

Autonomy and relatedness in the transition to adulthood:  
Predictors of functioning in close relationships from age 16 to age 18

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Abstract

This longitudinal study used observational data and multiple reporters to examine the effects of autonomy negotiation within parent-adolescent relationships on changes in adolescents' functioning in close relationships from mid-adolescence to early adulthood. Data was gathered from 136 adolescents, their parents, and their peers at two time points, once when the adolescents were approximately 16 years of age, and again when they were 18. Functioning in close relationships was assessed for both parent-adolescent and peer relationships. As predicted, observed behaviors promoting autonomy and relatedness at age 16 were generally linked to decreasing levels of conflict and parental attempts to control their adolescents over time, whereas behaviors undermining autonomy were typically linked with increasing conflict and attempted control over time. Similarly, promoting autonomy and relatedness predicted increasing social acceptance from peers, and in some cases increasing interpersonal competence and more intimate peer relationships over time. In addition, despite an association with decreasing interpersonal competence, undermining autonomy was also unexpectedly linked with increasing peer social acceptance. Complex interactions between adolescents' age, gender, and parents' gender were also revealed, such that results were most consistent for older adolescents, for girls, and for mother-adolescent dyads. Results are considered in the context of research and theory regarding the implications of autonomy development for adolescents' social and emotional adjustment.

**Autonomy and relatedness in the transition to adulthood:**

**Predictors of functioning in close relationships from age 16 to age 18**

It has been proposed that the optimal balance between autonomy and dependency across the lifespan is determined by the developmental tasks posed at each life stage. Developmental tasks, in turn, are determined by a range of biological, sociological, and psychological factors that are at work during various stages of development (Baltes & Silverberg, 1994). The life stage of adolescence involves a host of changes that mark the transition from childhood to adulthood. In addition to the physical and cognitive development that occurs during adolescence, most societies recognize this life stage by awarding adolescents more privileges as well as more responsibilities than younger children (Paikoff & Brooks-Gunn, 1991). Psychological processes that have been examined with regard to adolescence include identity and ego development (e.g. Grotevant & Cooper, 1985), as well as transitions that occur in relationships with close family and peers (e.g. Steinberg, 1990; Youniss & Smollar, 1985). During adolescence, all of these factors converge such that the achievement of autonomy becomes a primary developmental task in making the transition from childhood to adulthood.

The way in which autonomy is negotiated vis-a-vis the parent-adolescent relationship has been a primary focus of theory and research on adolescent development. Early psychoanalytic theorists proposed that adolescents needed to de-idealize their parents, rejecting previous infantile representations of parents as all-knowing and all-powerful (Blos, 1967). Such theorists also proposed that a re-emergence of sexual feelings towards parents precipitated the

need for adolescents to break away from them, and that this detachment from parents made attachments to extrafamilial objects – namely peers – possible (Freud, 1958). These theorists proposed that the period of adolescence would be characterized by “storm and stress” in the form of significant parent-adolescent conflict, and that this conflict was necessary for successful resolution of these intrapsychic issues.

Although more recent authors have disregarded some of the specifics of early psychoanalytic thinking, the basic premises of these theories continue to pervade current research and theory examining parent-adolescent relationships. While not focusing as explicitly on the intrapsychic processes involved, most current authors agree that significant realignments do occur in the power structure of parent-child relationship, with a gradual transition away from a hierarchical structure towards one that is more egalitarian. Gradual shifts in the degree and nature of parental control are thought to take place, such that by young adulthood, adolescents have made the transition to relative independence and self-governance (Baumrind, 1991; Collins, 1990; Eccles et al., 1993; Hill & Holmbeck, 1986; Steinberg, 1990). It has been proposed that negative consequences will ensue if parents are not able to adjust their parenting to accommodate adolescents’ need for more autonomy, particularly in terms of parent-adolescent relationship quality (Eccles et al., 1993), but also with regard to adolescents’ ability to form close and supportive relationships with their peers (Holmbeck, Paikoff, & Brooks-Gunn, 1995). Several researchers have associated parental promotion of autonomy and relatedness during adolescence with the provision of a secure base for exploration during childhood (e.g. Allen et al., 1990; Baltes & Silverberg, 1994; Collins, 1990; Hill & Holmbeck,

1986), with the corresponding benefits for the social functioning of adolescents. Finally, while rejecting the “storm and stress” notion that high levels of parent-adolescent conflict are necessary for healthy development, many current authors have proposed that parent-adolescent conflict can serve an adaptive function by acting both as an impetus for change, as well as a forum for change to occur (Collins, 1990; Hill & Holmbeck, 1986; Smetana, 1989; Steinberg, 1990).

These premises are mainstays of theories of adolescent development, and as such they are often evoked as post-hoc explanations for results of various studies of parent-adolescent relationships. However, they have received surprisingly little attention as the basis of empirical studies of adolescence (Hill & Holmbeck, 1986). In addition, although resolution of autonomy issues has been proposed as the key developmental task of adolescence, few studies to date have followed samples into late adolescence to evaluate the outcomes of the autonomy process. Further, while successful transition into adulthood has been proposed to involve *both* transitions in parent-adolescent relationships as well as transitions in peer relationships, few studies have examined either outcome with regard to the autonomy process. Research on peer relationships during adolescence indicates that there is an increased orientation towards peers during this stage, such that these relationships begin to take on many of the functions that they will serve for the remainder of the life span, such as intimacy and support (Buhrmester & Furman, 1987; Youniss & Smollar, 1985). Therefore, the purpose of the current study is to examine the premise that negotiation of autonomy during adolescence does indeed have significant implications for adolescents’ development as they begin the transition into adulthood.

Following early psychoanalytic theories as well as research on psychological functioning in late adolescence and early adulthood, this study examines transition to adulthood in terms of both functioning in relationships with parents and with peers. Although it has been established that the existence of harmonious, close, and supportive relationships with both parents and peers is a key component of healthy adjustment during adulthood (e.g. Aseltine & Gore, 1993), little is known about which adolescents are best able to establish and maintain such relationships as they move into early adulthood.

#### Autonomy and relatedness and parent-adolescent relationships

As is discussed above, psychoanalytic theorists have long suggested that successful establishment of autonomy from parents is key to healthy socio-emotional development during adolescence, particularly with regard to functioning within the parent-adolescent relationship (Blos, 1967). Recent authors have shifted to highlight the importance of establishing autonomy while also maintaining positive parent-adolescent relationships (Allen, Aber, & Leadbeater, 1990; Baltes & Silverberg, 1994; Collins, 1990; Hill & Holmbeck, 1986; Steinberg, 1990). Current research has established that negotiation of autonomy is related to a variety of indices of adolescent adjustment (Grotevant & Cooper, 1985; Hauser, et al., 1984; Allen, et al., 1994a; 1994b). Although fewer studies have examined the links between such negotiation and parent-adolescent relationship quality per se, the results of existing studies converge on the notion that promotion of autonomy is linked to higher quality relationships during this phase of development (Collins, 1990; Kandel & Lesser, 1972), whereas undermining of autonomy appears to be related to poorer parent-adolescent relationship functioning (Allen, et al., 1996).

A growing body of both self-report and observational studies have demonstrated that parental promotion of autonomy is positively linked to healthy adolescent adjustment, whereas undermining of autonomy generally relates to maladaptive outcomes for adolescents. Self-report studies have revealed that parents' granting of psychological autonomy is concurrently linked with a range of positive outcomes including higher attachment to school, better grades, less depressed affect, and fewer behavioral problems (Eccles et al., 1997), whereas parental psychological control is linked to higher levels of depression and lower self-worth (Garber, Robinson, & Valentiner, 1997). Short-term longitudinal studies utilizing self-report data have revealed similar results. For example, studies have shown that parents' granting of psychological autonomy is linked to decreased psychological distress and deviance over a one year period (Herman et al., 1997), whereas parents' psychological control is linked to decreased self-confidence and increased depression and hostile/aggressive behavior over time (Conger, Conger, & Scarmella, 1997). Observational research has supported the results of these self-report studies, indicating that adolescents' identity and ego development are positively linked with parental expressions of mutuality and enabling (thought to promote autonomy), and negatively related to expressions of separateness and constraining (thought to undermine autonomy) (Grotevant & Cooper, 1985; Hauser, et al., 1984). Similarly, Allen and colleagues found that parental promotion of autonomy (defined as stating reasons for holding a differing position while also remaining open to others' views) is linked with higher levels of self-esteem and ego development, and lower levels of depression (Allen et al., 1994a; 1994b).

The above studies demonstrate the importance of promotion of autonomy and relatedness for a variety of intrapsychic indicators of adjustment during adolescence. Although fewer studies have examined the links between negotiation of autonomy and parent-child relationship quality, those that have find that parental support for autonomy is generally linked with healthier parent-adolescent relationships, whereas inhibiting of autonomy is related to problematic parent-adolescent relationship functioning (Collins, 1990; Kandel & Lesser, 1972; Smetana, 1995). Self-report studies have suggested that parent-adolescent relationship quality, particularly with regard to affective components such as communication, affective expression, and involvement, is significantly related to the degree of autonomy and independence that parents are perceived as granting (Bulcroft, 1991; Collins, 1990). In a study of parent-adolescent conflict in 7<sup>th</sup>, 9<sup>th</sup>, and 11<sup>th</sup> graders, Smetana and Berent (1993) found that both mothers and adolescents reported that parental justifications supportive of autonomy were linked with decreased parent-adolescent conflict, whereas justifications inhibiting autonomy (e.g. assertions of parental power) were linked with increased conflict, particularly for older adolescents. In a similar study, both the frequency and the intensity of parent-adolescent conflict, as well as increased emotional distance from parents were all linked to adolescents' ratings of parents as less supportive of autonomy (Smetana, 1995). At least one study has examined these issues using both longitudinal and observational data, with similar findings. Using observational ratings of autonomy negotiation during a revealed differences task, Allen and colleagues found that difficulties in the establishment of autonomy with parents at age 14 (as measured by pressuring behaviors, overpersonalizing the disagreement, and/or recanting a

position) was the best predictor of hostile parent-adolescent interactions at age 16, even when accounting for prior levels of hostility (Allen, et al., 1996).

In sum, previous research has indicated the importance of establishing autonomy for adolescent adjustment, and there are further indications that successful negotiation of this task is also key for healthy parent-adolescent relationships. However, the majority of the research to date has examined the links between autonomy negotiation and parent-adolescent relationship functioning concurrently, and/or has used adolescent self-reports of both autonomy processes and relationship quality. While studies of this type have provided an important foundation for understanding parent-adolescent relationships, it is difficult to draw any firm conclusions about the unique role that autonomy negotiation may play in the long-term functioning of such relationships. It is difficult to determine from such studies whether the links between autonomy processes and other aspects of parent-adolescent relationship functioning (e.g. level of conflict) are indeed a function of autonomy, or whether these constructs are linked by virtue of other global family environment variables.

In addition, previous studies have largely been limited to examining the role of autonomy during early and mid-adolescence, without investigating adjustment later in adolescence and into early adulthood. In order to fully address the alleged fundamental nature of autonomy as a developmental task, the examination of these issues must be extended to explore the question of whether and to what extent the negotiation of autonomy during adolescence affects adjustment later in life. Longitudinal studies are necessary in order to determine whether negotiation of autonomy during adolescence is indeed linked to the ability to

assume relationships with parents that are more harmonious, less conflictual and more egalitarian as adolescents make the transition into early adulthood.

### Autonomy and relatedness and relationships with peers

While several recent studies have demonstrated that the quality of parent-child relationships during adolescence is an important predictor of adolescents' social functioning, very few studies have addressed whether autonomy promotion effects adolescents' abilities to form and maintain close relationships with peers. In contrast, a host of research has demonstrated links between parenting that encourages autonomy and social functioning in younger children. Both self-report and observational studies of parent-child relationships clearly indicate that parenting that emphasizes autonomy via encouraging children to express their own views, explaining and providing a rationale for rules, and giving children some degree of choice and control, is linked to positive social adjustment as measured by a variety of indicators. Alternatively, parenting that is more autocratic in nature, characterized by high levels of power assertion and low levels of responsiveness to children's own views is linked with maladaptive social functioning (Macoby & Martin, 1983). The literature examining parenting styles has not typically included an examination of specific processes or mechanisms that might explain the links between specific parental behaviors and child outcomes (Ladd, 1992). Similar to earlier psychodynamic theories, recent authors have proposed that parents who meet their children's developmental needs (e.g. for autonomy) raise children who are less preoccupied with themselves and better able to be responsive to others (Youngblade & Belsky, 1995). Similarly, researchers who have explored parenting styles during adolescence have proposed

that authoritative parenting is linked with adolescents' adaptive functioning specifically due to its encouragement of autonomy (Steinberg, Elmen, & Mounts, 1989).

While the links between parent-child and peer relationships has been extensively studied in young children, very few studies have addressed this topic with adolescents. However, a growing body of research has indicated that generally warm and supportive parent-adolescent relationships are linked to several aspects of adolescents' social functioning with peers. For example, self-report studies of both younger and middle adolescents have found that adolescents' ratings of their attachment to mothers and fathers are concurrently related to higher self-reported social competence with peers and decreased social anxiety (Papini, Roggman, & Anderson, 1991; Papini & Roggman, 1992; Paterson, Pryor, & Field, 1995). Similarly, a study of 12 to 18 year olds found that both mothers' and fathers' level of warmth and acceptance in their relationships with their adolescents were linked to adolescents feeling more socially accepted by their peers and having peer relationships that were characterized by high levels of trust and communication and low levels of alienation (Dekovic & Meeus, 1997). The quality of the parent-adolescent relationship has also been linked with more specific aspects of adolescents' functioning in peer relationships, such as adolescents' willingness to turn to same-sex peers for social support (Tourville & Bowen, 1994). Although these self-report studies do not examine autonomy processes, they do suggest that in general, warm and supportive parent-adolescent relationships are important for adolescents' social functioning with peers.

A large body of research has yielded definitive support for the role of autonomy promotion in the social functioning of younger children. Several studies have found links between parenting that discourages individual autonomy and difficulties in social interaction with peers during early childhood. For example, early studies by Baldwin and colleagues (Baldwin, 1948, 1949; Baldwin, Kalhoun, & Breese, 1945) found that children of autocratic parents were low in social interaction with peers and tended to be dominated by their peers during interactions that did occur. Similarly, early studies by Baumrind found that children who were characterized as unhappy and socially withdrawn in nursery school tended to have parents who were authoritarian (Baumrind, 1967; Baumrind & Black, 1967). Studies of prosocial behavior in young children have also revealed that children whose parents use unexplained prohibitions to direct their behavior (thus inhibiting autonomy) are less likely to exhibit prosocial behavior, defined as offering help and/or comfort to someone in distress (Zahn-Waxler, Radke-Yarrow, & King, 1979). In another study using observational ratings, Kahen and colleagues noted that elementary school age children who demonstrated low levels of engagement (defined as engaging in monologues during a play situation with peers) and low levels of personal disclosure had parents who were observed to use more commands and who were more intrusive with them (Kahen, Gatz, & Gottman, 1994). Thus, parenting that inhibits autonomy during early and middle childhood appears to be linked to a broad array of deficits in social functioning, most notably decreases in amount of social interaction with peers and deficits in interpersonal skills such as empathy and perspective taking .

