perlmutter (Ed.), *The Minnesota symposia on child psychology, cognitive perspectives on children's social and behavioral development* (Vol. 18, pp. 189–212). Hillsdale, NJ: Erlbaum.
- Berndt, T. J. (1989). Obtaining support from friends during childhood and adolescence. In D. Belle (Ed.), *Children's social networks and social supports* (pp. 308–331). New York, NY: John Wiley & Sons, Inc.
- Berndt, T. J. (1999). Friends' influence on students' adjustment to school. *Educational Psychologist*, 34, 15–28.
- Berndt, T. J. (2002). Friendship quality and social development. *Current Directions in Psychological Science*, 11, 7–10.
- Berndt, T. J., Hawkins, J. A., & Hoyle, S. G. (1986). Changes in friendship during a school year: Effects on children's and adolescents' impressions of friendships and sharing with friends. *Child Development*, 57, 1284–1297.
- Berndt, T. J., Hawkins, J. A., & Jiao, Z. (1999). Influences of friends and friendships on adjustment to junior high school. *Merrill-Palmer Quarterly*, 45, 13–41.
- Berndt, T. J., & Hoyle, S. G. (1985). Stability and change in childhood and adolescent friendships. *Developmental Psychology*, 21, 1007–1015.
- Berndt, T. J., & Murphy, L. M. (2002). Influences of friends and friendships: Myths, truths, and research recommendations. In R. V. Kail (Ed.), *Advances in child development and behavior* (Vol. 30, pp. 275–310). San Diego, CA: Academic Press.
- Blachman, D. R., & Hinshaw, S. P. (2002). Patterns of friendship among girls with and without attention-deficit/hyperactivity disorder. *Journal of Abnormal Child Psychology*, 30, 626–640.
- Bowker, A. (2004). Predicting friendship stability during early adolescence. *Journal of Early Adolescence*, 24, 85–112.
- Branje, S. J. T., Frijns, T., Finkenauer, C., Engels, R., & Meeus, W. (2007). You are my best friend: Commitment and stability in adolescents' same-sex friendships. *Personal Relationships*, 14, 587–603.
- Brendgen, M., Vitaro, F., Turgeon, L., & Poulin, F. (2002). Assessing aggressive and depressed children's social relations with classmates and friends: A matter of perspective. *Journal of Abnormal Child Psychology*, 30, 609–624.
- Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the friendship qualities scales. *Journal of Social and Personal Relationships*, 11, 471–484.
- Bukowski, W. M., & Newcomb, A. F. (1984). The stability and determinants of sociometric status and friendship choice: A longitudinal perspective. *Developmental Psychology*, 20, 265–274.
- Bukowski, W. M., Newcomb, A. F., & Hoza, B. (1987). Friendship conceptions among early adolescents: A longitudinal study of stability and change. *Journal of Early Adolescence*, 7, 143–152.
- Cairns, R. B., Cairns, B. D., Neckerman, H. J., Gest, S. D., & Gariépy, J. L. (1988). Social networks and aggressive behavior: Peer support or peer rejection. *Developmental Psychology*, 24, 815–823.
- Cairns, R. B., Leung, M.-C., Buchanan, L., & Cairns, B. D. (1995). Friendships and social networks in childhood and adolescence: Fluidity, reliability, and interrelations. *Child Development*, 66, 1330–1345.
- Cairns, R. B., Leung, M.-C., & Cairns, B. D. (1995). Social networks over time and space in adolescence. In L. J. Crockett & A. C. Crouter (Eds.), *Pathways through adolescence: Individual development in relation to social contexts. The Penn State series on child and adolescent development* (pp. 35–56). Hillsdale, NJ: Erlbaum.
- Cantin, S., & Boivin, M. (2004). Change and stability in children's social network and self-perceptions during transition from elementary to junior high school. *International Journal of Behavioral Development*, 28, 561–570.

- Chan, A., & Poulin, F. (2009). Monthly instability in early adolescent friendship networks and depressive symptoms. *Social Development, 18*, 1–23.
- Chan, A., & Poulin, F. (2007). Monthly changes in the composition of friendship networks in early adolescence. *Merrill-Palmer Quarterly, 53*, 578–602.
