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## 2

*Preadolescent friendship and peer status have an impact on early adulthood adjustment.*

### Friendship and Peer Rejection as Predictors of Adult Adjustment

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The idea that success in peer relations represents a critical aspect of social competence in childhood and adolescence has been supported by a well-developed research base over the past thirty years (Rubin, Bukowski, and Parker, 1998). The majority of this research has focused on children's popularity or status in their peer group, typically the other students in their school classroom or grade level. However, a separate body of work has considered the features, characteristics, and developmental significance of children's dyadic relationships with friends. As the chapters in this volume emphasize, both popularity (or avoiding rejection) in the larger peer group and establishment of close friendships are important developmental tasks for children and adolescents. Although many of the skills and competencies that lead to positive adjustment in the larger peer group are also those that forecast success in friendships, these two types of peer relations are not identical in their characteristic features or in the effects they have on children's social and emotional well-being (Bukowski and Hoza, 1989).

As our understanding of what peer relations look like, how they develop, and what predicts success or difficulty in establishing positive peer relationships has increased, investigators have paid greater attention to the developmental significance of these relationships. There are now a number of well-designed short-term longitudinal studies establishing links between poor peer relations in childhood—both peer rejection and the failure to form close friendships—and poor school adjustment and psychological health, loneliness, and problem behavior in later childhood or early adolescence (Boivin, Hymel, and Bukowski, 1995; Coie and others, 1995; Hoza,

Molina, Bukowski, and Sippola, 1995; Parker and Asher, 1993). These studies typically span a two- to four-year period. In addition, several longer-term follow-up studies focused solely on peer rejection (as opposed to dyadic friendships) suggest that children who are rejected by peers are at significantly increased risk for dropping out of school early, engaging in delinquent and criminal behavior, and developing mental health difficulties in adolescence and adulthood (for reviews see Parker and Asher, 1987; Parker, Rubin, Price, and De Rosier, 1995; Rubin, Bukowski, and Parker, 1998). In contrast, there is not a well-established literature on the importance of close friendships for long-term adaptive adjustment. Thus an unanswered question is whether popularity and participation in friendships are redundant predictors of adjustment and functioning in adulthood or whether each has unique implications for adult well-being. This question is the primary focus of the eighteen-year follow-up study we present in this chapter.

The chapter is divided into two primary sections that present a theoretical foundation and empirical evidence to address this question. In the first section, we discuss two aspects of a conceptual framework for examining the unique developmental significance of friendship: (1) the normative developmental tasks and transitions from preadolescence to adulthood and (2) the potential processes or mechanisms that explain why problems in preadolescent peer relations (that is, peer rejection or having no friends) might be related to maladjustment in later adolescence and adulthood. In the second section, we present findings from our longitudinal study of preadolescent peer rejection and friendship status as predictors of multiple domains of adjustment in early adulthood.

### Conceptual Framework for Developmental Significance of Peer Relations

In order to build a framework for understanding the significance of peer relations for long-term positive adjustment, it is critical first to examine the developmental tasks and transitions that occur in early adulthood and that would be considered normative. Only then can we examine how problems in peer relations might predict difficulties in mastering and negotiating these normal developmental tasks and transitions.

**Normative Developmental Tasks and Transitions of Early Adulthood.** Friendships and peer relations during the adolescent years serve to bridge the gap between childhood and adulthood. As children enter adolescence, they gain increasing independence from their parents and begin the continuous process of refining their personal commitments and relationships. Adolescents may have four to six best friends whom they characterize as trustworthy, understanding, and loyal (Berrid and Perry, 1990). These close friendships allow the adolescent to create a better understanding of the self, and they provide a support system to help the adolescent work through daily stresses. As youth progress through adolescence, they begin to formulate their own personal goals and values and learn of the

intricacies of romantic involvement. Adolescence should result in individualization, that is, a sense of being both separate from and close to others (Savin-Williams and Berndt, 1990). The tasks of adolescence help prepare for the transition to early adulthood, when the developmental challenges shift to occupation- and relationship-building goals (Vaillant, 1977). During this relationship-building process, associations with peers and friends undergo some change, most noticeably in the size and composition of social networks. For example, young adults in their twenties usually have only one or two best friends (Berrid and Perry, 1990), but they may have increased involvement with individuals who are potential life partners.

Several theorists have described the developmental tasks that accompany the transitions from childhood to adolescence and from adolescence to early adulthood. Erikson (1964) identified the challenge of establishing intimate relationships with others as the key developmental task in his sixth psychosocial stage, intimacy versus isolation, which takes place from approximately age twenty to age forty. Highlighting the importance of adolescence in the transition to adulthood, Erikson stressed that the ability to accomplish intimacy during young adulthood is largely dependent on earlier relational experiences. This idea is consistent with Sullivan's description (1953) of the importance of preadolescent friendships to providing a context for developing skills and competencies that are essential for success in future relationships. Furthermore, more recent conceptualizations of the functions of childhood and preadolescent friendships emphasize that these earlier friendship experiences provide building blocks for the development of romantic relationships and other interpersonal relationships in later adolescence and adulthood (for example, Harrup, 1992).

In an attempt to refine and expand Erikson's theory, Levinson (1978, 1996) presented a theory of adult psychosocial development that consists of a series of intermingling stages of transition and stability, each lasting approximately five to seven years. During periods of stability the focus is on building life structures (that is, the basic pattern of a person's life at a particular time) that successfully combine inner personal goals with outer societal demands. The components of these life structures are the person's most significant relationships with others (that is, individuals, groups, and institutions). Transitions are periods of structure changing, during which the individual reviews previous life structures, terminates components that do not work, and establishes new components that may be more suitable.

Levinson (1978, 1996) described the first stage of early adulthood (ages seventeen to twenty-two) as a transition period, followed by a period of stability (ages twenty-two to twenty-eight) during which the adult finds a comfortable life structure for early adulthood. During the period extending from age twenty-eight to age thirty, the young adult again enters a period of transition when the life structure for early adulthood crystallizes. These developmental periods in early adulthood correspond to our choice of assessment times in the present longitudinal study. Specifically, our first adult assessment occurred at approximately age twenty-three, when participants had

just moved out of Levinson's first early adulthood transition period. The second assessment occurred at approximately age twenty-eight, when participants were completing Levinson's stable period of early adulthood and entering another period of transition.