Given the proposed central nature of autonomy during adolescence, it would seem likely that similar links would be found during this stage of development as well. Surprisingly, fewer studies have examined this issue during adolescence, although results from existing studies are generally consistent with research on earlier stages of development. Although not directly assessing peer relationships, Baumrind presents data indicating that adolescents from authoritative and/or democratic households (that tend to promote autonomy) are rated as more “autonomous, socially conscious, mature, prosocial and socially responsible” than adolescents from households characterized by directive/authoritarian parenting (tending to de-emphasize autonomy) (Baumrind, 1991). Similarly, a handful of self-report studies have supported the importance of parental promotion of autonomy for healthy functioning with peers during adolescence. For example, adolescents’ self-reports of parental promotion of autonomy and participation in decision-making have been linked to peer sociometric ratings of social competence, as well as to membership in socially successful vs. deviant peer groups (Brown et al., 1993; Shulman, Collins & Dital, 1993). Conversely, a lack of support for autonomy within the parent-adolescent relationship has been associated with a more extreme peer orientation, which has been considered detrimental for adolescents’ social and behavioral outcomes (Fulgini & Eccles, 1993). One study in particular compared promotion of autonomy in a sample of younger children (ages 8-9) and in an adolescent/young adult sample (ages 15 to early twenties). This study found that there was a shift in the parent-child relationship variables that were associated with social competence in the two groups. For the younger sample, social competence was linked with both high parental support and high parental control, whereas in

the adolescent sample, social competence was associated with high parental support and *low* parental control (Amato, 1989). The author of the study concluded that issues of psychological autonomy vs. control become more central in shaping social competence as children move into adolescence.

The one study to date that has used a longitudinal design to examine the links between autonomy promotion and peer relationships more explicitly has yielded results that support the contention that autonomy negotiation during mid-adolescence is particularly important for functioning with peers later in life. These researchers used observations of parents' and adolescents' behaviors during a revealed differences task to study the effects of undermining autonomy on social relationships. Both adolescents' and parents' behaviors undermining autonomy at age 16 were assessed, as well as adolescents' level of hostility towards peers (as reported by peers) at age 25. The results of this study demonstrated that parental behaviors undermining autonomy during mid-adolescence predicted greater amounts of hostility in relationships with peers nine years later (Allen & Hauser, 1993).

In sum, research clearly indicates that difficulties in negotiating autonomy are linked with maladaptive social functioning, particularly in areas related to being able to appreciate the views and feelings of other people. Conversely, promotion of autonomy within the parent-adolescent relationship appears to be related to adolescents' ability to form more competent relationships with their peers. However, these links are currently much less clear during adolescence than in earlier ages, primarily due to a shortage of studies examining this question in adolescent samples. More research is clearly needed in this area, particularly studies relying on non-self-

report data that assess specific aspects of functioning with peers during adolescence. In addition, this literature has been largely limited to parenting style and aspects of parenting behavior that are more implicitly linked to negotiation of autonomy. The lack of a specific focus on autonomy per se in these studies leaves open the question of whether autonomy negotiation in and of itself is key for developing appropriate interpersonal skills. Finally, and most importantly, the majority of this research has been limited to pre-school and school age children, and to a lesser extent, early and middle adolescents. The links between autonomy negotiation and social adjustment have yet to be examined in the context of the transition to early adulthood.

#### Demographic factors: risk, gender, and age

One additional critique of the majority of literature examining negotiation of autonomy and socio-emotional functioning is the failure to examine the effects of demographic and contextual variables such as race/ethnicity and socio-economic status. As other researchers have pointed out, studies of minority groups and those that examine the effects of socio-economic status have tended to focus on problematic outcomes (e.g. teenage pregnancy and juvenile delinquency) rather than normative developmental processes and relational changes (Paikoff & Brooks-Gunn, 1991; Spencer & Dornbusch, 1990). At least one study has demonstrated that contextual variables, specifically the level of risk present in the environment, moderate the links between negotiation of autonomy and quality of parent-adolescent relationships. In a cross-sectional study of autonomy and adolescent social functioning, McElhaney and Allen (1998) found that undermining of autonomy was related to a variety of

indices of poorer mother-adolescent relationship quality in families residing in low-risk areas. However, in high-risk areas, undermining of autonomy was found to be related to *better* mother-adolescent relationships, as defined by higher levels of trust and acceptance. These findings are consistent with literature on parenting style that has found that, in ethnic minority samples as well as high-risk samples, authoritarian parenting (de-emphasizing autonomy in favor of parental power assertion) is often related to higher levels of adolescent competence across a variety of indicators (e.g. Dornbusch et al., 1987; Gonzales, et al., 1996). The results of these studies highlight the importance of considering the effects of contextual variables on the autonomy process.

Two aspects of gender effects on parent-adolescent relationships have received attention in the literature. The first concerns studies that have examined the differences between mother-adolescent and father-adolescent relationships; these studies have yielded mixed results. Although a growing body of literature suggests that mother-adolescent and father-adolescent relationships differ on several important dimensions, other studies have not found different patterns of interaction in mother-adolescent vs. father-adolescent dyads. Studies have suggested that mothers tend to spend more time with their adolescent children, are more likely to be involved in caregiving activities, and are more likely to be involved in offering support and/or advice than fathers (Collins & Russell, 1991; Green & Grimsley, 1990; Starrels, 1994). It also appears that the perturbations that occur in parent-adolescent relationships are more characteristic of mother-adolescent than father-adolescent dyads (Steinberg, 1987). For example, mothers are more likely than fathers to reports problems in their relationships with

their children as they enter mid-adolescence, and studies have shown that mother-adolescent interactions become more conflictual and less supportive than father-adolescent interactions during mid-adolescence (Buchanan et. al, 1990; Papini, Datan, & McClusky-Fawsett, 1988; Schoenleber & Collins, 1988). In a series of studies of male adolescents interacting with their parents, Steinberg found that as male adolescents approached puberty, they were increasingly assertive with their mothers, but decreasingly assertive with their fathers. Correspondingly, mothers became more submissive in interactions with their male adolescents, whereas fathers became more assertive (Steinberg & Hill, 1978; Steinberg, 1981). These results have not always been consistent, however, as some studies have indicated no differences in the rates of disagreements in mother-adolescent vs. father-adolescent dyads (e.g. Hill & Holmbeck, 1987).

Results from observational studies linking autonomy negotiation to adolescent outcomes are also mixed, with some studies finding different patterns for mother-adolescent vs. father-adolescent dyads, and some studies revealing no significant differences. One drawback to much of the self-report literature on this topic is that studies often assess adolescents' ratings of their relationships with both parents at once, rather than assessing the mother-adolescent and father-adolescent relationships separately (e.g. Eccles et al., 1997 ). Some research based on self-report data has suggested that both mothers' and fathers' approach to psychology control vs. autonomy has important implications for adolescents' adjustment, although their relative contributions may depend both on the outcomes being the examined and the gender of the adolescent (e.g. Conger, Conger, & Scaramella, 1997). In contrast, the observational studies linking autonomy negotiation to identity and ego development reviewed above yielded results

primarily for father-adolescent dyads, particularly when considering the effects of parents' behaviors (Allen et al., 1994; Grotevant & Cooper, 1985). However, in both studies, similar effects were found for adolescents' behaviors towards *both* parents. Similarly, studies linking undermining autonomy to hostility in parent and peer relationships have not found differences when considering mother-adolescent vs. father-adolescent dyads (Allen et al., 1996; Allen & Hauser, 1993). Allen and colleagues (1994) have hypothesized that fathers may take on a growing role in adolescence, and other authors have suggested that fathers play a particularly important role in shaping their children's relationships outside of the home (e.g. Crockenberg, Jackson, & Langrock, 1996; Youngblade & Belsky, 1995). However, researchers examining this question have cautioned that further research is needed that examines how autonomy negotiation with both parents affects adolescent development (e.g. Allen et al., 1994; Collins & Russell, 1991).

Results are even less clear regarding the effects of adolescents' gender in parent-adolescent relationship functioning. Studies often have revealed opposite conclusions, as well as complicated interactions between parents' and adolescents' gender. Studies such as Steinberg's presented above have been cited as support for the particular difficulties of mother-son relationships, but the inclusion of only one gender in these studies clearly impedes definitive conclusions (Paikoff & Brooks-Gunn, 1991). Further, studies have also suggested that mother-daughter relationships become particularly disrupted and conflictual during adolescence (Buchanan et. al, 1990; Holmbeck & Hill, 1991; Montemayor, 1982, 1986; Smetana, 1988, 1989), whereas other studies have indicated that both girls and boys become

more contentious in their interactions with their parents (particularly their mothers) as they enter adolescence (e.g. Smetana, Yau, & Hanson, 1991). However, other studies utilizing both self-report and behavioral observational have not found gender differences in rates of disagreement or in patterns of parent-adolescent interaction (e.g. Hill & Holmbeck, 1987; Papini et al., 1988).

Studies of autonomy negotiation that have examined the moderating effects of adolescents' gender have also yielded mixed results. Some research has highlighted different patterns of adjustment according to both parents' and adolescents' gender. For example, studies have suggested that fathers are more involved with their adolescent sons than with their daughters, and that fathers' level of control has less influence on outcomes for girls than for boys (Conger, Conger, & Scaramella, 1997; Starrels, 1994; Youniss & Smollar, 1985). However, other studies have found similar effects of parental behaviors with regard to autonomy promotion and adolescent outcomes for both male and female adolescents (e.g. Eccles, et al., 1997). In particular, the observational studies of autonomy processes presented above have not found gender differences in the links between parent-adolescent autonomy negotiation and adolescent outcomes (Allen et al., 1994; Allen et al., 1996; McElhaney & Allen, 1998). Further research is clearly needed that includes both mother-adolescent and father-adolescent dyads, as well as an examination of adolescent gender effects, in order to determine whether and to what extent the developmental process of autonomy negotiation and the outcomes that stem from this process differ according to gender.

One final demographic variable that has been found to moderate the autonomy process is the age of the adolescent. Researchers generally agree that perturbations in parent-adolescent relationships begin during early adolescence, and seem to peak during mid-adolescence (generally around age 15). For example, in a review of studies of parent-adolescent conflict, Montemayor (1983) noted that parent-adolescent conflict increases sharply in early adolescence, peaks during mid-adolescence, and gradually declines in late adolescence. Similarly, studies that have focused on pubertal development have found that disruptions in parent-adolescent relationships are most extreme at the peak of and directly following puberty (e.g. Hill et al., 1985a; 1985b; Steinberg, 1981, 1988; Steinberg & Hill, 1978). More importantly for the purpose of the current study, parental undermining of autonomy has been found to be more problematic for older vs. younger adolescents (e.g. Smetana & Berent, 1993). It is worth noting that most studies that have examined age effects with regard to autonomy processes have done so by comparing cross-sectional results from different age groups, with few studies following the same group of adolescents over time to track transitions in relationship functioning.

### Summary

In sum, the ability to gradually take on more independence with less parental regulation of activities and to form close, intimate relationships with peers both represent key aspects of healthy development in late adolescence. Despite the established importance of these tasks for successful transition into adulthood, little research has explored the developmental processes that are involved in successfully negotiating either of these tasks. Both theory and research on

autonomy processes and parent-adolescent interactions indicate that how parents and adolescents negotiate autonomy in day-to-day interactions during earlier stages of adolescent development will be predictive of the level of success in both of these aspects of the transition to adulthood. However, few studies of adolescent development have attempted to incorporate an examination of autonomy processes per se, and even fewer have studied these processes through late adolescence and into early adulthood. In addition, despite the significance of the existence of positive and supportive relationships for healthy psychological adjustment in adulthood, the links between autonomy negotiation and relationship quality have rarely been examined. Finally, there is growing evidence that demographic factors such as level of environmental risk and possibly also both parents' and adolescents' gender (as well as the interaction between the two) play key roles in moderating the links between autonomy negotiation and adolescent outcomes. However, further research is clearly needed to clarify the roles that such factors play in the autonomy process. In addition, longitudinal studies that track transitions in relationships in the same sample over time, allowing for comparison of different age groups within the same sample, are necessary to clarify the nature of autonomy processes over the course of adolescence.

#### General hypotheses and operational definitions of variables

The aim of this study was to examine the effects of autonomy negotiation in mid-adolescence on functioning in close relationships during early adulthood. It was generally hypothesized that successful negotiation of autonomy within the family context during mid-adolescence would be linked to healthier close relationship functioning during early adulthood.

Alternatively, difficulties in negotiation of autonomy within the family context would be linked to maladaptive relationship functioning. The ways in which parents and adolescents negotiate day-to-day conflicts are thought to provide important information regarding how autonomy is handled within the family context. Thus, this study focused on both parents' and adolescents' behaviors while discussing a current disagreement during a revealed differences task. The degree to which parents and teens were receptive to the others' viewpoint, but also able to provide a clear rationale for their own position, was considered a marker for healthy promotion of autonomy within the context of a supportive relationship. When autonomy is negotiated in this fashion, it was hypothesized that parents and adolescents would be able to transition into relationships in early adulthood that are characterized by decreasing battles for control and more mutual give-and-take. Further, this style of autonomy negotiation was hypothesized to encourage the development of interpersonal skills and to facilitate the development of healthy and supportive peer relationships. Alternatively, pressuring the other person to give up his or her position, overpersonalizing the discussion by bringing up personal characteristics, and/or placating the other person were considered markers for undermining autonomy. When such tactics are utilized during mid-adolescence, it was expected that conflicts over adolescents' activities would continue – if not escalate – as the adolescent is forced to heighten his or her battle for independence and control. At the same time, it was hypothesized that such adolescents would be likely to suffer socially, in terms of a lack of development of interpersonal competence and difficulties in forming close and supportive relationships with their peers.

This study examined the links between negotiation of autonomy and functioning in close relationships using a longitudinal design as well as observational and self-report data from multiple sources. The current sample was selected to allow assessments within a maximally meaningful range of psychosocial functioning, including substantial numbers of adolescents functioning both adequately and poorly. Ratings of both parents' and adolescents' behaviors promoting autonomy and relatedness and undermining autonomy during a revealed differences task at age 16 were used as predictors of functioning in parent-adolescent and peer relationships at age 18. Functioning in parent-adolescent relationships was operationalized by the *level of parent-adolescent conflict*, the severity of parent-adolescent conflict as measured by the *level of verbal aggression* present, and the degree to which *adolescents'* participated in the *decision-making* during conflicts. In addition, two measures of parental control were used: the degree to which *parents control adolescents' behavior* in their day-to-day-lives, and the way in which parents' respond to adolescents' behavior (*parental disciplinary control*). Functioning in peer relationships was defined in terms of the *level of attachment* to peers, *level of social acceptance* by peers, *level of interpersonal competence* exhibited with peers, as well as level of sophistication in *interpersonal negotiation*. Peer relationship quality was measured via adolescent self-reports and peer reports, as well as from ratings of responses to vignettes involving hypothetical interpersonal dilemmas.

#### Specific hypotheses in terms of proposed variables

While not a focus of primary analyses, the nature of both parent-adolescent and peer relationships were expected to show normative changes over time. In accordance with the

research on transformations in parent-adolescent relationships, it was expected that over time, the level of parent-adolescent conflict and the degree of verbal aggression would both decline. Similarly, it was expected that both parents' use of both disciplinary control and their level of control over adolescents' behavior would decrease over time. At the same time, adolescents' participation in decision-making was expected to increase. Along the same lines, peer relationships were expected to become closer and more intimate, such that attachment to peers would increase over time. No specific predictions were made regarding normative changes in adolescents' level of social competence over time.

With regard to the links between negotiation of autonomy and parent-adolescent relationship functioning, the following hypotheses were made:

1) Higher levels of promoting autonomy and relatedness would predict improvements in parent-adolescent relationship functioning over time, as defined by: a) decreasing parent-adolescent conflict; b) decreasing parent-adolescent verbal aggression; c) decreasing parental control over the adolescents' day-to-day activities; and d) decreasing parental disciplinary control.

2) Higher levels of undermining autonomy would be related to decreases in quality of parent-adolescent relationship functioning over time, as defined by: a) increasing parent-adolescent conflict; b) increasing parent-adolescent verbal aggression; c) increasing parental control over the adolescents' day-to-day activities; and d) increasing parental disciplinary control.