- Chen, X., French, D., & Schneider, B. (2006). *Peer relationships in cultural context. A volume in the Cambridge studies in social and emotional development*. New York: Cambridge University Press.
- Claes, M. (2003). *L'univers social des adolescents*. Montréal: Les Presses de l'Université de Montréal.
- Connolly, J., Furman, W., & Konarski, R. (2000). The role of peers in the emergence of heterosexual romantic relationships in adolescence. *Child Development, 71*, 1395–1408.
- Coyne, J. C. (1976a). Depression and the response of others. *Journal of Abnormal Psychology, 85*, 186–193.
- Coyne, J. C. (1976b). Toward an interactional description of depression. *Psychiatry, 39*, 28–40.
- Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the experience-sampling method. *Journal of Nervous and Mental Disease, 175*, 526–536.
- Degirmencioglu, S. M., Urberg, K. A., Tolson, J. M., & Richard, P. (1998). Adolescent friendship networks: Continuity and change over the school year. *Merrill-Palmer Quarterly, 44*, 313–337.
- Demir, M., & Urberg, K. A. (2004). Friendship and adjustment among adolescents. *Journal of Experimental Child Psychology, 88*, 68–82.
- Dishion, T. J., Andrews, D. W., & Crosby, L. (1995). Antisocial boys and their friends in early adolescence: Relationship characteristics, quality, and interactional process. *Child Development, 66*, 139–151.
- Dishion, T. J., & Medici Skaggs, N. (2000). An ecological analysis of monthly «bursts» in early adolescent substance use. *Applied Developmental Science, 4*, 89–97.
- DuBois, D. L., & Hirsch, B. J. (1990). School and neighborhood friendship patterns of Blacks and Whites in early adolescence. *Child Development, 61*, 524–536.
- Eccles, J. S., Lord, S., & Buchanan, C. (1996). School transitions in early adolescence: What are we doing to our young people? In J. A. Graber, J. Brooks-Gunn, & A. C. Petersen (Eds.), *Transitions through adolescence: Interpersonal domains and context* (pp. 251–284). Hillsdale, NJ, England: Lawrence Erlbaum Associates.
- Eder, D., & Hallinan, M. T. (1978). Sex differences in children's friendships. *American Sociological Review, 43*, 237–250.
- Ellis, W. E., & Zarbatany, L. (2007). Explaining friendship formation and friendship stability: The role of children's and friends' aggression and victimization. *Merrill-Palmer Quarterly, 53*, 79–104.
- Ennett, S. T., & Bauman, K. E. (1996). Adolescent social networks: School, demographic, and longitudinal considerations. *Journal of Adolescent Research, 11*, 194–215.
- Epstein, J. L. (1986). Friendship selection: Developmental and environmental influences. In E. C. Mueller & C. R. Cooper (Eds.), *Process and outcome in peer relationships* (pp. 129–160). Orlando, FL: Academic Press, Inc.
- Epstein, J. L. (1989). The selection of friends: Changes across the grades and in different school environments. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 158–187). New York: John Wiley & Sons.
- Feiring, C. (1999). Other-sex friendship networks and the development of romantic relationships in adolescence. *Journal of Youth and Adolescence, 28*, 495–512.
- Furman, W. (1982). Children's friendships. In T. Field, G. Finley, A. Huston, H. Quay, & L. Troll (Eds.), *Review of human development* (pp. 327–342). New York: Wiley.
- Furman, W. (1996). The measurement of friendship perceptions: Conceptual and methodological issues. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendships in childhood and adolescence* (pp. 41–65). Cambridge University Press.
- Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21*, 1016–1024.
- Giordano, P. C., Cernkovich, S. A., & Pugh, M. D. (1986). Friendship and delinquency. *American Journal of Sociology, 91*, 1170–1202.
- Granic, I., & Hollenstein, T. (2006). A survey of dynamic systems methods for developmental psychopathology. In Dante Cicchetti, Donald J. Cohen (Eds.), *Developmental psychopathology, Theory and method* (Vol. 1, 2nd ed., pp. 889–930). Hoboken, NJ, US: John Wiley & Sons Inc.