There are a limited number of studies that extensively examine the developmental tasks of early adulthood, particularly with regard to interpersonal relationships (for example, Reid and Fine, 1992; Winfield and Harvey, 1996). Even fewer studies examine longitudinally the links between adolescence and adulthood (for example, Jessor, Donovan, and Costa, 1991; Werner and Smith, 1992). The extant literature shows longitudinal associations between (1) friends' approval of problem behavior and measures of problem behavior in young adulthood, such as general deviant behavior and drug use (Jessor, Donovan, and Costa, 1991), (2) conventional friendships in early adolescence and more positive relationships both thirteen and twenty-one years later (Stein and Newcomb, 1999), and (3) higher levels of social support in adolescence and lower levels of drug use, relationship problems, emotional distress, and work, health, and family problems in young adulthood (Newcomb and Bentler, 1988). In contrast to these documented relations between adolescence and adulthood, Giordano and others (1998) found that adolescent family variables, not level of intimacy with adolescent friends, successfully predicted a variety of adult outcomes. These longitudinal studies, which report very different aspects of adolescent peer relations and reveal some contradictory findings, illustrate the need for additional research on the connections between peer variables in preadolescence and adjustment outcomes in early adulthood.

**Preadolescent Peer Relations and Later Maladjustment.** If it is established that preadolescent peer relations are strong predictors of adult outcomes, the next question is what accounts for these associations. There are multiple theoretical perspectives for understanding the processes through which peer relations in childhood and preadolescence might affect current and long-term social and emotional adjustment. Some of these theories emphasize the unique implications for later adjustment of different types of peer relationships, namely popularity and friendship, but others fail to make distinctions among the different dimensions of peer relations. We briefly discuss three perspectives in the following paragraphs: (1) needs fulfillment and relationship provisions, (2) stress and social support, and (3) developmental psychopathology.

One perspective suggests that children's experiences with peers yield relationship provisions that are important, if not essential, for adaptive adjustment. Consistent with this view is the notion that particular types of peer relations are best suited for meeting specific social and emotional needs that emerge at particular points in development. Sullivan (1953) suggested that the juvenile period (ages six to nine) is characterized by the need for acceptance and this need can be fulfilled by participation in peer groups. In contrast, during the transition to the preadolescent period, the need for acceptance shifts to a

need for interpersonal intimacy. At this developmental period mutual friendships, or "chumships," emerge.

The key elements of friendship that distinguish it from other peer relations and that account for its developmental significance include reciprocity, trust, loyalty, and mutual affection. As the distinctions between popularity and mutual friendship have become more clear, attention has been focused on identifying relationship provisions that may be gained in either relationship and those that may be unique to each. Although popularity and friendship may both be sources of instrumental aid, nurturance, companionship, and enhancement of self-worth, friendship is unique in its provision of affection, intimacy, and reliable alliance. In contrast, popularity is uniquely associated with feelings of belongingness and inclusion (Buhrmester and Furman, 1986; Furman and Robbins, 1985).

Another perspective for understanding the processes through which problems in peer relations may lead to adjustment difficulties suggests that peer rejection or failing to maintain close friendships is a stressful life experience. The experience of active rejection is, in itself, stressful for children. In addition, this stress is compounded by the fact that rejected and friendless children lack support from a strong social network and thus may be vulnerable to other stressors (Bukowski, Newcomb, and Hartup, 1996; Coie, 1990). According to this social support perspective, peer relations provide a number of direct and indirect benefits that potentially have a lasting impact on adjustment. The concept of cumulative risk in the stress literature suggests that stressful life experiences are additively associated with negative outcomes. In particular, coping resources are taxed as life stressors accumulate, and an individual's ability to cope with these stressors decreases, leading to negative outcomes. For example, Kupersmidt, Burchinal, and Patterson (1995) found support for the cumulative risk model, suggesting that multiple risk factors, including aspects of peer rejection and dyadic friendships, are additively predictive of externalizing behavior problems.

The framework of developmental psychopathology, particularly the constructs of developmental pathways and of risk and protective factors, provides a third model for examining the mechanisms through which peer relations influence later adjustment (Parker, Rubin, Price, and De Rosier, 1995). The field of developmental psychopathology is concerned both with understanding the course of individual patterns of development and with the interchange between normal and atypical development. In addition, this perspective focuses on the processes that moderate the expression and outcome of risk factors across the life span (Cicchetti and Cohen, 1995). It is clear that peer rejection and problems with friendships, either not having friends or having poor-quality friendships, are risk factors for adjustment difficulties.

One might logically conclude that having supportive friendships serves as a valuable protective factor. Unfortunately, the empirical research does not completely support this hypothesis. Supportive friendships contribute

to 4 (extremely), indicating the degree of distress associated with the particular symptom during the past week. Scale scores represented the average score for the items loading on that scale.

**Prediction of Adult Outcome from Preadolescent Friendship Status and Peer Rejection.** Our first set of analyses was designed to examine whether the patterns of prediction from preadolescent friendship status and peer rejection to adult adjustment differed at age 23 and age 28. Each of the domains of life status adjustment and psychopathological symptoms was regressed on gender, friendship status, and peer rejection. In addition, for the first step of the regression analysis to control for the stability of aspects of life status from adolescence to adulthood. In all cases gender was not associated with any outcome measure. Thus the analyses were rerun excluding gender to account for the best-fitting models.

The correlations between measures of life status adjustment and psychopathological symptoms at age 23 and age 28 are shown in column 3 of Table 2.1 and column 2 of Table 2.2. These correlations were generally moderate to high, indicating consistency in multiple domains of adjustment across early adulthood. Nevertheless, the correlations are not uniformly high, and although adjustment at ages 23 and 28 were related, there was evidence of transition and change during this five-year period as well.

On the life status measures, the greatest stability was shown in the domains of school performance, aspiration level, activity involvement, trouble with the law, and overall adjustment. School performance was likely consistent across time because this measure specifically tapped the participant's highest level of educational achievement, and those who had earned their final degree by age 23 thus showed stability from age 23 to age 28. Similarly, it is not surprising that individuals' aspirations and goals were consistent across early adulthood. Many participants' aspirations remained the same, or they were at least consistent in terms of their realistic nature and specificity. The strong association over time for the domains of activity involvement and trouble with the law likely reflects both stability in these aspects of adjustment and methodological consistency. In particular, at both age 23 and age 28, participants reported on involvement in extracurricular and community activities and trouble with authority figures at the current time and in the past. The potential overlap in reports of past behavior would be expected to contribute at least in part to the observed stability in adjustment in these areas. However, it is also likely that participation in conventional activities, such as music, sports, and other leisure activities, and participation in deviant activities are both consistent across time.