With regard to the links between negotiation of autonomy and functioning in relationships with peers, the following hypotheses were proposed:

1) Higher levels of promoting autonomy and relatedness would be related to improvements in peer relationship functioning over time, as defined by: a) increasing attachment to peers; b) increasing social acceptance by peers; c) increasing interpersonal competence; d) increasing competence in interpersonal negotiation.

2) Higher levels of undermining autonomy would be related to decreases in quality of functioning in peer relationships over time, as defined by: a) decreasing attachment to peers; b) decreasing social acceptance by peers; c) decreasing interpersonal competence; d) decreasing competence in interpersonal negotiation.

#### Hypotheses as a function of demographic factors

Based on previous work on the effects of contextual variables (Baldwin, Baldwin & Cole, 1990; McElhaney & Allen, 1998; Gonzales et al., 1996; Lamborn, Dornbusch, & Steinberg, 1996; Mason et al., 1996), it was hypothesized that the proposed relationships would vary systematically according to the level of risk present in the adolescents' environment. Specifically, for families living in high-risk environments, it was hypothesized that promotion of autonomy and relatedness would not necessarily be beneficial for adolescents' social functioning. Similarly, it was hypothesized that in high-risk environments, undermining of autonomy would actually be related to more positive parent-adolescent relationship functioning. As previous research on autonomy negotiation has not revealed moderating effects of level of

risk on quality of peer relationships (McElhaney & Allen, 1998), no specific hypotheses for this outcome were proposed.

Previous literature has also revealed different patterns for mother-adolescent vs. father-adolescent dyads, as well as effects of adolescents' gender and age. For the purposes of this study, mother-adolescent and father-adolescent dyads were examined separately, and both main effects and moderating effects of adolescent gender within each dyad were tested. As past studies of gender effects have yielded mixed results, no specific hypotheses were made with respect to dyadic patterns of interaction or adolescent gender effects. Finally, it was hypothesized that adolescents' age would moderate the patterns proposed above. Specifically, the hypotheses presented above were proposed to hold true particularly for the adolescents in the sample who were transitioning from mid-adolescence to early adulthood (moving from age 16 to age 18). No specific predictions were made for patterns of relationships between autonomy negotiation and social functioning for younger adolescents in the sample (those moving from age 14 to age 16).

## Methods

### *Sample*

The data for this study was collected as part of the Virginia Study of Teens and Families (VSTF), a longitudinal study of family relationships and adolescent socio-emotional development conducted at the University of Virginia. The data for VSTF was collected at two time points, once when the adolescents were approximately 16 years of age and again two years later, when they were 18. Approximately 136 adolescents and their families were

interviewed and videotaped at the first time point, and 133 of them (98%) were re-interviewed two years later. Attrition analyses revealed that the 3 adolescents who dropped from the study did not significantly differ from the remaining sample on any of the variables measured at the first time point (not depicted).

Participants were selected from two local public school systems for risk factors including low grades, multiple absences, suspensions, and grade retention. These criteria were utilized in order to obtain a representative sample of what has been referred to as the "Forgotten Half" of high school students, who are unlikely to go on to college, and thus who may be at an elevated risk for future poverty and unemployment (WT Grant Commission, 1988). This sampling strategy identified approximately one-half of students in a given class as eligible, thus allowing for inclusion of a range of adolescents, from those who were doing relatively well to those who were functioning quite poorly. On average, adolescents in the study met 1.39 out of the 4 criteria ( $sd=0.63$ ), with over 30% of the sample meeting 2 or more criteria. Demographic information regarding the sample at both time points is summarized in Table 1.

In addition to information gathered from adolescents and their parents, data was also collected from adolescents' peers at both time points. At each wave of data collection, the peer sample was selected by asking the adolescents to nominate up to 5 friends who "knew them well" to participate in the peer portion of the study. Up to two peers were then selected from this list to be interviewed and to complete measures both about themselves and about the teen in the study. In cases in which data was gathered from two peers about the adolescent in the

study, their ratings of the adolescent were averaged to create a single peer variable. The peer sample at the first time point included 201 peers who had known the teen in the study for an average of approximately 4.7 years ( $sd=3.7$ ). The peer sample at the second time point included 167 peers who had known the adolescent approximately 5.8 years ( $sd=4.6$ ).

Demographic information regarding the two peer samples is summarized in Table 2.

### *Measures*

Demographic information Both mothers, adolescents, and peers were asked to provide basic demographic information such as gender, age, and race/ethnicity. Mothers were asked to provide information regarding their level of education, family and marital status, annual household income, and number of persons supported by this income. Adolescents and peers reported on which local high school they attended, and peers reported on the number of years and/or months that they had known they adolescent in the study.

Level of risk in the environment Past research has indicated that level of risk plays an important role in moderating the links between autonomy negotiation and adolescent outcomes (Baldwin, Baldwin & Cole, 1990; Gonzales, Cauce, Friedman, & Mason, 1996; Lamborn, Dornbusch, & Steinberg, 1996; Mason, Cauce, Gonzales, & Hiraga, 1996; McElhaney & Allen, 1998). For the current study, level of risk in the environment was determined by combining mothers' reports of household income and family size with adolescents' reports of the school that they attended (McElhaney & Allen, 1998). Families living at or below 200% of the Federal poverty line (as determined by a combination of household income and number of persons in household supported by this income), and whose residence was within the city

boundaries (as determined by teens' attendance at the city high school) were designated as living in a high-risk environment, relative to those families whose incomes places them above the 200% marker, and/or who lived outside of the city line.

Substantial research has demonstrated that compared to children living above 200% of the poverty line, children living in near-poor families are at increased risk for a range of maladaptive physical and social outcomes such as stunted growth, lower academic achievement, and higher rates of teenage motherhood (Conger, Conger, & Elder, 1997; Haveman, Wolfe, & Wilson, 1997; Hauser & Sweeney, 1997; Korenman & Miller, 1997; Smith, Brooks-Gunn, & Klebanov, 1997; Teachman, Paasch, Day, & Carver, 1997). In addition, families living within city boundaries are at increased risk for exposure to criminal activity, particularly if they are living *in poverty* within these areas (Brooks-Gunn, Klebanov, Liaw, & Duncan, 1995; Krivo & Peterson, 1996; Virginia Department of State Police, 1995).

Using these two indicators in combination (income and location of residence) resulted in 44 (32%) of the families in the study being classified as living in a high-risk environment at the first wave of data collection. The remaining 92 (68%) of families were classified as living in a low-risk environment, as they experienced no risk factors or only a single risk factor in isolation (the low-risk group included 15 families that had incomes below the cutoff but lived in rural areas, and 38 that lived within city boundaries but had incomes above the poverty line).

Autonomy and relatedness in the parent-adolescent relationship. At the first time point, adolescents and each of their parents participated in a revealed differences task in which they discussed a family issue about which they disagreed. Typical topics of adolescent-mother

discussion included money (19%), grades (19%), household rules (17%), friends (14%), and brothers and sisters (10%); fathers-adolescent discussions focused largely on the same topics. (Other possible topic areas included communication, plans for the future, alcohol and drugs, religion, and dating). These dyadic interactions were videotaped, and then transcribed. Both the videotapes and transcripts were then utilized to code the parent-adolescent interactions for speeches promoting or undermining autonomy and relatedness in the dyad using the *Autonomy and Relatedness Coding System* (Allen et al., 1995).

In this coding system, concrete behavioral guidelines are utilized to rate each speech on ten separate codes that are then grouped on a priori basis onto three scales (Allen et al., 1994a). Scores are assigned to individual speeches on a scale of zero to four, and the scores for each of the speeches within each code are combined to yield an overall score for that code, also on a scale of zero to four. The scoring system takes into account both the frequency and level of statements falling into each code. For example, it is possible to earn a high score for Validates by making 1-2 statements in the 2.0 to 3.0 range, or by making several statements in the 0.5 to 1.0 range. Individual speeches can also be scored on more than one of the ten codes, if applicable.

As can be seen in Table 3, the Promotion of Autonomy and Relatedness scale includes four codes: the extent to which the speakers are able to *state their reasons* during the discussion and how *confident* they are while doing so, as well as *validation* of another's position and indicating *engagement and empathy*. The scale for Undermining Autonomy is made up of three codes: *overpersonalizing* the discussion, *pressuring* the other person to

change his or her position, and/or *placating/recanting* (pretending to go along with the other person without having been truly convinced). (Due to the focus specifically on autonomy, the additional scale for Undermining Relatedness, consisting of *interrupting/ignoring* and *hostile/critical* behaviors, was not utilized in these analyses).

The combination of each of these codes onto the three scales was based on a priori theoretical grounds and validated using a confirmatory factor analysis. The Promoting Autonomy and Relatedness scale was constructed based on the notion that the ability to promote both of these components (autonomy *and* relatedness) reflects the ideal autonomy negotiation strategy during adolescence. Similarly, the three behaviors captured on the Undermining Autonomy scale were grouped on the theoretical basis that they all interfere with autonomy expression within the dyad by employing psychologically controlling tactics that dismiss the importance of the other person's position and make it difficult for him or her to continue to discuss his/her position in the interaction. Although it could be argued that *pressuring* and *overpersonalizing* involve undermining the other person's autonomy, whereas *placating/recanting* relates more to undermining one's own autonomy, in actuality all three behaviors achieve the same end outcome, albeit via different routes. Thus, although it is rare for one person to exhibit all three behaviors within one discussion, they are placed on the same scale because they all are routes to the same end.

Allen and colleagues (1994a) have noted that the composition of the three scales was "relatively consistent with a three-factor solution in a confirmatory factor analysis". These authors reported loadings all above .35, with a goodness of fit index = .92. They noted one

exception to the factor pattern, in that the scale for recanting a position did not load on any factor. The authors stated that “this small incongruity is not surprising, given that related codes for some scales serve as alternative and, to some extent, mutually exclusive means of expressing the same function and thus were not correlated”. Past research utilizing this coding system has found it to be a reliable predictor of both family and adolescent functioning. Specifically, both parents’ and adolescents’ behaviors Promoting Autonomy and Relatedness as well as Undermining Autonomy have been related to adolescent attachment status, self-esteem, depression, ego development, hostile behavior and hard drug use (Allen et al., 1994a; 1994b; Allen et al., 1996; Allen & Hauser, 1991; Allen & Hauser, 1993).

Coder training and the establishment of inter-rater reliability on this coding system proceeded as follows. Coding manual authors who had previously trained and coded using another dataset introduced new coders to the underlying concepts as well as to the concrete aspects of the coding system. New coders practiced using tapes for which consensus codes had previously been established. Next, the whole group of experienced and new coders coded a small number of the tapes from the current dataset; these tapes were considered practice tapes for the new coders. Preliminary reliability estimates were then calculated using Pearson correlations, and new coders were considered trained when their average correlations with experienced coders across all 10 scales were in the .60 to .70 range (with Spearman-Brown correction, average correlations were required to be in the .75 range or above; see below). Additional new coders were trained in a similar manner, calibrating themselves to the group as a whole by practicing on consensus tapes. Bi-monthly coding meetings were held in which a

single tape was coded by the entire group to discuss interpretations of the manual and to prevent coder drift.

With the exception of the group reliability tapes as described above, each interaction was coded by two coders. Care was taken to ensure that coders were blind to the rest of the family data, and mother-adolescent and father-adolescent dyads were coded by two different raters. Final inter-rater reliability for these scales was calculated using intra-class correlations, with a Spearman-Brown correction to account for all interactions being double coded. Reliability coefficients for the scales utilized in these analyses ranged from .75 (adolescent to mother undermining autonomy) to .90 (adolescent to father promoting autonomous-relatedness). Copies of the coding manual are available upon request.

#### Conflict and control in the parent-adolescent relationship

*Behavioral Control.* The amount of parental control over adolescents' day-to-day lives was assessed using the Monitoring and Control Questionnaire (MC) (Hetherington & Clingempeel, 1992). This questionnaire lists 13 aspects of adolescent day-to-day life and asks both parents and adolescents to report how often the parents know about, attempt to control, and actually control the adolescent in each of these areas on a 5-point Likert scale from "never" to "always." The 13 items load onto two scales, one encompassing Character Development and focusing on such issues as choice of friends and intellectual interests, and one assessing Deviant Behavior, including activities such as drug use and problem behavior in school. For example, parents were asked: "How often do you actually influence or control your teenager's activities outside of school (sports, jobs, clubs, etc.)?".

Each of the scales showed adequate internal consistency, with Cronbach alphas ranging from .79 (fathers' report of attempted control of character) to .93 (mothers' report of total actual control). For the purposes of data reduction, the Character Development and Deviant Behavior scales (correlated in the .60 range across all reporters) were combined to yield estimates of Total Attempted and Actual control across all areas. In addition, as the correlations between Attempted and Actual control were also quite high across all reporters ( $r$ 's ranging from .57 to .70), these scales were also collapsed to yield a total estimate of amount of Behavioral Control exercised by parents. Adolescents reported on the level of both maternal and paternal Behavioral Control (Cronbach alphas=.92 and .94, respectively), and parents each reported on their own level of control (Cronbach alphas: mothers' report=.94, fathers' report=.92).

*Disciplinary Control.* Assessment of the type of disciplinary control exercised by parents was accomplished using the Child Report of Parenting Behavior Inventory (CRPBI) (Schaefer, 1965; Schluderman & Schluderman, 1970). A shortened version of the original 108-item CRPBI (Schaefer, 1965) was used to gather information from both adolescents and their parents regarding the nature of parental control. The shortened version of this inventory contains 30 items, and asks the rater to assess how well each item describes the parent on a three-point scale, from "not like" up to "a lot like" (Schluderman & Schluderman, 1970). The content of the items focuses on issues of conflict, rules, and consequences. For example, adolescents were asked to respond to the items "My parent is a person who is less friendly with me if I do not see things his/her way" and "My parent insists that I must do exactly as I am

told". This questionnaire yields three scales, two of which pertain to issues of control: Psychological Control vs. Autonomy, and Firm vs. Lax Control. These scales showed adequate internal consistency, with Cronbach alphas ranging from .79 (father reported psychological control) to .86 (teen reported fathers' firm control).

Again, for the purposes of data reduction, these two scales were collapsed to yield a single index of the type of Disciplinary Control utilized by parents. The rationalization for collapsing these scales was based in part on the fact that item content was often quite similar between the two scales. In addition, the items on the "firm control" scale was thought to reflect parental *over*-control for this age group (e.g. rule inflexibility, denial of adolescents' participation in decision making). Thus, it was hypothesized that both Firm Control and Psychological Control would be similarly related to autonomy negotiation. The correlations between these two scales were moderate across all reporters (*r*'s range from .29 to .50). Again, adolescents reported on both maternal and paternal Disciplinary Control, and each parent also reported on their own control styles. Chronbach alphas for the final scale indicated good internal consistency (adolescent reports of mothers=.84 , adolescent reports of fathers=.89, mothers' reports=.82, fathers' reports=.83).

*Parent-Adolescent Conflict.* Information regarding the amount of conflict within the parent-adolescent relationship was gathered using the Parent-Child Conflict Questionnaire (Hetherington & Clingempeel, 1992). This questionnaire contains 39 items that cover a broad array of possible topics of conflict that are divided into four general areas: Deviance, Adolescent Issues, Household Routines, and Behavior Towards Others. Both parents and

adolescents were asked to report how often they have disagreed about each topic within each of these areas in the last month, on a 6-point scale ranging from “never” to “more than once a day”. Sample topics include manners, choice of friends, keeping your room neat, and choice of social activities. A total estimate of conflict across all areas was calculated by summing all items into one scale. This scale showed adequate internal consistency, with Cronbach alphas ranging from .90 (adolescents’ report of total conflict with mother) to .96 (adolescents’ report of total conflict with father).