- Hallinan, M. T., & Tuma, N. B. (1978). Classroom effects on change in children's friendships. *Sociology of Education, 51*, 270–282.
- Hardy, C. L., Bukowski, W. M., & Sippola, L. K. (2002). Stability and change in peer relationships during the transition to middle level school. *Journal of Early Adolescence, 22*, 117–142.
- Hartup, W. W. (1989). Social relationships and their developmental significance. *American Psychologist, 44*, 120–126.
- Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1–13.
- Horrocks, J. E., & Thompson, G. G. (1946). A study of the friendship fluctuations of rural boys and girls. *The Journal of Genetic Psychology, 69*, 189–198.
- Joiner, T. E. Jr., (1999). A test of interpersonal theory of depression in youth psychiatric inpatients. *Journal of Abnormal Child Psychology, 27*, 77–85.
- Kiesner, J., Cadinu, M., Poulin, F., & Bucci, M. (2002). Group identification in early adolescence: Its relation with peer adjustment and its moderator effect on peer influence. *Child Development, 73*, 196–208.
- Kiesner, J., Poulin, F., & Nicotra, E. (2003). Peer relations across contexts: Individual-network homophily and network inclusion in and after school. *Child Development, 74*, 1–16.
- Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: Predictors of children's early school adjustment? *Child Development, 61*, 1081–1100.
- Ladd, G. W., & Price, J. M. (1987). Predicting children's social and school adjustment following the transition from preschool to kindergarden. *Child Development, 58*, 1168–1189.
- Ladd, G. W., & Troop-Gordon, W. (2003). The role of chronic peer difficulties in the development of children's psychological adjustment problems. *Child Development, 74*, 1344–1367.
- Larson, R. W., & Verma, S. (1999). How children and adolescents spend time across the world: Work, play, and developmental opportunities. *Psychological Bulletin, 125*, 701–736.

- Laursen, B., & Bukowski, W. B. (1997). A developmental guide to the organization of close relationships. *International Journal of Behavioral Development*, 21, 747–770.
- Lee, L., Howes, C., & Chamberlain, B. (2007). Ethnic heterogeneity of social networks and cross-ethnic friendships of elementary school boys and girls. *Merrill-Palmer Quarterly*, 53, 325–346.
- Maccoby, E. E. (1998). *The two sexes: Growing up apart, coming together*. Cambridge: Harvard University Press.
- Mahoney, J. L. (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns. *Child Development*, 71, 502–516.
- Martin, C. L., & Fabes, R. A. (2001). The stability and consequences of young children's same-sex peer interactions. *Developmental Psychology*, 37, 431–446.
- McDougall, P., & Hymel, S. (2007). Same-gender versus cross-gender friendship conceptions: Similar or different? *Merrill-Palmer Quarterly*, 53, 347–380.
- Mounts, N. S. (2000). Parental management of adolescent peer relationships: What are its effects on friend selection? In K. Kerns, J. Contreras, & A. Neal-Barnett (Eds.), *Family and peers: Linking two social worlds* (pp. 169–193). Westport, CT: Praeger.
- Nangle, D. W., Erdley, C. A., Newman, J. E., Mason, C. A., & Capenter, E. M. (2003). Popularity, friendship quantity, and friendship quality: Interactive influences on children's loneliness and depression. *Journal of Clinical Child and Adolescent Psychology*, 32, 546–555.
- Neckerman, H. J. (1996). The stability of social groups in childhood and adolescence: The role of the classroom social environment. *Social Development*, 5, 131–145.
- Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin*, 117, 306–347.
- Nolen-Hoeksema, S., & Girgus, J. S. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin*, 115, 424–443.
- Parker, J. G., & Seal, J. (1996). Forming, losing, renewing, and replacing friendships: Applying temporal parameters to the assessment of children's friendship experiences. *Child Development*, 67, 2248–2268.
- Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). *Antisocial boys*. Eugene, Oregon: Castalia Publishing Company.
- Pelligrini, A. D. (1994). A longitudinal study of school peer networks and adjustment to middle school. *Educational Psychology*, 14, 403–412.