As shown in Table 2.2, several measures of psychopathological symptoms were moderately correlated between ages 23 and 28. The greatest stability was apparent for overall symptomatology (that is, the GSI). Interpersonal sensitivity, anxiety, paranoid ideation, and psychoticism. The correlation between overall severity of symptomatology in both early adulthood

Table 2.1. Prediction of Life Status Adjustment at Ages 23 and 28

Adult Measure	Fifth-Grade Role	Age 23 Assessment								Age 28 Assessment						
		<i>r</i>	<i>R</i> <sup>2</sup>	$\beta_T$	<i>sr</i> <sup>2</sup> <sub>T</sub>	$\beta_F$	<i>sr</i> <sup>2</sup> <sub>F</sub>	$\beta_R$	<i>sr</i> <sup>2</sup> <sub>R</sub>	<i>R</i> <sup>2</sup>	$\beta_T$	<i>sr</i> <sup>2</sup> <sub>T</sub>	$\beta_F$	<i>sr</i> <sup>2</sup> <sub>F</sub>	$\beta_R$	<i>sr</i> <sup>2</sup> <sub>R</sub>
Overall adjustment	None	.52 <sup>d</sup>	.30 <sup>d</sup>			.18	.02	-.45 <sup>d</sup>	.16	.11 <sup>a</sup>		-.03	.00	-.34 <sup>b</sup>	.09	
School performance	Smart	.80 <sup>d</sup>	.28 <sup>d</sup>	.21 <sup>a</sup>	.04	.02	.00	-.41 <sup>c</sup>	.13	.34 <sup>c</sup>	.24 <sup>a</sup>	-.03	.00	-.47 <sup>c</sup>	.17	
Job performance	Competence	.35 <sup>b</sup>	.13 <sup>b</sup>	-.29	.07	.11	.01	-.30 <sup>b</sup>	.07	.08	.02	.00	.00	-.27	.05	
Job satisfaction	Competence									.06	-.24	.05	.18	.03	-.03	.00
Family interaction	None		.10 <sup>a</sup>			.29 <sup>b</sup>	.07	-.05	.00							
High school	None	.29 <sup>b</sup>								.12 <sup>b</sup>		.08	.00	-.31 <sup>b</sup>	.08	
Ages 18-23	None	.44 <sup>c</sup>								.08		.26 <sup>a</sup>	.06	-.03	.00	
Past year	None	.28 <sup>b</sup>								.10 <sup>a</sup>		.34 <sup>b</sup>	.09	.06	.00	
Aspiration level	Competence	.66 <sup>d</sup>	.31 <sup>d</sup>	.28 <sup>b</sup>	.06	-.08	.00	-.43 <sup>c</sup>	.14	.15 <sup>b</sup>	.17	.02	-.04	.00	-.31 <sup>b</sup>	.07
Social life	Prominence		.11 <sup>a</sup>	.12	.01	.09	.00	-.23	.04							
High school	Prominence	.19								.13 <sup>a</sup>	-.14	.01	.22	.03	-.25	.05
Ages 18-23	Prominence	.22								.20 <sup>b</sup>	-.11	.01	.47 <sup>c</sup>	.15	-.03	.00
Past year	Prominence	.22								.05	.02	.00	.22	.03	.05	.00
Activity involvement	Prominence	.79 <sup>d</sup>	.10	-.02	.00	-.16	.02	-.36 <sup>b</sup>	.10	.18 <sup>b</sup>	.08	.01	-.24	.04	-.46 <sup>c</sup>	.17
Trouble with the law	Aggression	.61 <sup>d</sup>	.12 <sup>a</sup>	-.03	.00	.26 <sup>a</sup>	.05	-.13	.01	.16 <sup>b</sup>	-.37 <sup>b</sup>	.08	-.28 <sup>a</sup>	.06	-.07	.00
Mental health difficulties	Aggression and immaturity	.34 <sup>b</sup>	.06	.01	.00	.19	.03	.36	.03	.01	-.10	.00	-.04	.00	.01	.00
				-.27	.02						.04	.00				

Note: Significance tests for  $\beta$  and *sr*<sup>2</sup> are identical, and notations of significance are placed only on  $\beta$ ; *sr*<sup>2</sup> = squared semipartial correlation; subscripts: T = fifth-grade trait, F = friendship status (0 = chumless, 1 = friended), R = peer rejection.

<sup>a</sup>*p* < .10

<sup>b</sup>*p* < .05

<sup>c</sup>*p* < .01

<sup>d</sup>*p* < .001

**Table 2.2. Prediction of Psychopathological Symptoms at Ages 23 and 28**

Symptom Dimension	Age 23 Assessment						Age 28 Assessment				
	<i>r</i>	<i>R</i> <sup>2</sup>	$\beta_F$	<i>sr</i> <sup>2</sup> <sub>F</sub>	$\beta_R$	<i>sr</i> <sup>2</sup> <sub>R</sub>	<i>R</i> <sup>2</sup>	$\beta_F$	<i>sr</i> <sup>2</sup> <sub>F</sub>	$\beta_R$	<i>sr</i> <sup>2</sup> <sub>R</sub>
Global Severity Index	.54 <sup>d</sup>	.10 <sup>b</sup>	-.19	.03	.18	.03	.08	-.18	.03	.16	.02
Somatization	.17	.09 <sup>a</sup>	-.07	.00	.27 <sup>a</sup>	.06	.04	-.15	.02	.09	.01
Obsessive-compulsive tendencies	.35 <sup>b</sup>	.02	-.17	.02	-.11	.01	.04	.07	.00	.23	.04
Interpersonal sensitivity	.58 <sup>d</sup>	.08	-.16	.02	.16	.02	.03	-.17	.02	-.03	.00
Depression	.30 <sup>b</sup>	.15 <sup>c</sup>	-.33 <sup>b</sup>	.09	.10	.01	.13 <sup>b</sup>	-.40 <sup>b</sup>	.13	-.16	.02
Anxiety	.49 <sup>d</sup>	.03	-.05	.00	.13	.01	.01	-.06	.00	.02	.00
Hostility	.34 <sup>b</sup>	.06	.19	.03	.09	.01	.14 <sup>b</sup>	-.08	.01	.33 <sup>b</sup>	.09
Phobic anxiety	.16	.07	-.08	.00	.22	.04	.01	-.03	.00	.06	.00
Paranoid ideation	.60 <sup>d</sup>	.10 <sup>b</sup>	-.23	.04	.13	.01	.12 <sup>b</sup>	-.28 <sup>a</sup>	.06	.10	.01
Psychoticism	.51 <sup>d</sup>	.10 <sup>b</sup>	-.11	.01	.26 <sup>a</sup>	.05	.10 <sup>a</sup>	-.27 <sup>a</sup>	.06	.08	.01

Note: Significance tests for  $\beta$  and *sr*<sup>2</sup> are identical, and notations of significance are placed only on  $\beta$ ; *sr*<sup>2</sup> = squared semipartial correlation; subscripts: F = friendship status (0 = chumless, 1 = friended), R = peer rejection.