*Adolescent Decision-Making.* Information about patterns of decision-making within the parent-adolescent relationship was gathered using the Parent-Child Conflict Questionnaire (PCC) (Hetherington & Clingempeel, 1992). After rating the amount of conflict in each topic area as described above, both parents and adolescents were then asked to report on who decided the outcome of the conflict by choosing one of the following: Parents, Adolescents, Both, or Neither (Steinberg, 1987; Dornbusch, et al., 1985). An estimate of the level of adolescents’ participation in decision-making was obtained by summing the proportion of adolescent decision-making with the proportion of joint decision-making.

*Parent-Adolescent Aggression.* Information concerning how parents and adolescents handle conflicts was gathered from teens using the Conflict Tactics Scale (CTS) (Straus, 1979). The CTS is a 21-item measure that asks the adolescents to rate how often their parents have utilized a variety of different conflict resolution methods, from calm discussion to physically threatening or aggressive behaviors. For example, adolescents were asked to rate how often (in the past year) their parent has “insulted or sworn at them” during a conflict or disagreement.

This measure yields scales for the frequency of both verbally and physically aggressive behaviors by each member of the dyad. These scales had adequate internal consistency, with Cronbach alphas for teen reports of mothers' aggression of .68 (verbal aggression) and .81 (physical aggression), and alphas for teen reports of fathers' aggression of .79 (verbal aggression) and .78 (physical aggression). As estimates of verbal and physical aggression were moderately correlated ( $r=.58$  mother to adolescent,  $r=.45$  father to adolescent), these scales were collapsed to yield a single estimate of the level of Aggression within the mother-adolescent and father-adolescent relationship. This final scale showed good internal consistency, with Cronbach alphas equal to .83 for both mother to teen and father to teen aggression.

#### Adolescents' functioning in peer relationships

*Social Competence.* At both time points in the study, both adolescents' and peers' reports of the adolescents' social competence were assessed using a modified version of the Self-Perception Profile (Harter, 1985). While teens in the study completed the measure by rating their own competence, peers completed a slightly modified version to report on the competence of the *teen in the study*. For each item, teens and peers were asked to choose which of two contrasting statements best described the teen. For example: "Some people do have a close friend that they can share secrets with, BUT Other people do not have a really close friend that they can share things with". Once the participant chose one of the two statements, they were asked to decide whether the statement was "sort of true" or "really true" for the target adolescent. The resulting ratings yielded a 4-point scale, with higher ratings indicating greater competence. The five scales administered included scholastic competence,

behavioral conduct, romantic appeal, social acceptance, and close friendships. When two peers were present, their ratings were averaged to create a single indice of peer-rated adolescent competence for each scale.

The current study utilized two scales from this measure: both self and peer reports of social acceptance and competence in close friendships. Self-report scales showed good internal consistency at both time points, with Cronbach alphas of .83 for social acceptance and .86 for competence in close friendships at Time 1, and .72 and .87, respectively, at Time 2. Peers demonstrated moderate agreement regarding the adolescents' social competence at the first time point ( $r$  close friendships = .29,  $r$  social acceptance = .48), with somewhat lower agreement at the second time point ( $r$  close friendships = .21,  $r$  social acceptance = .20). These scales showed good internal consistency at both time points, with Cronbach alphas equal to .81 (close friendship) and .83 (social acceptance) at Time 1, and .80 and .79, respectively, at Time 2.

At the second time point, when adolescents were 18, both the adolescents and their peers were asked to report on more specific behaviors in close friendships using the Adolescent Interpersonal Competence Questionnaire (Buhrmester, 1990; Buhrmester, Furman, Wittenberg, & Reiss, 1988). This questionnaire contains 40 items assessing different domains of interpersonal competence, including initiating relationships, offering emotional support, engaging in self-disclosure, asserting influence, and resolving conflicts. Each item is rated on a 5-point scale from 1 (poor at this) to 5 (extremely good at this). For example, peers were asked to rate how good the adolescent was at "showing that he/she really cares when someone talks

about problems” (emotional support) and at “telling people private things about him/herself” (self-disclosure).

For the purposes of this study, only the emotional support, self-disclosure, and conflict resolution scales were utilized. Both the self-report and the peer-report versions of these scales showed good internal consistency, with Chronbach alphas ranging from .87 (teens’ report of their skills at conflict resolution) to .92 (teens’ report of emotional support). Correlations between peers’ reports of adolescents’ interpersonal competence ranged from  $r=.18$  (conflict resolution) to  $r=.43$  (self-disclosure). Because correlations among these three scales were moderate to high for both adolescent and peer reports (ranging from .40 to .63), and because all three scales were expected to covary similarly with the autonomy variables of interest in this study, they were collapsed to form a single indicator of Interpersonal Competence. This overall scale showed good internal consistency for both teens’ and peers’ reports, with Cronbach alphas of .94 for both reporters.

*Friendship Quality.* Adolescents and peers also reported on the overall quality of their friendship using the peer version of the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). The IPPA is a 32-item measure that lists a variety of statements describing relationships and asks the participant to rate how true each statement is about their friendship. The items are rated on a 5-point scale from “never true” to “almost always true.” While the IPPA contains three sub-scales (Trust, Communication, and Alienation), its authors recommend collapsing these scales into a single Total Attachment scale (Armsden & Greenberg, 1987). Adolescents reported on their attachment to peers at both time points,

whereas peers only completed this measure at the second time point. Adolescents' ratings of their Total Attachment to peers showed good internal consistency, with Cronbach alphas of .83 at Time 1 and .94 at Time 2. Peers' ratings on the IPPA were only collected at Time 2. Peers ratings of Total Attachment in their friendship with the target teen were uncorrelated ( $r = .04$ ), although the averaged Total Attachment scale showed good internal consistency, with a Cronbach alpha of .92.

*Interpersonal Negotiation Strategies.* An additional measure of adolescents' social competence was obtained by evaluating their responses to hypothetical vignettes involving interpersonal conflicts. At each wave, adolescents were presented with vignettes (nine at the first time point, seven at the second) drawn from the Adolescent Problem Inventory for Boys (API; Freedman et al., 1978) and the Problem Inventory for Girls (PIAG; Gaffney & McFall, 1981), with virtually identical items administered to both genders. The vignettes for these measures were originally generated by surveying adolescents about difficult social situations that they had encountered and how they had handled them, thus they have a very high level of face validity for most teens. Each vignette involves situations in which the adolescents' needs are conflicting with the needs of another person (either a peer, a parent, or another adult). For example, one vignette involves the teen getting in trouble with their parent after they lost track of the time and arrived home late for their curfew.

After hearing the vignettes, teens were asked to state what they would do if the situation happened to them. Their answers were audiotaped, and coding was done directly from these tapes. The adolescents' Interpersonal Negotiation strategies were rated on two dimensions:

Level of Sophistication and Self vs. Other Transforming (Brion-Meisels & Selman, 1984; Leadbeater et al., 1989). Level of Sophistication was scored according to a theoretical description of developmental differences in interpersonal negotiation strategies (Selman et al., 1986) that focuses on children's increasing ability to view themselves as part of a larger social context, and to recognize and coordinate other people's needs along with their own (Schultz, Yeates, & Selman, 1989). Self vs. Other transforming is an additional dimension of interpersonal negotiation referring to whether or not the proposed solution to the conflict involves a change in one's own goals and/or behavior vs. a change in the other person's goals and/or behavior. Types of self vs. other transforming strategies tend to vary by level of sophistication. For example, at a lower level of sophistication, an other-transforming strategy might involve using force to get what is wanted, whereas at a higher level of sophistication, an other-transforming strategy might involve trying to talk the other person into changing their goals and/or behavior (Schultz et al., 1989).

Adolescents' responses to each vignette received two scores, one for Level of Sophistication and one for Self vs. Other Transforming. Level of Sophistication was scored on a four-point scale, from 0 (least sophisticated) to 3 (most sophisticated). Self vs. Other Transforming was scored dichotomously, and the final score was calculated as the total proportion of Other Transforming responses. Total scores for each coder were obtained by averaging scores across each vignette. Participants' responses were double-coded, such that their final score was an average of two sets of ratings. Pearson correlations were calculated periodically in order to monitor the level of agreement present between coders. In addition, on

a bi-monthly basis, the entire coding team rated a single tape and then discussed their ratings and resolved discrepancies in order to prevent coder drift. Final reliability estimates were calculated using intra-class correlations, which were subjected to Spearman-Brown transformations to account for double coding. Reliability coefficients were identical at both time points: .79 for Level of Sophistication and .81 for Other Transforming strategies.

A summary of both the parent-adolescent relationship and peer relationships variables assessed in the current study can be found in Table 4.

## Results

### Preliminary Analyses

#### *Intercorrelations among variables*

Autonomy and relatedness at Time 1. Correlations among all autonomy variables used in the analyses below are presented in Table 5. These correlations revealed that members of a dyad tended to behave similarly to one another. Promoting Autonomy and Relatedness was particularly highly correlated across both adolescent-mother and adolescent-father dyads, such that if one member of the dyad exhibited this behavior, the other was likely to be behaving similarly. Undermining Autonomy was also positively correlated across members of a dyad, although these correlations were more in the moderate range. The correlations among autonomy scales also indicated that mother-adolescent and father-adolescent dyads from the same family tended to behave similarly, especially with regard to behaviors Promoting Autonomy and Relatedness.

Time 1 Parent-adolescent relationship functioning. Correlations among Time 1 parent-adolescent relationship variables are presented in Table 6. Adolescent and parent reports of the same constructs ranged from being completely uncorrelated to being moderately positively correlated. Adolescents' reports of mothers' and fathers' behavior on the same construct were moderately to strongly positively correlated, whereas mothers and fathers' reports of their own behaviors with their teens were largely uncorrelated with each other. Correlations between constructs indicated that higher levels of Disciplinary Control were related to higher levels of Conflict and Aggression across both adolescent-mother and adolescent-father dyads. Parents' Behavioral Control and adolescents' participation in Decision Making were largely uncorrelated with other measures of control and conflict in the parent-adolescent relationship. All correlations were in expected directions, with the exception of the positive correlation between adolescents' report of Decision Making with their mothers and level of fathers' Behavioral Control.

Time 2 Parent-adolescent relationship functioning. Correlations among Time 2 parent-adolescent relationship variables are presented in Table 7. Again, adolescent and parent reports of the same constructs ranged from being completely uncorrelated to being moderately positively correlated. Adolescents' reports of mothers' and fathers' behavior on the same construct were generally moderately positively correlated. Again, mothers and fathers' reports were largely uncorrelated. Correlations between constructs indicated that higher levels of Disciplinary Control were related to higher levels of Behavioral Control, Conflict and Aggression across both adolescent-mother and adolescent-father dyads. In addition, at Time 2

higher levels of Behavioral Control were also related to higher levels of Conflict across both dyads. Adolescents' participation in Decision Making was largely uncorrelated with other measures of control and conflict in parent-adolescent relationships. All correlations were in expected directions with the exception of the positive correlation between mothers' reports of adolescent participation in Decision Making and fathers' reports of Behavioral Control.

Time 1 Peer relationship functioning. Correlations among Time 1 peer relationship variables are presented in Table 8. As can be seen in this table, both adolescents' self-reports and peer reports of the quality of peer relationships and adolescents' social competence were consistent both within and across reporters.

Time 2 Peer relationship functioning. Correlations among Time 2 peer relationship variables are presented in Table 9. As with Time 1 reports, at Time 2, both adolescents' self-reports and peer reports of the quality of the peer relationship and adolescents' social competence were consistent both within and across reporters.

*Correlations between relationship functioning at Time 1 and Time 2*

Parent-adolescent relationship functioning. Correlations between parent-adolescent relationship functioning at Time 1 and Time 2 are presented in Table 10. As expected, relationship functioning was generally consistent over time, with moderate positive correlations within the same rater across time (shown in bold). Adolescents' reports of their participation in Decision Making and fathers' reports of Conflict with their teens were the least consistent over time (correlations in the .20 range). As was the case within each time point, the dimensions of control and conflict tended to be moderately positively correlated with each other across time.

Specifically, higher levels of parent-adolescent Conflict at Time 1 were related to higher levels of both Disciplinary and Behavioral Control at Time 2. All correlations were in expected directions with the exception of the positive correlations between adolescents' and mothers' reports of adolescent Decision Making and adolescents' ratings of fathers' Disciplinary Control and mothers' Behavioral Control, respectively (see Table 10). This result suggests that the measure of Decision Making used in this study may not necessarily reflect promotion of adolescents' autonomy within the parent-adolescent relationship.

Peer relationship functioning. Correlations between peer relationship functioning at Time 1 and Time 2 are presented in Table 11. As expected, relationship functioning was generally consistent over time, with moderate to strong positive correlations within the same rater across time (shown in bold). Adolescents' self-reports were particularly consistent over time, with moderate positive correlations between almost all variables measured at both time points. Peer ratings and ratings across reporters were also relatively consistent over time.

*Demographics and variables of interest*

Autonomy and relatedness. Mean comparisons for autonomy and relatedness across risk groups, gender, and age are presented in Table 12. Families living in low-risk environments (particularly adolescents) tended to have higher scores on the measures of both Promoting and Undermining Autonomy. There were also significant group differences between male and female teens on two of the autonomy and relatedness variables. Compared to male adolescents, female teens showed higher levels of Undermining Autonomy with their mothers, and higher levels of Promoting Autonomy and Relatedness with their fathers. Finally, there was

one significant group difference between younger adolescents (less than 18 years old at Time 2) and older adolescents (18 years or older at Time 2), in that older adolescents exhibited higher levels of Promoting Autonomy and Relatedness with their mothers (see Table 12). Finally, there was also a trend for fathers of older adolescents to show higher levels of Undermining Autonomy than fathers of younger adolescents.

Parent-adolescent relationship functioning. As can be seen in Table 13, there were very few group differences across all of the Time 2 variables measuring parent-adolescent relationship functioning. There was one significant difference between families living in low vs. high-risk environments: mothers in high-risk environments reported exercising higher levels of Behavioral Control over their teens than mothers in low-risk environments (see Table 13). In addition, there was a trend for mothers in high-risk environments to report experiencing more Conflict with their adolescents than mothers in low-risk environments. There were not any mean differences between male and female adolescents on any of the Time 2 parent-adolescent relationship variables. As can be seen in Table 13, there was one significant group difference between older and younger adolescents: younger adolescents reported experiencing higher levels of Behavioral Control from their mothers than older adolescents.

Peer relationship functioning. Group comparisons for all Time 2 peer relationship variables across risk groups, gender, and age are presented in Table 14. There were no significant group differences for either level of environmental risk or for adolescent age. However, there were two significant differences for male vs. female adolescents. As can be seen in Table 14, peers of female adolescents rated them as more Interpersonally Competent

than peers of male adolescents. In addition, female adolescents were rated as using more sophisticated Interpersonal Negotiation Strategies in solving hypothetical interpersonal dilemmas than male adolescents (see Table 14).

*Means and standard deviations: Changes over time*

Autonomy and relatedness. Means and standard deviations of autonomy and relatedness variables measured at the first time point are presented in Table 15.

Parent-adolescent relationship functioning. Means and standard deviations of all parent-adolescent relationship variables, as well as level of change over time in each, are presented in Table 16. As can be seen in this table, there were significant changes in both mother-adolescent and father-adolescent relationships over time. All of the changes observed were in expected directions, with the possible exception of adolescents' participation in Decision Making. Specifically, both mothers and fathers reported decreases in their levels of Disciplinary and Behavioral Control from Time 1 to Time 2. Adolescents reported experiencing decreased Behavioral Control from both mothers and fathers from Time 1 to Time 2, but they did not report any changes in their parents' Disciplinary Control. In addition, levels of parent-adolescent Conflict and Aggression decreased in both mother-adolescent and father-adolescent relationships from Time 1 to Time 2. Finally, although adolescents reported an increase in their participation in Decision Making with their mothers, there were no changes in mother reports of adolescent Decision Making, and neither adolescents nor fathers reported increases in adolescents' participation in Decision Making with fathers.