- Poulin, F., Dishion, T. J., & Medici, N. (1998). *Antisocial behavior and relationship fluidity in childhood and adolescence*. Paper presented at the XVth biennial ISSBD meeting, Berne, Switzerland.
- Poulin, F., & Pedersen, S. (2007). Developmental changes in gender composition of friendship networks in adolescent girls and boys. *Developmental Psychology*, 43, 1484–1495.
- Richards, M. H., Crowe, P. A., Larson, R., & Swarr, A. (1998). Developmental patterns and gender differences in the experience of peer companionship during adolescence. *Child Development*, 69, 154–163.
- Rose, A. J. (2007). Structure, content, and socioemotional correlates of girls' and boys' friendships. *Merrill-Palmer Quarterly*, 53, 489–506.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationships processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, 132, 98–131.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (1998). Peer interactions, relationships, and groups. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed., pp. 619–700). New York: Wiley.
- Rubin, K. H., Fredstrom, B., & Bowker, J. (2008). Future directions in friendship in childhood and early adolescence. *Social Development*, 17, 1085–1096.
- Rubin, K. H., Wosjlawowicz, J. C., Rose-Krasnor, L., Booth-LaForce, C., & Burgess, K. B. (2006). The best friendships of shy/withdrawn children: Prevalence, stability, and relationship quality. *Journal of Abnormal Child Psychology*, 34, 143–157.
- Rudolph, K. D., & Clark, A. G. (2001). Conceptions of relationships in children with depressive and aggressive symptoms: Social-cognitive distortion or reality? *Journal of Abnormal Child Psychology*, 29, 41–56.
- Rudolph, K. D., Hammen, C., & Burge, D. (1997). A cognitive-interpersonal approach to depressive symptoms in preadolescent children. *Journal of Abnormal Child Psychology*, 25, 33–45.
- Safran, J. D. (1990). Towards a refinement of cognitive therapy in light of interpersonal theory: I. Theory. *Clinical Psychology Review*, 10, 87–105.
- Schneider, B. H. (2000). *Friends and enemies: Peer relations in childhood*. London: Arnold.
- Schneider, B. H., Fonzi, A., Tani, F., & Tomada, G. (1997). A cross-cultural exploration of the stability of children's friendships and the predictors of their continuation. *Social Development*, 6, 322–339.
- Schneider, B. H., Wiener, J., & Murphy, K. (1994). Children's friendships: The giant step beyond peer acceptance. *Journal of Social and Personal Relationships*, 11, 323–340.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Thomas, J. J., & Berndt, T. J. (2005). Friendship quality, friends' activities, and students' academic adjustment. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA: VERIFIER SI PUBLIÉ.
- Tuma, N. B., & Hallinan, M. T. (1979). The effects of sex, race, and achievement on schoolchildren's friendships. *Social Forces*, 57, 1265–1285.
- Vernberg, E. M., Greenhoot, A. F., & Biggs, B. K. (2006). Intercommunity relocation and adolescent friendships: Who struggles and why? *Journal of Consulting and Clinical Psychology*, 74, 511–523.
- Vitaro, F., Boivin, M., & Bukowski, W. M. (2009). The role of friendship in child and adolescent psychosocial development. In K. H. Rubin, W. W. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships and groups* (pp. 568–588). New York, NY: Guilford Press.
- Vitaro, F., Tremblay, R. E., & Bukowski, W. M. (2001). Friends, friendships, and conduct disorders. In J. Hill & B. Maughan (Eds.), *Conduct disorder in childhood* (pp. 346–378). Cambridge: Cambridge University Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

- Wichstrom, L. (1999). The emergence of gender difference in depressed mood during adolescence: The role of intensified gender socialization. *Developmental Psychology*, 35, 232–245.
- Wojslawowicz, J. C., Rubin, K. H., Burgess, K. B., Booth-LaForce, C., & Rose-Krasnor, L. (2006). Behavioral characteristics associated with stable and fluid best friendship patterns in middle childhood. *Merrill-Palmer Quarterly*, 52, 671–693.
- Youniss, J. (1980). *Parents and peers in social development*. Chicago: University of Chicago Press.