<sup>a</sup>*p* < .10

<sup>b</sup>*p* < .05

<sup>c</sup>*p* < .01

<sup>d</sup>*p* < .001

assessments suggests that even if individuals' specific symptoms changed over time, the overall level of distress they experienced remained relatively consistent.

*Prediction of Life Status Adjustment.* In general, predictions of life status adjustment from preadolescent friendship status and peer rejection were similar for both adult assessments. Table 2.1 presents the findings from both the age 23 and age 28 assessments. The combination of friendship status and rejection continued to be associated with overall adjustment, school performance, and aspiration level at age 28. In all three cases peer rejection explained a unique portion of the variance, and preadolescents who were rejected by peers experienced poorer adult adjustment in these areas. As might be expected, an increase in the interval of time between preadolescence and adult follow-up was related to less powerful predictions for overall adjustment and aspiration level.

Somewhat surprisingly, friendship and peer rejection were better predictors of school performance at age 28 than at age 23. One potential explanation for these findings is that whereas at age 23 a significant number of participants were still in school, by age 28 most participants had completed their education. Thus age 28 scores on the school performance measure reflect more accurately how far participants will go in school because most have achieved their highest level of education. To the extent that preadolescent social adjustment is related to school performance, the prediction will be stronger when participants' education is complete.

At age 28, participants' positive interactions with others, particularly with their family, peers, and friends as indexed by the measures of family interaction and social life, were significantly related to their preadolescent friendship status and peer rejection. In the age 23 assessment these measures were marginally related to preadolescent peer indicators. It is interesting that friendship and peer rejection were associated with positive family involvement in different ways over several time periods. In the age 28 assessment, participants provided a retrospective report of their relationships with parents and siblings during high school, from ages 18 to 23, and over the past year. For the high school years, peer rejection was associated with more problematic family relations. Friendship status was a marginally significant predictor of family functioning from ages 18 to 23, and friended preadolescents reported more positive family interactions during this time. However, having a close friend in preadolescence was more strongly related to better relations with family members during the past year.

One potential explanation for these findings is the developmental transitions in provisions and features of family relations during adolescence and early adulthood. Temporary perturbations in family relationships accompanied by increased bickering, decreased levels of positive interaction, and increased coping over minor issues on the part of parents is a normative occurrence in adolescence as the family adapts to the adolescent's maturity and autonomy (Collins, 1990; Steinberg, 1990). Critical dimensions of effective parenting in

adolescence include emotional support, supervision, and monitoring (Dishion, French, and Patterson, 1995; Steinberg, 1990). Peer rejection in preadolescence is associated with a host of problems, such as affiliations with deviant peers, school problems, and aggression (Coe and others, 1995; De Rosier, Kupersmidt, and Patterson, 1994; Rubin, Bukowski, and Parker, 1998), that might make these aspects of parenting difficult and contentious and might increase the expected level of perturbation in family interactions. As such, peer rejection may be more related to family functioning in this age period than are friendship relations.

During the period from 18 to 23 years old, many of the participants were in college or away from home. Their more limited interactions with parents and family during this period may be responsible for the weaker association between earlier peer measures and family functioning. However, by age 28, when many participants had children themselves and were perhaps reconnecting with their family of origin, friendship status emerged as the critical preadolescent predictor. At this time relationships with parents and siblings are less hierarchical and more egalitarian. Parents and their young adult children are expected to have achieved an interdependent relationship characterized by cooperative negotiation rather than unilateral authority (Youniss and Smollar, 1985). It is likely, then, that the characteristics facilitating success in preadolescent friendships (for example, trust, reciprocity, and mutual engagement) may be even more related to positive family interactions at this developmental period than at prior ones.

Having an active social life with peers, friends, and romantic partners was related to preadolescent peer rejection and friendship status only during the time periods of high school and ages 18 to 23. When participants reported on their social life at age 28, there was no association between preadolescent peer relations and having an active social life in the past year. Similar to the findings for positive family interactions, the relative importance of peer rejection and friendship in predicting social life activity was not consistent across time. There was no unique prediction of involvement in social activities with peers and friends in high school for friendship status or peer rejection, but together they explained a marginally significant portion of the variance in social life activity. The direction of the regression coefficients suggests that rejected preadolescents may be somewhat less involved with peers and friends in high school. In contrast, between ages 18 and 23 it was the preadolescents without a best friend who failed to have an active social life with peers and romantic partners. Peer rejection is a fairly stable phenomenon in preadolescence and adolescence (Coe and Dodge, 1983; Rubin, Bukowski, and Parker, 1998). It is not surprising, then, that those youth who were disliked by the larger peer group in preadolescence would be those who are less likely to have an active social life in adolescence.

For a large number of our participants, the period of time between the age 23 and age 28 assessments was characterized by major life transitions,

particularly marriage and parenthood. These transitions are expected to result in changes in leisure time activities and thus to have a significant effect on an individual's social life. Consistent with this notion, participants' involvement in activities, including extracurricular activities and community involvement, was associated with preadolescent peer rejection only at age 28. Even though participants reported on activity involvement during high school and between ages 18 and 23 in both assessments, the addition of information about the past year enhanced the link between being disliked by peers and limited involvement in activities.

Similar to the findings for family interactions, preadolescent friendship status increased in relative importance for predicting social life activity over time while peer rejection seemed to decrease in its predictive power. These findings suggest that having a close friend in preadolescence has greater long-term implications for positive adult relationships than peer rejection has. An important function of childhood friendships is that they serve as building blocks for future relationships (Harrup, 1992, 1996). They provide a context for learning and practicing relationship skills and competencies that form the foundation for successful relationships with others throughout life. The current findings for family interaction and social life are consistent with this function of childhood friendships because both tap specific adult relationships—with family members and with peers.