Peer relationship functioning. Means and standard deviations of peer relationship variables, as well as level of change over time in those measured at both time points, are presented in Table 17. (Means and standard deviations of variables collected only at Time 2 are presented in Table 18). As can be seen in Table 17, the changes that were observed in peer relationships over time were in expected directions. Specifically, adolescents reported that the quality of their Attachment to their Peers increased from Time 1 to Time 2. Similarly, ratings of both sophistication in adolescents' Interpersonal Negotiation strategies and their use of Other Transforming strategies increased from Time 1 to Time 2. However, neither the level of Social Acceptance nor Competence in Close Friendships reported by either adolescents or peers changed from Time 1 to Time 2.

*Correlations between autonomy and relatedness and relationship functioning*

Parent-adolescent relationship functioning. Correlations between autonomy and relatedness at Time 1 and parent-adolescent relationship functioning at Time 1 and Time 2 are presented in Tables 19 and 20, respectively. As can be seen in Table 19, cross-sectionally at Time 1 Promoting Autonomy and Relatedness was generally linked with lower levels of maternal Disciplinary Control, higher levels of parental Behavioral Control, higher levels of adolescent Decision Making, and lower levels of parent-adolescent Conflict. Undermining Autonomy, on the other hand, was linked with higher levels of Disciplinary Control, higher levels of Behavioral Control, and higher levels of parent-adolescent Conflict and Aggression. All correlations were in expected directions, with the possible exception of the positive relationship between Promoting Autonomy and Relatedness and Behavioral Control.

Prediction over time between the autonomy and relatedness variables and parent-adolescent relationship functioning at Time 2 yielded a very similar pattern of results, with a few exceptions. As in the cross-sectional analyses, higher levels of Promoting Autonomy and Relatedness were linked with lower levels of Disciplinary Control over time. However, in contrast to the cross-sectional pattern, higher levels of Promoting Autonomy and Relatedness at Time 1 were linked with *less* Behavioral Control at Time 2. Similar to the cross-sectional pattern, higher levels of Promoting Autonomy and Relatedness were linked to lower levels of parent-adolescent Conflict over time. Finally, higher levels of Undermining Autonomy at Time 1 were related to higher levels of Disciplinary and Behavioral Control at Time 2, as well as higher levels of parent-adolescent Conflict and Aggression. In contrast to the cross-sectional findings, the longitudinal links between autonomy negotiation and both adolescent Decision Making and parent-adolescent Aggression were less consistent and less robust.

Peer relationship functioning. Correlations between autonomy and relatedness at Time 1 and peer relationship functioning at Time 1 and Time 2 are presented in Tables 21 and 22, respectively. As can be seen in Table 21, with a few exceptions, there were generally no cross-sectional links between autonomy negotiation and functioning with peers at Time 1. The exceptions were largely found in the adolescent-father dyads: higher levels of Promoting Autonomy and Relatedness within these dyads were linked with better Attachments to Peers, whereas higher levels of adolescent to father Undermining of Autonomy were linked to less Competence in Close Friendships. In addition, higher levels of fathers' Promoting Autonomy and Relatedness were linked with lower levels of Other Transforming strategies.

As can be seen in Table 22, Promotion of Autonomy and Relatedness was consistently related to functioning in relationships with peers over time, particularly with regard to adolescents' Promotion of Autonomy and Relatedness with their mothers. When adolescents engaged in higher levels of Promoting Autonomy and Relatedness with their mothers at Time 1, at Time 2 they reported better Attachment Relationships with their peers, higher levels of Social Acceptance and Competence in Close Friendships, as well as higher levels of adolescent Interpersonal Competence with peers. Similar links were found with peer reports: when adolescents displayed high levels of Autonomy and Relatedness at Time 1, their peers reported that they were more Competent in Close Friendships at Time 2, and also indicated that they were more Interpersonally Competent within their friendships. Interestingly, adolescents' Undermining Autonomy behaviors with their mothers at Time 1 were also linked with *higher* levels of peer reported Attachment quality, as well as *higher* levels of peer reported Interpersonal Competence at Time 2.

*Predicting relationship functioning at Time 2 using regression analyses*

Appendices A to W provide results of regression analyses predicting both parent-adolescent relationship functioning and functioning in relationships with peers at Time 2 from the negotiation of autonomy and relatedness at Time 1. These regression models accounted for both main effects and interaction effects of demographic variables (see below for more detail on the construction of the regression models), but did not include Time 1 level of the outcome being examined as a covariate. As the primary focus of this study was on *change* in functioning over time, these direct prediction models are presented as preliminary analyses only. The

results of the direct prediction models are presented in Appendices due to the fact that the number of variables examined was quite large, and the results are generally consistent with the change models presented below,

### Primary Analyses

#### *Overview of analyses.*

To further examine the prediction of adolescents' relationship functioning at Time 2 from autonomy negotiation at Time 1, a set of hierarchical regressions was performed. To examine change over time, the models were constructed including the level of functioning at Time 1 as a covariate. In addition, given the associations between demographic variables and both autonomy negotiation and relationship functioning discussed above, as well as results from previous studies suggesting associations between demographics and adolescents' functioning with both parents and peers (e.g. Blyth, Hill, & Thiel, 1982; Hanson & Mullis, 1985) the models also included tests for the main effects of adolescent gender, adolescent age, and level of risk in the environment. The autonomy variables were entered next, with the effects of Promoting Autonomy and Relatedness and the effects of Undermining Autonomy examined in separate sets of regression models. In addition, mother-adolescent autonomy variables were examined separately from father-adolescent autonomy variables. However, within each dyad, both parents' and teens' behaviors were entered into the same models, with adolescents' behaviors entered after parents'. This strategy attempted to account for the links between parents' and adolescents' behaviors with regard to autonomy (presented earlier), and tests for

the effects of adolescents' behaviors on the dependent variables over and above the effects of parents' behaviors.

Finally, interaction terms were created by standardizing the independent variables and multiplying them together, and these terms were entered following the test for the main effects of the autonomy variables to examine the interaction effects between autonomy variables and each of the demographic variables outlined above. Interaction terms were tested in blocks, with each block including pairs of interaction terms that corresponded to the autonomy variables being tested (e.g. the interaction between risk and mothers' undermining autonomy paired with the interaction between risk and adolescents' undermining autonomy). Pairs of interaction terms were entered into the models in the following order: autonomy\*risk, autonomy\*age, and autonomy\*gender. Pairs of interaction terms were retained in the regression model when the test of the block was significant at at least  $p < .10$  (Cohen & Cohen, 1975). Note that neither the main effects of level of risk in the environment nor the interactions between fathers-adolescent autonomy behaviors and level of risk were examined in any of the models below due to a limited sample of fathers from families in high-risk environments ( $n=4$ ). For the same reason, these variables were also omitted from models examining the effects of mother-adolescent autonomy negotiation on *father* reports of their relationship with their adolescents.

#### *Predicting changes in parent-adolescent relationship functioning*

As discussed above, hierarchical regression models were utilized to examine the extent to which parent-adolescent autonomy negotiation at Time 1 predicted change in both parent-adolescent relationship functioning and adolescents' functioning in their relationships with their

peers from Time 1 to Time 2. The analyses present below are organized as follows: models examining the effects of autonomy negotiation on parent-adolescent relationship functioning are presented first, followed by those examining effects on functioning with peers. Note that some of the Time 2 variables measuring social functioning with peers were not collected at Time 1. In these cases, a standard Time 1 variable assessing general competence with peers was entered into regression equations to account for the level of functioning with peers at Time 1. Within each section, effects of adolescents' and mothers' behaviors with regard to autonomy are presented first, followed by models examining effects of adolescents' and fathers' behaviors. In addition, models are organized according to whether they pertain to Promotion of Autonomy and Relatedness or Undermining Autonomy.

Promoting autonomy in mother-adolescent dyads predicting changes in parent-adolescent relationship functioning. The effects of both adolescents' and mothers' behaviors Promoting Autonomy and Relatedness were largely in predicted directions, in that these behaviors were generally linked to decreases in control and conflict in parent-adolescent relationship functioning over time. However, a majority of these effects were moderated by both adolescent age and gender, such that the effects of Promotion of Autonomy and Relatedness were strongest for female adolescents and for older adolescents.

Adolescents' displays of Promoting Autonomy and Relatedness at Time 1 predicted decreases in parental control from Time 1 to Time 2, although these effects were only significant for older adolescents and females. As can be seen in Table 23, relative to younger adolescents, when older adolescents Promoted Autonomy and Relatedness in interactions with their mothers

at Time 1, they reported decreases in the level of Disciplinary Control that they experience from their fathers from Time 1 to Time 2. Further, when *female* adolescents Promoted Autonomy and Relatedness with their mothers at Time 1, their mothers reported decreasing levels of Disciplinary Control over their teens from Time 1 to Time 2; this effect was not significant for male teens (see Table 24). An additional moderating effect for gender was found that contradicted the hypotheses. As can be seen in Table 25, both adolescents and mothers agreed that mothers' Promotion of Autonomy and Relatedness with female teens predicted *decreases* in the teens' participation in Decision Making with their mothers. Neither of these effects were significant for male adolescents.

Effects of Promoting Autonomy and Relatedness on conflict and aggression were in predicted directions, with one exception. As can be seen in Table 26, when either adolescents or mothers promoted autonomy and relatedness at Time 1, the amount of father-adolescent Conflict decreased from Time 1 to Time 2. In addition, mothers' Promotion of Autonomy and Relatedness was linked to decreases in father-adolescent Aggression, but only for teens living in *high-risk* environments (see Table 27). Contrary to the hypotheses, there was a trend for higher levels of mother' Promoting Autonomy and Relatedness at Time 1 predicting *increases* in father-adolescent Aggression for teens living in low-risk environments.

A summary of the findings for the Promotion of Autonomy and Relatedness within mother-adolescent dyads predicting changes in parent-adolescent relationship functioning is presented in Table 28. As can be seen in this table, overall, results were consistent with the hypotheses, particularly for female teens and for the outcomes of Parent-Adolescent Conflict

and Disciplinary Control. Higher levels of Promoting Autonomy and Relatedness by either mothers or adolescents at age 16 resulted in decreases in mother-adolescent conflict from age 16 to age 18, as well as decreases in mothers' use of Disciplinary Control. In the latter case, this decrease was particularly true for older adolescents and for girls. Results for Adolescent Decision-Making and Parent-Adolescent Aggression were somewhat mixed. Inconsistent with the hypotheses, when mothers' Promoted Autonomy and Relatedness at age 16, female adolescents' participation in Decision-Making *decreased* from age 16 to age 18. Finally, in the case of Parent-Adolescent Aggression, the interaction between risk and autonomy was in the opposite direction than predicted in the hypotheses.

Undermining autonomy in mother-adolescent dyads predicting changes in parent-adolescent relationship functioning. The effects of mothers' behaviors Undermining Autonomy were all in predicted directions, in that mothers' Undermining of Autonomy at Time 1 predicted increasing difficulties in parent-adolescent relationships from Time 1 to Time 2. However, the majority of the effects of *adolescents'* behaviors Undermining Autonomy were contrary to the hypotheses, in that these behaviors were generally linked to *decreases* in parental control from Time 1 to Time 2. The majority of the effects of both mothers' and adolescents' Undermining of Autonomy were moderated by both adolescent age and gender. Similar to the results for Promoting Autonomy and Relatedness presented above, the moderating effects of gender and age presented below indicate that generally, effects of mothers' behaviors Undermining Autonomy were as predicted for older adolescents and females. Effects of adolescents'

behaviors Undermining Autonomy were generally in opposite directions than predicted for older adolescents and females, but in predicted directions for younger adolescents and males.

Only one main effect of mothers' Undermining Autonomy was found: overall, when mothers were observed to Undermine Autonomy in interactions with their adolescents at Time 1, they reported increases in the amount of mother-teen Conflict from Time 1 to Time 2 (see Table 29). Similarly, as can be seen in Table 30, when mothers were observed to Undermine Autonomy in interactions with their adolescents at Time 1, *older* adolescents reported experiencing increases in mothers' Behavioral Control from Time 1 to Time 2 (this effect was in the opposite direction, but non-significant, for younger adolescents). However, this effect was reversed when *adolescents* engaged in Undermining Autonomy at Time 1; in this case, mothers of older adolescents reported *decreasing* their level of control over their teens' behavior from Time 1 to Time 2 (see Table 31). The effect for younger adolescents was significant and in the opposite (predicted) direction: when younger adolescents were observed to Undermine Autonomy with their mothers at Time 1, their mothers' reported increasing their control over their teens' behavior from Time 1 to Time 2.

A similar pattern was found for fathers' Disciplinary Control: when mothers Undermined Autonomy at Time 1, both older adolescents and female adolescents reported that their fathers increased their level of Disciplinary Control from Time 1 to Time 2 (see Table 32). However, when *adolescents* were observed to Undermine Autonomy with their mothers at Time 1, both older adolescents and female adolescents reported *decreases* in their fathers'

Disciplinary Control from Time 1 to Time 2. In both cases, the effects for younger adolescents and for male adolescents were non-significant.

One final effect was found for Undermining Autonomy in mother-adolescent dyads. This effect followed a similar pattern to the effects presented above, except that in this case, the moderator was the level of risk in the environment. As can be seen in Table 33 when mothers Undermined Autonomy in low-risk environments (relative to high-risk environments), teens reported decreases in their participation in Decision Making from Time 1 to Time 2. However, when *teens* in *high-risk* environments (relative to those in low-risk environments) Undermined Autonomy with their mothers at Time 1, they reported *increases* in their participation in Decision Making from Time 1 to Time 2. Note that although the step including the interaction terms in this model accounted for a significant amount of variance at the trend level, neither interaction term is significant on its own, and thus these results should be interpreted with caution.

A summary of the results of models using Undermining Autonomy in mother-adolescent dyads to predict changes in parent-adolescent relationship functioning can be found in Table 34. As can be seen in this table, results of the models examining the effects of mothers' behaviors Undermining Autonomy were all consistent with the hypotheses. When mothers' undermined autonomy within the dyad at age 16, parental Control and parent-adolescent Conflict both increased from age 16 to age 18. These increases were particularly seen in families with female adolescents and older adolescents. In addition, mothers' Undermining Autonomy interacted with level of risk in a predicted direction, such that mothers' behaviors

Undermining Autonomy were linked to decreases in Adolescent Decision-Making only for low-risk adolescents. Table 34 also reveals that, inconsistent with the hypotheses, when adolescents are Undermining Autonomy in interactions with their mothers at age 16, the amount of Control and Conflict in the parent-adolescent relationship *decreased* from age 16 to age 18. Again, these results were particularly true for families with older adolescents and female adolescents. The one exception to this pattern is the interaction between adolescents' Undermining Autonomy and risk, which was consistent with the hypotheses in that Undermining Autonomy appears to be a more beneficial pattern for high-risk adolescents.

Promoting autonomy and relatedness in father-adolescent dyads predicting changes in parent-adolescent relationship functioning. Effects of Promoting Autonomy and Relatedness in father-adolescent dyads were largely in predicted directions, in that increased Promotion of Autonomy and Relatedness at Time 1 was linked with decreases in levels of Control and Conflict in parent-adolescent relationships from Time 1 to Time 2. However, as with autonomy negotiation in mother-adolescent dyads, these effects were all moderated by adolescent gender and/or age, with most results being significant for older adolescents and/or female teens.

As hypothesized, when fathers of *older* adolescents Promoted Autonomy and Relatedness at Time 1, both Conflict and Control in parent-adolescent relationships decreased from Time 1 to Time 2. Specifically, when fathers Promoted Autonomy and Relatedness at Time 1, mothers of older adolescents reported that they decreased their level of Disciplinary Control from Time 1 to Time 2; this effect was in the opposite direction, but non-significant, for younger adolescents (see Table 35). Similarly, when fathers' were observed to Promote

Autonomy and Relatedness at Time 1, older adolescents reported decreases in the amount of father-adolescent Conflict from Time 1 to Time 2; this effect was in the opposite direction, but non-significant for younger adolescents (see Table 36).

Additional moderating effects were found for adolescent gender. Consistent with the hypotheses, when fathers' displayed higher levels of Promoting Autonomy and Relatedness at Time 1, they reported decreases in the amount of Behavioral Control that they exerted over their adolescents from Time 1 to Time 2 (see Table 37). Further, higher levels of fathers' Promotion of Autonomy and Relatedness with their *daughters* at Time 1 predicted decreases in fathers' reports of the amount of Behavioral Control they exerted over their teens from Time 1 to Time 2; this effect was non significant for male teens. As can also be seen in Table 37, one model yielded a significant effect for adolescents' Promotion of Autonomy and Relatedness, and this effect was inconsistent with the hypotheses. Contrary to the hypotheses, when adolescents' showed higher levels of Promoting Autonomy and Relatedness with their fathers at Time 1, their fathers reported *increases* in the amount of Behavioral Control that they exerted over their teens from Time 1 to Time 2.

One additional moderating effect of gender was found, although results should be interpreted with caution; although the step containing the interaction terms was significant, neither interaction term individually was significantly different from zero. Contrary to the hypotheses, it appears that fathers' Promotion of Autonomy and Relatedness with girls (relative to boys) at Time 1 was linked to *decreases* in adolescents' participation in Decision Making from Time 1 to Time 2 (see Table 38). In contrast, consistent with the hypotheses, relative to

boys, girls' Promotion of Autonomy and Relatedness with their fathers at Time 1 was linked to increases in adolescents' participation in Decision Making from Time 1 to Time 2.

A summary of the findings for Promoting Autonomy and Relatedness in father-adolescent dyads predicting changes in parent-adolescent relationship functioning can be found in Table 39. This table shows that, consistent with the hypotheses, when either fathers or adolescents Promote Autonomy and Relatedness at age 16, both Conflict and Control in the parent-adolescent relationship decrease from age 16 to age 18. Similar to the findings for mother-adolescent dyads, this pattern is particularly true for older adolescents and for female adolescents. Also similar to the mother-adolescent findings, one of the exceptions in the father-adolescent findings is in the case of Adolescent Decision-Making: when fathers Promoted Autonomy and Relatedness at age 16, female adolescents' participation in Decision-Making *decreased* from age 16 to age 18. One additional contradictory finding is that adolescents' Promotion of Autonomy and Relatedness with their fathers at age 16 is linked to *increases* in parents' Behavioral Control from age 16 to age 18.

Undermining autonomy in father-adolescent dyads predicting changes in parent-adolescent relationship functioning. The effects of Undermining Autonomy in father-adolescent dyads were generally in predicted directions, although unlike previous findings, these effects appeared to be most salient for *younger* adolescents and for *males*. In two cases, results consistent with the hypotheses were found for the entire sample: overall, when either fathers or adolescents Undermined Autonomy during their interaction at Time 1, fathers reported increasing their level of Behavioral Control from Time 1 to Time 2 (see Table 40). Similarly,

when adolescents were observed to Undermine Autonomy with their fathers at Time 1, they reported experiencing increases in Disciplinary Control from their mothers from Time 1 to Time 2 (see Table 41).

Moderating effects of age generally revealed results for younger adolescents; although the hypotheses expected results for older vs. younger adolescents, these results were consistent with the predicted direction of the effects. As can be seen in Table 42, compared to fathers of older adolescents, when fathers of *younger* adolescents Undermined Autonomy at Time 1, they reported an increase in their Disciplinary Control from Time 1 to Time 2. Similarly, *younger* adolescents who displayed high levels of Undermining Autonomy with their fathers reported increases in levels of Aggression in their relationships with their mothers from Time 1 to Time 2; this result was non-significant for older adolescents (see Table 43).

One final model yielded a moderating effect of gender in a direction that was contradictory to the hypotheses, and to the remainder of the results. As can be seen in Table 44, for boys, higher levels of fathers' Undermining Autonomy at Time 1 predicted *decreases* in teen reports of the amount of control that their fathers exerted over their behavior from Time 1 to Time 2; this effect was non-significant for girls.

A summary of the results for Undermining Autonomy in father-adolescent dyads predicting changes in parent-adolescent relationship functioning can be found in Table 45. Unlike the findings with Undermining Autonomy in mother-adolescent dyads, this table shows that models examining *both* fathers' *and* adolescents' behaviors Undermining Autonomy were generally consistent with the hypotheses. When either fathers' or adolescents' Undermined

Autonomy at age 16, the level of parental Control increased from age 16 to age 18. Again in contrast to the mother-adolescent dyads, interactions with age tended to reveal effects particular to families with younger adolescents (whereas effects of Undermining Autonomy within mother-adolescent dyads tended to be particularly salient for older adolescents). The one exception in these models that contradicts the hypotheses is that, for male adolescents, fathers' behaviors Undermining Autonomy at age 16 were linked with *decreases* in parents' Behavioral Control from age 16 to age 18.

*Predicting changes in peer relationship functioning*

Promoting autonomy and relatedness in mother-adolescent dyads predicting changes in functioning with peers. Effects of adolescents' Promotion of Autonomy and Relatedness with their mothers were consistent and in predicted directions, in that higher levels of Promotion of Autonomy and Relatedness at Time 1 predicted increases in competence with peers from Time 1 to Time 2. Results for mothers' Promotion of Autonomy and Relatedness generally indicated that mothers' behaviors with regard to autonomy were particularly salient for the social functioning of *younger* adolescents, as well as female adolescents.

With one exception, the results for adolescents' behaviors Promoting Autonomy and Relatedness were consistent across the entire sample. When adolescents displayed high levels of Promotion of Autonomy and Relatedness with their mothers, they reported increased feelings of Social Acceptance from their peers from Time 1 to Time 2 (see Table 46). Further, teens who Promoted Autonomy and Relatedness with their mothers at Time 1 were seen by their peers as more Interpersonally Competent at Time 2 (after accounting for overall social

competence at Time 1) (see Table 47). Finally, adolescents' Promotion of Autonomy and Relatedness with their mothers at Time 1 was linked to increases in their level of Attachment to their peers from Time 1 to Time 2, but this effect was only significant for teens living in low-risk environments (see Table 48). This effect was in the predicted direction for the moderating effect of environmental risk.

The effects of mothers' Promotion of Autonomy and Relatedness were moderated by adolescent age, gender, and level of risk in the environment. Unlike models predicting changes in parent-adolescent functioning presented above, when predicting changes in functioning with peers, evidence suggested that mothers' Promotion of Autonomy and Relatedness was more salient for *younger* adolescents. As can be seen in Table 49, relative to older adolescents, when *younger* adolescents had mothers who Promoted Autonomy and Relatedness with them at Time 1, their peers reported that their level of Social Acceptance increased from Time 1 to Time 2.

In addition, the effects of mothers' Promotion of Autonomy and Relatedness on functioning with peers appeared to be particularly salient for *female* adolescents. When mothers of girls Promoted Autonomy and Relatedness at Time 1, adolescents reported being more Interpersonally Competent at Time 2 (see Table 50). In contrast, there was a trend toward the opposite effect for boys. Unexpectedly, when male adolescents had mothers who Promoted Autonomy and Relatedness at Time 1, they reported feeling *less* Interpersonally Competent at Time 2. These effects were observed after accounting for adolescents' level of social competence at Time 1.

This model also revealed a trend towards a three-way interaction between gender, risk, and mothers' Promotion of Autonomy and Relatedness, indicating that the effects of gender and mothers' Promotion of Autonomy and Relatedness on adolescents' Interpersonal Competence depended on the level of risk present in the adolescents' environment. Specifically, as can be seen in Table 51, mothers' Promotion of Autonomy and Relatedness predicted increases in adolescents' self-reported Interpersonal Competence particularly for girls living in *high-risk* environments; this effect was non-significant for girls living in low-risk environments. The effect is contrary to the expected moderating effect of environmental risk.

A summary of the results of Promoting Autonomy and Relatedness in mother-adolescent dyads predicting changes in functioning with peers is presented in Table 52. As can be seen in this table, these models were generally consistent with the hypotheses. When either mothers or adolescents were observed to Promote Autonomy and Relatedness at age 16, adolescents became increasingly Attached to their peers, increasingly Socially Accepted by their peers, and increasingly Interpersonally Competent with their peers. These models also revealed some interaction effects that showed no consistent pattern across the variables examined. In one case, results were more salient for low-risk adolescents, in another case results were more salient for younger adolescents, and in a third case results were more salient for high-risk, female adolescents. In addition, there was one trend that contradicted the hypotheses: when mothers Promoted Autonomy and Relatedness at age 16, there was a trend for male adolescents to show *decreases* in their Interpersonal Competence from age 16 to age 18.

Undermining autonomy in mother-adolescent dyads predicting changes in functioning with peers. Effects of displays of Undermining Autonomy in mother-adolescent dyads on social functioning with peers were mixed, with most results contradicting the proposed hypotheses. Overall, results indicated that, with a few exceptions, Undermining Autonomy was not detrimental for adolescents' functioning with peers, and in fact, was generally linked to increases in competence with peers over time. This was particularly true when considering *adolescents'* behaviors Undermining Autonomy with their mothers. There was also some evidence for the moderating effects of both adolescents' age and the level of risk present in the environment.

Effects for mothers' behaviors Undermining Autonomy were particularly mixed. Contrary to the hypotheses, for *older* adolescents, mothers' Undermining Autonomy with their adolescents at Time 1 predicted *increases* in peers' reports of teens' Social Acceptance from Time 1 to Time 2 (see Table 53). In contrast, results also revealed moderating effects of level of risk in the environment that indicated that mothers' Undermining of Autonomy *was* (unexpectedly) detrimental for adolescents' living in high-risk environments. Specifically, when mothers were observed to Undermine Autonomy at Time 1, adolescents living in high-risk environments reported that their level of Social Acceptance *decreased* from Time 1 to Time 2 (see Table 54). This effect was in the opposite direction, but non-significant, for teens living in low-risk environments.

This model also revealed a three-way interaction between gender, risk, and adolescents' Undermining of Autonomy that contradicted the hypotheses. Relative to males,

female adolescents in low-risk environments who Undermined Autonomy with their mothers reported *increased* Social Acceptance from Time 1 to Time 2 (see Table 55). Similarly, results also revealed a trend towards adolescents' Undermining Autonomy with their mothers predicting *increases* in adolescents' Competence in Interpersonal Negotiation (in hypothetical dilemmas) from Time 1 to Time 2 (see Table 56). Finally, the latter model also revealed the one finding that was consistent with the hypotheses: mothers' Undermining of Autonomy at Time 1 was linked with decreased Competence in Interpersonal Negotiation from Time 1 to Time 2.

A summary of the results of Undermining Autonomy in mother-adolescent dyads predicting changes in adolescents' social functioning can be found in Table 57. As can be seen in this table, most of these models yielded results that were inconsistent with the hypotheses as well as contradictory interaction effects. The one model that yielded results consistent with the hypotheses indicated that when mothers Undermined Autonomy at age 16, adolescents' Interpersonal Negotiation skills decreased from age 16 to age 18. However, other models revealed that when mothers Undermined Autonomy at age 16, adolescents' level of Social Acceptance *increased* from age 16 to age 18, particularly for older adolescents. While one model did show a decrease in adolescents' social acceptance linked to mothers' Undermining Autonomy, this effect was only true for families living in *high-risk* environments, who (according to the hypotheses) should show the opposite pattern. Finally, when low-risk female adolescents were observed to Undermine Autonomy with their mothers at age 16, their level of Social Acceptance *increased* from age 16 to age 18. There was also a trend for the whole

sample in which adolescents' Undermining Autonomy was linked to *increases* in their Interpersonal Negotiation skills from age 16 to age 18.

Father-adolescent autonomy negotiation predicting changes in functioning with peers.

There were few significant results in models predicting changes in social functioning with peers from promotion of autonomy and relatedness in father-adolescent dyads. Similar to models predicting change in parent-adolescent relationship functioning presented above, promotion of autonomy and relatedness in father-adolescent dyads appeared to be particularly salient for the social functioning of younger adolescents and males. While most of the results were consistent with the hypotheses, there was also some indication that adolescents' Promotion of Autonomy with their fathers was detrimental for their social functioning with peers.

While effects had been hypothesized for older adolescents, consistent with the direction of the hypotheses, *younger* adolescents (relative to older adolescents) whose fathers Promoted Autonomy and Relatedness at Time 1 had friends who saw them as having increased Social Acceptance from Time 1 to Time 2 (Table 58). Similarly, when *boys* had fathers who Promoted Autonomy and Relatedness at Time 1, they reported increases in their levels of Social Acceptance from Time 1 to Time 2; this effect was non-significant for girls (see Table 59). However, contrary to the hypotheses, when the boys themselves displayed high levels of Promoting Autonomy and Relatedness with their fathers' at Time 1, they reported that their level of Social Acceptance *decreased* from Time 1 to Time 2.

There were no main effects or interaction effects using adolescents' or fathers' behaviors Undermining Autonomy to predict changes in adolescents' social functioning with

peers from Time 1 to Time 2. A summary of the findings from models using Promoting Autonomy and Relatedness in father-adolescent dyads to predict changes in functioning with peers is presented in Table 60. As can be seen in this table, effects of fathers' behaviors Promoting Autonomy and Relatedness were in predicted directions, whereas effects of adolescents' behaviors Promoting Autonomy and Relatedness were not. When fathers' were observed to Promote Autonomy and Relatedness at age 16, adolescents' level of Social Acceptance increased from age 16 to age 18. Similar to the models examining autonomy negotiation within mother-adolescent dyads, these effects appeared to be most salient for younger adolescents. The father-adolescent models also reveal an interaction effect of gender, such that Social Acceptance increased particularly for male adolescents. However, inconsistent with the hypotheses, when male adolescents themselves Promoted Autonomy and Relatedness with their fathers, their level of Social Acceptance *decreased* from age 16 to age 18.

### Discussion

Drawing from both theory and research on the role of autonomy processes in adolescent development, this study examined the longitudinal effects of autonomy negotiation within parent-adolescent relationships on transitions in close relationships from mid-adolescence to early adulthood. It was hypothesized that promotion of autonomy and relatedness would indicate successful resolution of the autonomy process, allowing for parent-adolescent relationships to follow a normative path of becoming increasingly egalitarian in nature, and less characterized by conflict and struggles for control. Similarly, it was hypothesized that promotion of autonomy and relatedness in the parent-adolescent relationship would also be

linked to increases in adolescents' interpersonal competence and would allow them to develop more intimate peer relationships as they moved into early adulthood. Conversely, it was hypothesized that undermining autonomy during mid-adolescence would contribute to increased battles for control in parent-adolescent relationships, and decreased quality of peer relationships as adolescents made the transition into early adulthood.