The most striking difference between the findings from 1993 and 1998 was in the area of trouble with the law. In the age 23 assessment preadolescent aggression was not significantly related to the degree to which participants had trouble with authority figures or displayed antisocial behavior. The pattern was quite different by the time of the age 28 assessment, when preadolescent aggression was a significant predictor of trouble with the law. The more important finding, however, was the trend for adults who had a close friend in preadolescence to report more criminal offenses and other indications of trouble with the law and authority figures than those who had been chumless. A trend of similar magnitude at age 23 was in the opposite direction, suggesting that chumless status was associated with greater trouble with authority.

A potential explanation for the changes in these patterns relates directly to the conceptualization of two pathways to delinquency and antisocial behavior (Moffitt, 1993; Patterson, Capaldi, and Bank, 1991; Patterson and Yoerger, 1997). At the time of the first adult follow-up, our measure of trouble with the law tapped participants' involvement in delinquent activity primarily in adolescence. Moffitt has suggested that some delinquent and antisocial behavior is normative in adolescence, and it may in fact be that adolescents who do not display some minor conflict with authority figures or the law are those who are at risk for adjustment problems. By assessing delinquent behavior at the end of adolescence (our age 23 assessment), we perhaps captured two distinct groups—life course-persistent offenders and adolescence-limited offenders. Life course-persistent offenders are those

who have a history of childhood offenses and continue to engage in antisocial behavior throughout adolescence and adulthood. As the name suggests, adolescence-limited offenders begin their delinquent behavior in adolescence, are expected to desist by early adulthood, and are responsible for the significant increase in criminal offenses characteristic of adolescence. According to the dual-pathway theory, those individuals who still engage in antisocial behavior at age 28 are expected to be part of the more chronic, persistent group. Thus serious preadolescent aggression would be related to this type of behavior. However, preadolescent aggression would not be expected to predict the more normative behavior displayed in adolescence by the adolescence-limited group.

It is particularly interesting that friendship status predicted trouble with the law and peer rejection did not. Antisocial behavior and delinquency are common outcome measures in longitudinal studies of peer rejection, particularly because of the link between childhood peer rejection and aggression, a precursor to serious antisocial behavior. Peer rejection has been shown to be a strong predictor of delinquent behavior (Coe and others, 1995; De Rosier, Kupersmidt, and Patterson, 1994; Kupersmidt, Burchinal, and Patterson, 1995; Kupersmidt and Coie, 1990; Rubin, Bukowski, and Parker, 1998). Peer rejection and friendship status are rarely examined simultaneously, and our findings suggest that success in friendship relations is related to trouble with authority figures. In particular, chumless status was related to less involvement in delinquent behavior. These findings highlight the importance of considering both the positive and negative effects of friendship and are consistent with the short-term longitudinal study of Kupersmidt, Burchinal, and Patterson (1995), in which children with a reciprocated best friendship were at risk for later externalizing behavior problems in some circumstances, particularly if there was a high level of conflict in the friendship.

Having a best friend thus is not always a positive aspect of social competence. For example, children who are aggressive or rejected often form friendships with others who have similar characteristics. In addition, these children are often those that are rejected by the peer group at large. Thus they have limited opportunities for engaging with prosocial peers, and they actively seek out one another because they reinforce one another's delinquent behavior. Dishion and colleagues have described a process of deviancy training in antisocial boys' friendships (Chapter Four of this volume; Dishion, Patterson, and Griesler, 1994; Dishion, Spracklen, Andrews, and Patterson, 1996; Poulin, Dishion, and Haas, 1999). Through this process of talk and engagement in delinquent behavior, antisocial friends encourage and enhance their antisocial tendencies. It may be that at least some of the individuals experiencing trouble with the law in the current study participated in a friendship in which deviancy training was a salient process.

*Prediction of Psychopathological Symptoms.* As shown in Table 2.2, the pattern of prediction of psychopathological symptoms from preadolescence to early adulthood was fairly consistent at age 23 and at age 28. Preadoles-

cent friendship status and peer rejection were at least marginally significant predictors of the specific dimensions of depression, paranoid ideation, and psychoticism in both adult assessments. It is interesting to note that at age 28 overall severity of symptomatology was no longer related to preadolescent peer relations.

Perhaps the most important finding is that not having a close friend in preadolescence was uniquely and consistently related to greater symptoms of depression in early adulthood. Friendships in preadolescence provide a context for learning to give and receive emotional support and to self-disclose (Harrup, 1996). High-quality friendships promote positive self-esteem, may ward off feelings of loneliness, and may provide a buffer against the negative effects of stress. Thus, failing to form these close friendship relations is related to depressive symptoms in the short term (Boivin, Hymel, and Bukowski, 1995; Verhberg, 1990), and our findings suggest that this association carries on into adulthood.

In both adult assessments peer rejection and friendship status together predicted symptoms of paranoid ideation and psychoticism. Friendship status was a marginally significant predictor of these two symptom dimensions in the age 28 assessment. At age 23, however, peer rejection was a marginally significant unique predictor of psychoticism. The most notable change from age 23 to age 28 in terms of associations with preadolescent peer relations was that peer rejection was a significant and unique predictor of hostility at age 28 but not at age 23.

**Test Efficiencies for Preadolescent Adjustment Indicators.** As described in the findings already presented, the primary goal of our study was to examine mutual friendship and peer rejection prospectively as predictors of adult adjustment. This second component of our analysis was similar to a case-control design and allowed us to consider potential maladaptive pathways to adulthood that begin with specific preadolescent risk factors. In this analysis we examined those adults who exhibited significant problems in overall life status adjustment or who reported elevated psychopathological symptomatology. We drew on Meehl and Rosen's classic work (1955) on antecedent probability and the efficiency of psychometric signs to assess whether different preadolescent adjustment indicators were risk factors for problematic adult outcomes at ages 23 and 28. Specifically, we calculated base rates for the negative outcomes of poor overall life status adjustment and elevated psychopathological symptoms at ages 23 and 28. We then examined combinations of four preadolescent risk factors (chumless status, rejection, aggression, and withdrawal) as tests or indicators of poor outcome. Specifically, we computed the proportion of correct predictions of positive or negative outcome (that is, test efficiencies) based on these combinations and incorporated sample base rate information. Whether the risk factors were effective markers of poor adult adjustment was evaluated by comparing these test efficiencies with the accuracy of predictions we could make simply by examining the base rate of poor outcome in the sample.

We were particularly interested in combinations of these preadolescent indicators because the presence of multiple indicators can be conceptualized as cumulative risk. In addition to evaluating the two combinations of chumless status with aggression and chumless status with withdrawal, we included the three-part combinations of chumless status, peer rejection, and aggression and chumless status, peer rejection, and withdrawal in order to examine the risk associated with specific subgroups of peer-rejected youth. There are at least two distinct subgroups of rejected children—those who are aggressive and those who are withdrawn. In addition to being associated with different behavioral precursors to peer rejection, these subgroups differ in their risk for certain outcomes, with the rejected-aggressive subgroup at greatest risk for developing serious antisocial and externalizing behavior problems (Coie and others, 1995) and the rejected-withdrawn subgroup more likely to show internalizing difficulties, including depressive symptoms and loneliness (Boivin, Hymel, and Bukowski, 1995; Parkhurst and Asher, 1992). It is important to note, however, that all participants who were chumless and withdrawn in preadolescence were also rejected.

**Life Status Adjustment.** Using the modified Status Questionnaire (Mori-son and Masten, 1991), we identified those individuals with significant problems in overall life status adjustment. This measure reflected the extent to which the individual was generally well adjusted in a variety of areas (for example, family, social life, mental health, and work). We defined significant problems as scores that were below average—that is, ratings of 1 (well below average) or 2 (moderately below average) on a 5-point scale for overall adjustment.

Among the sixty young adults who participated at age 23, twenty individuals (33.33 percent) obtained below-average ratings of overall life status adjustment, compared with nineteen of fifty-one individuals (37.25 percent) at age 28. Of the twenty individuals who exhibited below-average ratings on overall life status adjustment at age 23, fifteen were in the age 28 follow-up sample, and ten continued to have below-average scores. Four preadolescent characteristics were considered potential indicators of low overall adjustment: absence of mutual friendship, standard scores on preadolescent peer rejection greater than 1.0, aggression greater than 1.0, and withdrawal greater than 1.0.

As shown in Table 2.3, our base rate for negative life status adjustment at age 23 was .33. Thus in order for our preadolescent risk factors to be useful indicators of negative adjustment, the test efficiency must have exceeded .67—the rate of correct predictions if we simply used the base rate information and predicted positive life status adjustment for all participants. Using chumless status as a single test of poor adult adjustment, we did not improve prediction of life status adjustment over the base rate. However, the combination of chumless status and other preadolescent risk factors yielded higher test efficiencies and thus provided improvement over the base rate. We obtained the highest efficiency for the combination of chumless status

**Table 2.3. Base Rates and Test Efficiencies for Life Status Adjustment and Psychopathology at Ages 23 and 28**

Adolescent Predictor	Overall Life Status Adjustment				Psychopathological Symptoms			
	Age 23 Base Rate = .67/.33 <sup>a</sup> Test Efficiency		Age 28 Base Rate = .63/.37 <sup>a</sup> Test Efficiency		Age 23 Base Rate = .67/.33 <sup>a</sup> Test Efficiency		Age 28 Base Rate = .79/.21 <sup>a</sup> Test Efficiency	
Chumless	.67	(n = 30)	.51	(n = 26)	.63	(n = 30)	.63	(n = 26)
Chumless-rejected	.82	(n = 13)	.69	(n = 11)	.62	(n = 13)	.81	(n = 11)
Chumless-withdrawn <sup>b</sup>	.77	(n = 6)	.61	(n = 5)	.63	(n = 6)	.77	(n = 5)
Chumless-aggressive	.72	(n = 7)	.61	(n = 5)	.59	(n = 7)	.73	(n = 5)
Chumless-rejected-aggressive	.73	(n = 4)	.65	(n = 3)	.63	(n = 4)	.77	(n = 3)
Chumless-rejected-withdrawn <sup>b</sup>	.77	(n = 6)	.61	(n = 5)	.63	(n = 6)	.77	(n = 5)

<sup>a</sup>Base rate for positive outcome/base rate for negative outcome

<sup>b</sup>All of the chumless-withdrawn individuals are also rejected.



Summary of Parkhurst & Asher's (1992) Peer Rejection in middle school: Subgroup difference in behavior, loneliness and interpersonal concerns. *Developmental Psychology*, 28, 231-241.

Among the purposes is to study behaviorally distinct subgroups of children, the hyper-aggressive rejected and the socially unassertive & *the low social interaction* children, in middle school.

450 7<sup>th</sup> and 8<sup>th</sup> graders were studied: peer behavioral assessment (e.g., starts fights, someone you can trust, easy to push around) (unlimited nominations), positive and negative sociometric nominations (measures of liked most, liked least, social impact [+ & -]), measures of loneliness & social dissatisfaction, and interpersonal concerns.

Major findings: 1. Positive interaction qualities (e.g., cooperates, trust) consistently correlated with positive and negative nominations, but negative nominations with starts fights, disrupts, can't take teasing. Differences among rejected, neglected, average, controversial, & popular for cooperates, kind & *trust*. In summary, both aggressive rejected and submissive rejected students were unable to take teasing, were (judged) lacking in cooperative, and *trustworthiness*.  
2. However, neither aggressiveness nor submissiveness was sufficient to induce rejection, but those aggressive or submissive students who are rejected are also deficient in positive qualities.  
3. Shyness was negatively related to dislike, whereas easy to push around was negatively related to liking! (G.H. Mead?)  
4. Aggressive rejected students have difficulty with teasing. (Dodge & Frame)  
5. Submissive-rejected students were found to report significantly more concern than average students about the possibility of being humiliated or rejection, whereas aggressive rejected students did not differ significantly.  
*"the best liked students generally evidence a cooperative and compassionate spirit."* (p. 238)

Dodge et al. (1990) Peer status and aggression in boys' groups: Developmental and contextual analyses. *Child Dev.*, 61, 1289-1309.

23 groups of 5-6 boys each observed for 45 min. free play. The groups were composed of black boys, 1 popular, 1 neglected, 2 average and 2 rejected. Driven to lab by assistant who informally interviewed boy during trip.

Results: 1. Behaviors increasing across the 5 sessions were solitary, reactive aggressive, instrumental aggression, bullying, persuasive attempts and adult reprimands.