As parent-adolescent conflict has been proposed as a key forum for the negotiation of autonomy issues (e.g. Collins, 1990), this study utilized observations of both parents' and adolescents' behaviors during a revealed differences task to examine autonomy negotiation. Promoting autonomy and relatedness was defined in terms of being able to present one's own viewpoints in a confident manner, while also being interested in and responsive to the other's views. Undermining autonomy was defined as behaviors that dismiss the importance of the others' viewpoint, either by turning the discussion to personal characteristics, pressuring the other person to give in, or placating the other person by pretending to go along with their views (Allen et al., 1995). The emphasis on both parents' and adolescents' behaviors and the use of a revealed differences task are consistent with current theories regarding the dyadic nature of the autonomy process (e.g. Holmbeck & Hill, 1987), as well as perspectives that emphasize the importance of parent-adolescent conflict as a vehicle for both adolescents' and parents' to signal the need for changes in their relationship, and to respond to that need (e.g. Collins, 1990; Smetana, 1989). Similarly, the operational definitions of promoting autonomy and relatedness vs. undermining autonomy are consistent with research and theory that emphasize the importance of the balance of warmth and support for exploration, highlighting autonomy

promotion in the context of close relationships as akin to providing a secure base for exploration during adolescence (Allen, Aber & Leadbeater, 1990; Hill & Holmbeck, 1987; Steinberg, 1990).

Although the results of this study generally confirmed the hypotheses that autonomy negotiation would significantly affect adolescents' social functioning over time, the pattern of effects that was revealed was more complex than initially hypothesized. Overall, the effects on parent-adolescent relationships were more extensive and more consistent with the hypotheses than the effects on peer relationships. Across both parent-adolescent and peer relationships, promotion of autonomy and relatedness yielded more consistent results, whereas effects for undermining autonomy often contradicted the hypotheses. Similarly, effects of parents' behaviors with regard to autonomy tended to be more consistent with the hypotheses than the effects of adolescents' behaviors. However, somewhat different patterns were found when considering mother-adolescent vs. father-adolescent dyads.

The results of this study also revealed complex moderating effects, particularly with regard to the age and gender of the adolescent. As hypothesized, results were generally most consistent for older adolescents (both male and female), defined as those teens who moved from mid-adolescence into early adulthood over the course of the study. In addition, although past research utilizing the current measures of autonomy negotiation to adolescent adjustment has generally *not* revealed gender effects (e.g. Allen et al., 1996), results of the current study indicated that autonomy negotiation had significant consequences particularly for female adolescents' relationships, with very few effects for males. In some cases, different patterns

were revealed according to *both* parents' and adolescents' gender. Finally, although it was hypothesized that level of risk in the environment would moderate the links between negotiation of autonomy and relationship quality, with a few exceptions, this hypothesis was not supported. Results for effects on parent-adolescent relationship quality are considered more fully below, followed by those for peer relationships.

#### Negotiating autonomy and changes in parent-adolescent relationships

The results of this study revealed that how parents and adolescents negotiate autonomy during mid-adolescence has definite implications for the quality of parent-adolescent relationships as adolescents move into early adulthood. Overall, results were most consistent for parental behaviors, both in terms of promoting autonomy and relatedness and undermining autonomy. As hypothesized, parental promotion of autonomy and relatedness predicted decreasing conflict and parental control over adolescents over time, whereas parental undermining of autonomy was linked to parent-adolescent relationships that were characterized by increasing conflict and parental power assertion. Adolescents' behaviors promoting autonomy and relatedness were also generally linked to decreases in both parent-adolescent conflict and parental control, as predicted. However, contrary to the hypotheses, in some cases adolescents' *undermining* autonomy in discussions with their parents was also linked to *decreases* in parental control. Finally, somewhat different patterns were found when considering mother-adolescent vs. father-adolescent dyads, and when considering male vs. female adolescents.

A clear pattern emerged in which parental behaviors promoting autonomy and relatedness were linked to decreases in conflict and control, whereas parental behaviors undermining autonomy were linked to increases in these outcomes. When either mothers or fathers were observed to confidently state their own viewpoints while simultaneously being receptive to their adolescents' views, ratings of the frequency of parent-adolescent conflict decreased over time. Similarly, when fathers especially were observed to promote autonomy and relatedness in interactions with their adolescents, parental use of disciplinary control (e.g. harsh punishment) decreased. The opposite effect was found for undermining autonomy: when mothers were observed undermining their adolescents' autonomy – by pressuring, overpersonalizing, and/or placating – the level of parent-adolescent conflict *increased* over time. Finally, when either mothers or fathers were observed to undermine autonomy during discussions with their adolescents, both parental use of disciplinary control and parental control over adolescents' day-to-day lives increased over time. In many cases, these results were found particularly for the older adolescents in the sample (those entering early adulthood by the second time point).

While results were sometimes limited to one parent or another, there was no clear indication that either parents' behaviors with regard to autonomy had more important implications for parent-adolescent relationship quality. In general, these results suggest that parental behaviors that promote autonomy and relatedness during mid-adolescence lead to more harmonious and more egalitarian parent-adolescent relationships over time. These effects may occur for several reasons. Past research has suggested that parental explanations and the

use of induction, particularly in the context of supportive parent-child relationships, communicate a respect for the adolescent and his or her (potentially) divergent viewpoints, and therefore contribute to subjective feelings of independence (e.g. Macoby & Martin, 1983). Thus, it seems likely that when parents take the time to both explain their own views *and* listen to their adolescents' ideas, adolescents are more likely to feel heard and to be receptive to their parents' views. Parents who promote autonomy while maintaining relatedness create an environment in which the adolescent has the opportunity to try out decision-making while simultaneously remaining open to their parents' guidance. Adolescents in these dyads are less likely to feel the need to "rebel" against their parents' wishes, thus over the long term, there are fewer conflicts as parents feel comfortable allowing their adolescents increasing independence and responsibility. These results are consistent with theoretical proposals regarding the benefits of parenting styles that emphasize both responsiveness and demandingness (e.g. Baumrind, 1991), as well as past research concurrently linking parental autonomy promotion and flexible approaches to control to parent-adolescent relationship quality (e.g. Collins, 1990).

Results of this study also revealed that parental undermining of adolescents' autonomy contributed to parent-adolescent relationships that were characterized by non-normative patterns of increasing conflict and battles for control. In other words, when parents engaged in behaviors that dismissed their adolescents' viewpoint, both their level of control over adolescents' day-to-day lives and their use of disciplinary control increased over time. It appeared that this pattern was particularly salient for older adolescents and their mothers. Thus, at an age at which these adolescents should be entering into more harmonious and egalitarian

relationships with their parents, they are instead becoming increasingly locked into hostile interactions with them that are characterized by struggles for control. Several researchers have noted that parental use of coercion and/or parental power assertion during adolescence is likely to result in increasing disregard for parental authority (e.g. Hill, 1988). Thus, it seems likely that when adolescents' autonomy is undermined, a cycle begins in which adolescents make increasingly extreme bids for autonomy, possibly in the form of acting out behaviors (Allen, Aber, & Leadbeater, 1990), and parents respond by increasing their pressure against autonomy. These results are consistent with research highlighting the importance of parental recognition of adolescents' increasing need for autonomy, particularly with regard to the negative effects of parental insensitivity to those needs (e.g. Eccles, 1993; Holmbeck, Paikoff, & Brooks-Gunn, 1995; Smetana, 1989). The implication of these findings is that when autonomy is undermined during mid-adolescence, the course of parent-adolescent relationships is significantly altered in such a way that the development of the adolescent (vis-a-vis the parent-adolescent relationship) is derailed.

Findings regarding *adolescents'* behaviors promoting autonomy and relatedness were partially consistent with the effects found for parents' behaviors, although different patterns were revealed when considering mother-adolescent vs. father-adolescent dyads. Similar to results for parents' behaviors, when adolescents were observed to promote autonomy while also maintaining relatedness in their interactions with their *mothers*, both parent-adolescent conflict and parents' use of controlling disciplinary tactics (e.g. harsh punishment) decreased over time. These results were particularly found for the older portion of the sample: those

adolescents moving from mid-adolescence to early adulthood. However, unexpectedly, when adolescents were observed to promote autonomy in their interactions with their *fathers*, parents were observed to *increase* their control over adolescents daily lives. In other words, when adolescents presented their views in a confident manner in interactions with their fathers (while still remaining open to their fathers' views), their fathers' responded by *increasing* their monitoring of and interventions in the adolescents' day-to-day lives.

While somewhat unexpected, when the results from mother-adolescent and father-adolescent days are considered in conjunction with each other, they are consistent with some of the research regarding the differences between mother-adolescent and father-adolescent relationships. Research has suggested that mothers are more attuned to their adolescents' developmental needs than fathers, and thus are more likely to alter their parenting accordingly (Collins & Russell, 1991). Thus, similar to when parents promote autonomy and relatedness, when adolescents are able to negotiate autonomy successfully with their mothers, the normal developmental process occurs in which parents gradually allow their adolescents to function independently. Consistent with social-cognitive theories on negotiation of autonomy (e.g. Collins, 1990), mothers may take adolescents' ability to express their views while simultaneously remaining open to their mothers' ideas as a signal of their growing maturity and recognize that there is less need for their involvement. Similarly, mothers may feel more comfortable in letting these adolescents function independently because they have more information regarding adolescents' views and are more confident that adolescents will make good decisions.

Unexpectedly, the opposite pattern was revealed for adolescents and fathers, in that adolescents' promotion of autonomy and relatedness predicted *increased* parental control. This result is consistent with the above mentioned studies regarding mothers' vs. fathers' ability to recognize and appropriately respond to adolescents' developmental needs (Collins & Russell, 1991). Thus, when adolescents promote autonomy, their fathers may not recognize this behavior as a cue for decreased control, and/or may recognize it but choose to increase their involvement in their adolescents' lives. Similarly, these results may also indicate that it is less normative for adolescents to challenge fathers vs. mothers. It may be that promoting autonomy is seen as acting out against the fathers' role as the family leader (e.g. Steinberg, 1981), and thus fathers react as if their adolescents' behavior were a challenge to their control. Further research investigating fathers' thoughts and feelings regarding adolescents' promotion of autonomy may help to distinguish whether fathers' increase in control over adolescents' daily lives signifies a lack of recognition of adolescents' developmental needs or an attempt to suppress autonomy efforts that are seen as inappropriately challenging and/or as potentially leading to problematic outcomes.

Additional differences were found for mother-adolescent vs. father-adolescent dyads when considering adolescents' behaviors *undermining* autonomy, although in this case, the unexpected results were found for interactions with mothers. As hypothesized, when adolescents were observed to undermine autonomy in discussions with their fathers (by engaging in pressuring, overpersonalizing, and/or placating behaviors) the level of control in the parent-adolescent relationship increased over time, both in terms of parental use of disciplinary

control and parental control over adolescents' behavior. However, when adolescents undermined autonomy during interactions with their *mothers*, both parental control over adolescents' behavior and parental use of disciplinary control *decreased* over time. These results were found particularly for older adolescents; when younger adolescents attempted to undermine autonomy with their mothers, the level of parental control over adolescents' behavior increased, as hypothesized.

These results indicate that parents respond differently to adolescents' behaviors undermining autonomy, depending on whether these behaviors occur with mothers or with fathers. One possible explanation for these results is found in past research mentioned above that suggests that adolescents' challenging of mothers leads to shifts in the balance of power and control throughout the family system (e.g. Steinberg, 1981). While this research has shown that mothers in particular respond to their adolescents' bids for control by becoming more submissive, it may be that fathers also react to adolescents' challenging of mothers by decreasing their attempts to control their behavior. Thus, when adolescents' attempt to dismiss their mothers' views by pressuring, overpersonalizing, and/or placating, parents may respond by decreasing control as a way of "giving up" and letting the adolescent go his or her own way. The age effects in these results suggest that parents may be more willing to abdicate control for older adolescents, who may be seen as more developmentally capable of suffering the consequences of their mistakes. Another possible explanation arises from research indicating that adolescents' undermining autonomy contributes to increased hostility in parent-adolescent relationships over time (Allen et al., 1996), and that mother-adolescent relationships in

particular are subject to increasing conflict and hostility during adolescence (Buchanan et. al, 1990; Holmbeck & Hill, 1991; Montemayor, 1982, 1986; Smetana, 1988, 1989). Thus, both mothers and fathers may decrease their control over adolescents who undermine autonomy with their mothers as an attempt to escape from and/or de-escalate increasingly hostile interactions.

*Gender effects.* While the above results were generally found either for the entire sample or for older adolescents (both male and female), in several cases the links between negotiation of autonomy and parent-adolescent relationship quality were moderated by gender. In almost every case of a moderating effect, significant results were found only for the female adolescents in the sample, with null results being found for males. Further, most of the moderating effects were found for mother-adolescent vs. father-adolescent dyads. These results are consistent with research that suggests that mother-adolescent relationships are particularly effected by the perturbations of adolescence (Collins & Russell, 1991), as well as some of the literature on gender socialization that emphasizes the importance of socialization within same-sex parent-child dyads (e.g. Johnson, 1963; 1975; Mischel, 1970; Siegal, 1987), as is discussed further below.

Promotion of autonomy and relatedness in mother-adolescent dyads appears to be particularly linked to decreasing parental control in families with female adolescents. When adolescent daughters were observed to assert their own viewpoints while remaining open to their mothers' ideas, the level of parental disciplinary control decreased over time. Similarly, mothers' undermining autonomy was linked to increased use of disciplinary control particularly

for female adolescents (in addition to older adolescents, as presented above). Also, the *decrease* in disciplinary control associated with with older adolescents' undermining autonomy with their mothers as described above was also found particularly for female adolescents.

Two questions arise from this pattern of results within mother-adolescent dyads: 1) Why would this pattern be found particularly for female adolescents? and 2) Why is this pattern *not* found to be true for male adolescents, and particularly not for younger male teens? With regard to the first question, some of the research on parent-adolescent relationships suggests that mother-daughter relationships are unique in exhibiting the combination of both closeness and warmth as well as heightened conflict over autonomy issues (Collins & Russell, 1991; Honess et al., 1997). Thus, the autonomy constructs examined in this study may be particularly well-suited to capture the dynamics of mother-daughter relationships (although past research using the same coding system has also revealed effects for other family constellations). Similarly, the unique effects of autonomy negotiation in mother-daughter relationships are consistent with research on gender identification and gender effects in socialization that suggests that interactions within same gender parent-child dyads are particularly important for social development (Conger, Conger, & Scaramella, 1997; Holmbeck & Hill, 1991; Youniss & Ketterlinus, 1987). For example, studies have suggested that, for female teens, the process of individuation is more closely tied to interactions with mothers than with fathers (Youniss & Ketterlinus, 1987). Similar, other research has indicated that the effects of mothers' behaviors with regard to autonomy and control appear more salient for as adolescent girls as they mature,

while fathers' behaviors show a corresponding decrease over outcomes for their daughters (Conger, Conger & Scaramella, 1997).

One possibility with regard to the question of why so few results were found for younger adolescent males relates to the ages of the younger adolescents in the current sample (14 to 16). Research on this age group has noted that, for males, this age range corresponds with the pubertal apex and/or the time frame directly following it – a time during which perturbations in parent-adolescent relationships are particularly strong (Hill et al., 1985b; Steinberg, 1981; Steinberg & Hill, 1978). Thus, younger male adolescents in particular are likely to be at a different phase with regard to the nature of the autonomy struggle vis-a-vis the parent-adolescent relationship, such that the hypothesized relationships between autonomy negotiation and parent-adolescent relationship quality do not hold. In other words, family conflict may be following a normative pattern of peaking for younger male adolescents (rather than declining, as is expected with older adolescents), such that the expected relationships between autonomy negotiations and decreasing conflict was not found for this group. It should also be noted that results may have been found less consistently for male adolescents due to the decreased power that resulted from reduced sample sizes when the genders were examined separately. In other words, there may have been effects for male adolescents that were too small to detect in the current sample.