2. Sociometric differences in solitary effects, reactive and instrumental aggression, and adult reprimands. Popular boys displayed lower rates of solitary, rough play and bullying, but so did un(?)popular boys for some of these at the 3<sup>rd</sup> grade (p. 1299).

\*3. At the first grade, relative to average boys, popular boys show lower rates of solitary behavior and higher rates of rough play and bullying whereas at the 3<sup>rd</sup> grade, unpopular boys showed more solitary behavior and similar rates of rough play and bullying relative to the average boys.

4. Social preference in classroom predicted preference in the play group.  
[contaminated?]

5. however, aggressive behaving boys were NOT likely to be disliked within the new peer group, maybe because of the short duration of the play sessions.

6. peer responses were more closely tied to the other's behavior than the other's status.

- Friendship(?) and status may be based on different behaviors at different ages. Why?
- However, the relationship between behavior and status seems to cut across sub-cultural groups.
- 

General findings from Dodge & others:

1. unpopular boys are more aggressive
2. mini-longitudinal studies show that the aggression precedes the unpopularity
3. unpopular boys seem to process social information in a biased way (e.g., Dodge & Frame)

Dodge, K. A., Bates, J. E., Pettit, G. S. (2000?) Mechanisms in the cycle of violence. *Science*, ,

What is the risk factor in child abuse? Retrospective clinical studies of those subject to child abuse in the past show 18% physically harmed in early life. *What is needed is a prospective study.*

Through what intrapersonal mechanisms does abuse have its effect? *Note intrapersonal.* "Aggressive children, relative to average children, have been found to display chronic biases & deficits in the processing of provocation stimuli." They explain these in terms of attachment and social learning theories.

**The Multi-site Child Development Project.** 309 4 year old children identified early in kindergarten from Nashville, Knoxville & Bloomington. A socio-economically & ethnically sample. Assessments of discipline, etc. from interviews with mothers, also relationships with spouses, etc., birth, & temperament reports. Then assessments of social information processing (imagine being the protagonists). 6 months later, assessments of child aggressive behavior by teachers & peers.

Results: 1. Early physical harm and sex had effect for teacher ratings and peer ratings. Teacher-rated aggression scores of harmed children were 93% higher than those of non-harmed children. About twice as many peers nominated harmed children as aggressive as they did for non-harmed children.

3. Physically harmed children developed significantly different information processing styles as non-harmed children.

4. Multiple regression showed that the 7 processing variables significantly predicted later aggression as measured by teachers, peers and observers.

5.

Conclusions: "The findings of this study offer clear evidence that the experience of physical abuse in early childhood is a risk marker for the development of chronic aggressive behavior patterns."

Questions & criticisms: *Abuse promotes childhood aggression, but it is necessary for it? If not, then what else leads to it?*

*How and why does abuse affect social information processing?*

*Could abuse lead to behavior from others, which promotes and justifies faulty social information processing?*

**Dodge, Crick et al's research on peer relations (sociometric) and aggression.**

and peer rejection in preadolescence. Although not as strong as the combination of being chumless and being rejected by peers, the combination of chumless status and withdrawal provided a more efficient test than chumless status combined with aggression.

We did not find the same magnitude of improvement in the prediction of life status adjustment with the preadolescent indicators at age 28. Our base rate for negative life status adjustment was .37. Thus test efficiencies needed to exceed .63 to provide improvement over the base rate. Chumless status alone, chumless status combined with aggression, and chumless status combined with withdrawal provided no improvement over the base rate. A small degree of improvement occurred when we considered the combination of chumless status and peer rejection.

Overall, chumless status alone was not a useful indicator variable for problematic overall life status adjustment at either age 23 or age 28. However, when combined with peer rejection, chumless status was an efficient marker of future negative outcomes in this area. These findings support the cumulative risk model, indicating that having difficulty in multiple dimensions of peer relations, namely peer status and close friendships, results in increased risk for maladaptive adult adjustment. The finding that the two peer indicators of chumless status and peer rejection were better indicators of adult adjustment difficulties than the behavioral indicators of aggression and withdrawal gives further support to theoretical assertions that the developmental significance of peer relations extends beyond the concept of popularity and includes specific dyadic relationships.

*Psychopathological Symptoms.* The global severity index of the Brief Symptom Inventory provides a brief measure of overall psychopathology. In order to identify those individuals with elevated levels of psychopathology, we used a cutoff score of  $T = 60$ , or 1 standard deviation above the mean. This cutoff score provided a base rate of psychopathology of 33 percent and 21 percent at ages 23 and 28, respectively. Of the twenty participants who had elevated psychopathological symptoms at age 23, eighteen were in the follow-up sample, and nine continued to have elevated scores on the GSI.

We next evaluated the efficiency of our preadolescent indicators in predicting psychopathological symptoms. As Table 2.3 indicates, none of the preadolescent indicators provided improvement over the base rate of psychopathological symptoms (.33) at age 23. However, some indicators provided improvement over the base rate (.21) at age 28. Chumless status alone did not improve on the base rate at age 28, but chumless status in combination with rejection offered a small improvement on the rate of prediction. The preadolescent risk factors of aggression and withdrawal did not contribute to the prediction of psychopathology when combined with chumless status.

Although not as strong as the findings for overall life status adjustment, the combination of the two poor peer relations indicators again provides the most efficient marker for psychopathological symptoms. This finding gives

further support to the additive effects of multiple indicators of poor peer relations and suggests that peer rejection and friendship status are not redundant measures of social competence. We examined the combination of poor peer relations and a behavioral indicator to represent two subgroups of rejected youth—rejected-aggressive versus rejected-withdrawn—but there was no apparent difference in the efficiency of these risk variables.

*Illustrations of Divergent Pathways from Preadolescence to Adulthood.* Several case studies serve to illustrate patterns of adjustment over time for individuals at greatest risk for negative outcomes based on the preadolescent indicators. We examined the profile of long-term outcomes for three individuals whose pattern of preadolescent risk factors included chumless status and rejection but who differed in the presence or absence of elevated levels of aggression and withdrawal. These three cases illustrate the construct of multiplicity which is frequently discussed in the developmental psychopathology literature. In particular, they experienced similar problems in preadolescent social and behavioral adjustment, but these individuals followed somewhat divergent developmental pathways as revealed by their psychosocial adjustment in early adulthood. (These individuals' names have been changed to ensure their anonymity.)

The participant with the second highest peer rejection score, John, was also chumless and had the highest withdrawal score in the sample. In the age 23 assessment John's overall life status adjustment was well below average, and he reported the second highest level of distress from psychopathological symptoms in the sample. John endorsed clinically elevated symptoms of depression, anxiety, hostility, interpersonal sensitivity, and multiple other domains of symptomatology. This pattern fits with expectations about preadolescent peer relations and behavioral indicators of aggression and withdrawal as powerful predictors of negative adjustment in adolescence and beyond. In contrast, the pattern was somewhat less apparent by age 28. At that time John's overall life status adjustment was average for the sample, and the severity of his symptoms, although somewhat elevated, did not reach a clinically significant range.

Although we do not have enough information to hypothesize causal mechanisms responsible for John's improvement in adjustment over the five-year period, an examination of changes in his protocol suggests some potentially important transitions that occurred during this period of time. For example, he moved away from home and began a new job that he rated as highly personally rewarding. He reported more positive relationships with family members and more specific and realistic goals and aspirations. In general, the biographical information John provided and his responses on questionnaires indicated that he had reached a more settled, less transitional period in his life. His general adjustment in multiple areas could be considered average in comparison with the rest of the sample by age 28. John's pathway is characterized by the presence of early risk factors, and his trajectory appears to follow a consistently negative path across the transition

to early adulthood. However, events that occur during early adulthood seem to be responsible for his deflection from this trajectory to a more positive developmental pathway.

In contrast, the individual with the highest preadolescent rejection score, Nancy, was also the most aggressive. Furthermore, she was clumsy, and she had an elevated withdrawal score. Nancy's overall life status adjustment was below average at age 23 and average at age 28. The severity of her psychopathological symptoms, however, increased from a negligible level to a significantly elevated range from age 23 to 28, particularly in the symptom domains of hostility, paranoid ideation, obsessive-compulsive behaviors, and interpersonal sensitivity. According to Nancy's protocol, the primary life events that occurred between the ages of 23 and 28 were marriage and the birth of a second and third child. She also reported feeling less connected to others her age at 28. In other ways Nancy's protocol was quite stable from age 23 to age 28. She did not hold a job outside the home at all during that time, reported no future career goals, received no further education or training, and maintained consistent physical health and relationships with her family.

Nancy's trajectory also begins with indications of considerable risk for maladjustment. Unlike John, however, Nancy's pathway as yet does not indicate a positive trajectory into the later stages of early adulthood. According to Vaillant (1977), the primary developmental tasks of early adulthood are twofold—relationship and vocation building. Nancy began the adult task of relationship building somewhat earlier than most participants in our sample. Levinson (1978, 1996) suggests that around age 28, young adults begin to reevaluate their life structures, and according to Nancy's protocol, she is feeling less connected to others and does not seem to have specific and realistic goals for her future.

Finally, Scott was both rejected and highly aggressive in preadolescence. His overall life status adjustment was well below average at both age 23 and age 28. At age 23 his general distress from psychopathological symptoms was elevated only slightly, but by age 28 this score was in the clinically significant range. Overall, Scott's protocol of life status adjustment was consistent in both early adulthood assessments, and his adjustment was well below average in nearly all domains, particularly by age 28. The most striking difference between ages 23 and 28 in domains of life status was that Scott's adjustment in terms of trouble with the law and mental health difficulties was average at age 23 but well below average by age 28. The latter score is consistent with the significant increase in psychopathological symptoms he reported. Scott's trajectory supports empirical research indicating that aggression, particularly when combined with peer rejection, is a significant risk factor for a host of negative outcomes in adulthood, especially delinquency, antisocial behavior, and mental health difficulties (Coié and Dodge, 1998; Parker and Asher, 1987; Patterson, De Baryshe, and Ramsey,

1989). His antisocial behavior and psychopathological symptoms seem to have increased throughout early adulthood, and he seems to be on a stable pathway of negative adjustment.

### Conclusions

Overall, the findings from our follow-up study highlight the importance of considering multiple dimensions of peer relations in order to understand the developmental significance of childhood social relationships. Specifically, friendship and peer rejection are similarly related to aspects of maladjustment in adulthood, but each has unique implications for particular dimensions of adult social and emotional functioning. Further long-term follow-up studies are needed to clarify the relative utility of peer relations indicators for identifying children at risk for serious adjustment difficulties. The present study is helpful in revealing distinctions between popularity and having friends; however, we are now aware of even more specific measures of peer and friendship relations that have short-term implications for adjustment, such as friendship quality, associations with deviant versus conventional peers, and relations in the larger friendship network (Rubin, Bukowski, and Parker, 1998). These other dimensions of social competence with peers should be included as predictor variables in future longitudinal studies.

In addition to including multiple measures of friendships, future studies examining the long-term implications of peer relations for healthy adjustment would benefit from the inclusion of other control variables, including gender. For example, given the strong associations among family relationships, parenting characteristics, adolescent adjustment, and, especially, the influence of family variables on peer relationships (Rubin, Bukowski, and Parker, 1998), it seems particularly important to control for family functioning.

Two other limitations of the current study are important to note. First, the study includes a relatively small, homogeneous middle-class sample, and potential variations in developmental trajectories due to cultural and social class differences could not be considered. Similarly, the current sample represents only a subsample of the original 334 preadolescents; thus the original variability in the preadolescent predictor variables could not be preserved in the subsample included in the young adult follow-up assessments. Second, our follow-up assessment relied on self-report questionnaires, and our measures of adolescent family adjustment, peer relations, and social activities are based on retrospective reporting. Clearly, in future studies that are designed from the outset to follow children through the transitions to adolescence and adulthood, assessments throughout the adolescent period and the inclusion of multiple sources of information would be expected to enhance the adjustment measures gained through self-report questionnaires and retrospective reporting.

As is evident from this chapter, we know much more about the transition from childhood to adolescence than the transition from adolescence to adulthood, particularly in terms of the important interpersonal relationships that provide support for or hinder successful adaptation during these periods of transition. As we increase our understanding of the tasks and challenges surrounding the transition from adolescence to adulthood, we may more fully understand life span trajectories and the way childhood relationships influence subsequent adolescent and adult relationships. With an emphasis on considering normal and atypical development simultaneously and on understanding risk and protective factors and developmental pathways, developmental psychopathology provides a useful theoretical framework for continuing to address these questions.

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