*The special case of adolescent decision-making.* It should be noted that one set of gender effects contradicted not only the hypotheses of the current study, but also the other moderating effects of gender that were found. These effects were largely limited to father-

daughter dyads, although some contradictory results were also revealed for mother-daughter dyads. Following the pattern discussed above, (as expected) fathers' promotion of autonomy and relatedness with their female adolescents was linked to decreasing parental control over their daughters over time. However, at the same time that parents were decreasing their control over their adolescent daughters' behavior, results indicated that they were also allowing them *less* participation in decision making. Also, in general adolescents' promotion of autonomy and relatedness with their fathers was linked to *increasing* behavioral control (as presented above). In contrast, when adolescent girls promoted autonomy and relatedness with their fathers, they were granted *increasing* participation in decision making during conflicts. These results could be consistent with some research that suggests that parents' relationships with their daughters are more difficult (Buchanan et. al, 1990; Holmbeck & Hill, 1991; Montemayor, 1982, 1986; Smetana, 1988, 1989), particularly with regard to allowing daughters more freedom and independence. Thus, one interpretation of this pattern is that parents (particularly fathers) could be conflicted about allowing their daughters' increasing autonomy, and thus there is a trade off in granting increasing freedom in one arena but decreasing it in another. It also could be the case that a decrease in participation in decision-making does not necessarily correspond to the level of functional independence that these adolescent girls are exhibiting. In other words, they may be living their lives increasingly independent of their parents' control (e.g. choosing their own friends, spending their free time how they wish), regardless of who is making the decisions about family conflicts (e.g. participating less in deciding how chores get done).

Along those lines, there was some evidence to suggest that these findings may be related to how adolescent decision-making was measured in this study. Both adolescent-only decision-making and joint parent-adolescent decision making were included in the same scale, in order to capture all ways in which adolescents were participating in conflict resolution. However, some research has indicated that, in terms of autonomy promotion, adolescent-only decision making functions quite differently from joint parent-adolescent decision making. Specifically, whereas joint decision-making is considered a marker for democratic parent-adolescent relationships, adolescent-only decision making has been conceptually linked to a stance of disengagement from parents, and empirically linked more with problematic outcomes for adolescents (Dornbusch et al., 1995; Lamborn, Dornbusch & Steinberg, 1996). Thus, in hindsight it seems likely that autonomy negotiation may be linked differently to these two types of adolescent participation in decision making, possibly resulting in the contradictory results found in the current study. In support of this explanation, an examination of the data does reveal that the measure of decision-making used in this study functioned quite differently than the other measures. It was expected that adolescent participation in decision-making would reflect increasing adolescent independence and decreasing parental control, such that levels of adolescent decision-making should show a normative increase over time. However, no significant changes were observed in the level of adolescents' decision-making over time. In addition, adolescent decision-making was largely uncorrelated with other measures of autonomy vs. control within parent-adolescent relationships. It appears that future research examining autonomy negotiation in conjunction with decision-making patterns should separate

adolescent-only decision making from joint parent-adolescent decision making and examine how promotion vs. undermining of autonomy and relatedness is related to each in turn.

*Summary.* It appears that both parents' and adolescents' approaches to autonomy negotiation during mid-adolescence have definitive effects on changes in the nature of parent-adolescent relationship as teens move into early adulthood. Parental autonomy promotion (by either fathers or mothers) was clearly linked to parent-adolescent relationships becoming increasingly more egalitarian and less conflictual over time, reflecting the normal developmental processes of adolescence. Conversely, parental undermining of autonomy was linked to a deviation from the normative pathway, as these behaviors predicted *increasing* conflict and struggles for control over the course of late adolescence. It also appears that mother-adolescent and father-adolescent dyads function somewhat differently with regard to how parents respond to adolescents' bids for autonomy. Whereas adolescents' behaviors promoting autonomy and relatedness with their mothers showed effects similar to those outlined above, when adolescents promoted autonomy and relatedness with their fathers, the opposite pattern occurred in which parents (fathers in particular) *increased* their control over their adolescents' lives. Further differences in mother-adolescent vs. father-adolescent dyads were apparent with regard to adolescents' undermining autonomy: while undermining autonomy with fathers predicted increasing conflict and control in parent-adolescent relationships, undermining autonomy with mothers predicted *decreasing* control. Finally, in general these results were often most consistent for older adolescents as well as female teens, with the latter being most consistent in mother-daughter dyads. These findings are interpreted as consistent with research

on normative adolescent development, the growing body of research highlighting gender socialization roles, as well as documented differences between mother-adolescent and father-adolescent relationships. It is important to note that these findings also go beyond past self-report research in delineating the significant effects of observed autonomy promotion vs. autonomy undermining on parent-adolescent relationships over time.

#### Negotiating autonomy and changes in peer relationship quality

The effects of parent-adolescent autonomy negotiation on changes in adolescents' functioning in peer relationships over time suggest that the links between these two domains are quite complex. Unexpectedly, it appears that parental promotion of autonomy and relatedness has particular implications for the social functioning of *younger* adolescents, defined as those who began the study in middle adolescence and progressed to the cusp of late adolescence (ages 14 to 16). Further, the pattern of effects also indicates complex interactions between parents' and adolescents' gender as follows: Although adolescents' promotion of autonomy and relatedness with their *mothers* appears to have particularly important consequences for adolescents' functioning in peer relationships, a unique pattern was revealed for father-son dyads that contradicted the results for mother-adolescent dyads. Finally, there is some evidence to suggest that there are multiple pathways to social competence during adolescence, in that *both* promoting autonomy and relatedness and undermining autonomy were linked with indices of increased social competence over time. The combination of these findings suggest that it may be beneficial for adolescents' to be engaged in their relationships with their parents,

regardless of the quality of their interactions around autonomy issues. These results are discussed in further detail below.

Parental promotion of autonomy and relatedness contributed significantly to *younger* adolescents' functioning with their peers over time. When either mothers or fathers were observed to promote their own ideas while also remaining receptive to adolescents' views, younger adolescents' level of social acceptance by their peers increased significantly over time. While this result was not expected to be limited to younger adolescents, the direction of the effect is consistent with the literature that suggests that promotion of autonomy facilitates social competence (e.g. Macoby & Martin, 1983). With regard to the unique effects for younger adolescents, research has suggested that, although intimacy with peers increases over the course of adolescence, early and mid-adolescence is a time period in which an sharp increase in orientation towards peers occurs (e.g. Younnis & Smollar, 1985). Thus, younger adolescents could have benefitted more from their parents' encouragement of autonomy because peer relationships were somewhat more fluid for the younger adolescents in the sample, leaving more room for change to occur.

Several authors have proposed that parental approaches that involve explanations as well as room for adolescents to express their own views result in an increase in adolescents' abilities to engage in perspective taking and to empathically relate to others (e.g. Hill & Holmbeck, 1986). This explanation is consistent with the view of promotion of autonomy and relatedness as akin to the provision of a secure attachment model that allows the adolescent to anticipate and to appropriately respond to social interactions with others (e.g. Baltes &

Silverberg, 1994; Hill & Holmbeck, 1986); this rationale has often been put forth to account for the links between parental approaches to autonomy and social competence in both younger children and adolescents (e.g. Macoby & Martin, 1983; Holmbeck, Paikoff & Brooks-Gunn, 1995). Other authors have proposed that effects of parental promotion of autonomy within the context of supportive relationships are mediated by such constructs as adolescents' self-concept (e.g. Dekovic & Meeus, 1997; Garber, Robinson, & Valentiner, 1997) and/or adolescent ego development (e.g. Grotevant & Cooper, 1985). As more evidence emerges regarding the unique contribution of autonomy promotion to adolescents' social functioning, future studies should begin to address the pathways by which these effects occur.

Similarly, results of the current study also revealed that when adolescents of any age were able to present their own views confidently, while also expressing interest in and acceptance of their mothers' views, multiple indices of their relationships with their peers improved over time. In particular, these adolescents showed an increase in their level of interpersonal competence with peers, as well as in their level of social acceptance by their peers over time. In addition, these adolescents became increasingly attached to their peers over time, indicating that levels of trust and communication in their peer relationships increased, while their levels of alienation from peers decreased as they moved into early adulthood. This pattern again supports the notion outlined above that adolescents gain important interpersonal skills via these interactions with their mothers, such as empathy and perspective taking, that translate to the peer arena and allow for development of social competence and an improvement in intimate interpersonal relationships. Similarly, these results are also consistent with psychodynamic and

attachment theories that assert that successful resolution of autonomy issues in the form of adolescents' needs for autonomy expression being met within their relationships with their parents allows for greater competence with peers in the form of increased responsiveness and capacity for intimacy (Allen, Aber & Leadbeater, 1990; Baltes & Silverberg, 1994; Blos, 1969; Collins, 1990; Hill & Holmbeck, 1986; Youngblade & Belsky, 1995).

In contrast to the relatively consistent patterns found in mother-adolescent dyads, a somewhat unique pattern of effects was found for father-adolescent dyads, particularly with regard to fathers and sons. When fathers were observed to promote autonomy and relatedness in interactions with their male adolescents, the adolescents' level of social acceptance from their peers increased over time. However, when male teens were observed to promote autonomy and relatedness with their fathers, their level of social acceptance from their peers *decreased* over time. Although these results were unexpected, they are consistent with results presented earlier indicating that adolescents' promotion of autonomy and relatedness with fathers predicted increases in fathers' attempts to control their teens' behavior. Both of these results are consistent with research discussed earlier regarding same-sex gender socialization, as well as studies that have suggested that challenging fathers may be less developmentally appropriate than challenging mothers, particularly for male adolescents (e.g. Steinberg, 1981). These findings suggest the possibility of a complex pattern in which adolescents' promotion of autonomy with fathers leads to increasing tension between fathers and teens that may result in behaviors (e.g. hostility/aggression) that could be associated with decreasing social acceptance by peers. In contrast, fathers' promotion of autonomy with their sons significantly facilitates

their social acceptance by peers, suggesting that fathers' are modeling something particular for sons (vs. daughters) that assists in their social functioning with peers. Clearly, further research is needed to tease out the mechanisms by which autonomy promotion effects adolescents' social functioning, particularly within same-gender dyads.

The complexity of the links between autonomy negotiation and social functioning was also underscored by the pattern of results revealed for mother-adolescent dyads. These results suggest an alternate pathway to social competence, and highlight the importance of distinguishing between social acceptance and interpersonal competence. Contrary to the hypotheses, both mothers' and adolescents' behaviors *undermining* autonomy were linked to *increases* in social acceptance from peers over time. Thus, when either mothers or adolescents engaged in behaviors that pressured, overpersonalized, and/or placated the other person, both adolescents *and* their peers reported that the adolescents became *more* socially accepted over time. At the same time, mothers' undermining of autonomy was also linked to *decreases* in adolescents' competence in interpersonal negotiation over time, particularly with regard to their ability to use perspective-taking to solve interpersonal conflicts. The combination of these two findings indicates that when undermining of autonomy occurs in mother-adolescent dyads, adolescents are less able to appreciate others' views, but still manage to gain increasing social acceptance from their peers.

While this pattern was not expected, there is some research indicating that parental undermining of autonomy is associated with both an increased orientation towards and an increased closeness with same-age peers (Fulgini & Eccles, 1993; Mayseless, Wiseman, &

Hai, 1998). One study in particular found a curvilinear relationship between warmth and autonomy promotion and intimacy with peers (defined as feelings of closeness, shared activities, and provision of support). Adolescents who characterized their relationships with their parents as high in both warmth and autonomy promotion, as well as those who described their relationships with their parents as distant and controlling both reported high levels of intimacy with their peers (as compared to adolescents who reported intermediate levels of parental warmth and control) (Mayseless, Wiseman, & Hai, 1998). Similarly, the results of the current study suggest the possibility that adolescents who are engaged in conflictual, autonomy-undermining exchanges with their mothers may be highly motivated to seek relationships with their peers. Although they are not adept at interpersonal negotiation, they may adapt alternative strategies to gain peer acceptance. It is worth noting that the peer sociometric literature has demonstrated that there are adolescents who are socially accepted (e.g. identified as social leaders) who also have traits that are typically associated with less competent interpersonal relationships (e.g. disruptive and aggressive behavior) (Coie, Dodge, & Coppotelli, 1982). Thus, it seems possible that despite lacking in interpersonal skills, adolescents who experience (and exhibit) autonomy undermining behaviors with their mothers are still able to gain social acceptance, although they may fail to form intimate and supportive relationships with their peers. Again, these results highlight the need for further research examining the mechanisms between autonomy negotiation and adolescents' social functioning, with particular attention paid to possible differences between skills in interpersonal interaction and social acceptance.

*Summary.* The links between autonomy negotiation within parent-adolescent relationships and adolescents' social functioning are complex, particularly highlighting the need for further research in this area. First, it appears that parental promotion of autonomy and relatedness has particular implications for the social functioning of *younger* adolescents, possibly due to the developmental trajectory of peer relationships during adolescence. Second, the clearest pattern of results was found for adolescents' promotion of autonomy and relatedness with their mothers: these teens were more interpersonally skilled, had higher quality relationships with their friends, and were increasingly socially accepted over time. Third, the differences between mother-adolescent and father-adolescent dyads were again highlighted, with the finding that promoting autonomy and relatedness with fathers led to *decreases* in social acceptance (particularly for male teens). Finally, and perhaps most importantly, there is some evidence to suggest that there are multiple pathways to social competence during adolescence: despite losses in interpersonal negotiation skills, adolescents who were involved in autonomy undermining interactions with their mothers made gains in social acceptance from the peers over time. This last result highlights the need for research on social functioning to distinguish between interpersonal skills and social acceptance, as well as to more carefully delineate the mediators between autonomy negotiation and functioning with peers.

#### Effects of level of risk in the environment

It was hypothesized that the level of risk present in the adolescents' environment would moderate the links between parent-adolescent autonomy negotiation and adolescent social functioning, particularly with regard to the quality of parent-adolescent relationships. In general,

however, moderating effects of the level of risk in the adolescents' environment were not found, and the few effects that were found were often marginally significant and in contradiction with each other. No one explanation captures the pattern of results, making it difficult to draw definitive conclusions regarding the role of environmental risk; these effects will therefore only be discussed briefly.

The majority of moderating effects for the quality of parent-adolescent relationship functioning were found for adolescents' participation in decision making. As was discussed at length previously, in hindsight there were numerous indications that the current measure of decision making was flawed and may have contributed to spurious results. However, the direction of these findings were generally consistent with the hypotheses, in that mothers' promotion of autonomy and relatedness was linked to *decreased* decision making for high-risk female teens (increased for low-risk). Thus, if adolescents' participation in decision making (as measured) is perceived as a beneficial outcome, then these results suggest that a style of autonomy negotiation that is generally adaptive in low-risk environments may be maladaptive for families in high-risk settings. Similarly, results of the current study also revealed that, in high-risk settings, adolescents' undermining of autonomy in interactions with their mothers related to *increased* adolescent decision making. Again, if increased participation in decision making is construed as positive, this result indicates that a style of autonomy negotiation that tends to be maladaptive in low-risk settings appears to be adaptive for teens in high-risk environments. These results are consistent with previous research that has demonstrated that environmental risk plays an important role in determining the consequences of parent-adolescent interactions

(e.g. Baldwin, Baldwin & Cole, 1990; Gonzales, Cauce, Friedman, & Mason, 1996; Lamborn, Dornbusch, & Steinberg, 1996; Mason, Cauce, Gonzales, & Hiraga, 1996), particularly with regard to the links between parents' behaviors and parent-adolescent relationship quality (McElhaney & Allen, 1998).

The results of this study also revealed scattered moderating effects of risk with regard to adolescents' functioning with peers that were largely inconsistent with hypotheses. First, mothers' promotion of autonomy and relatedness predicted *increased* interpersonal competence particularly for female adolescents in high-risk environments. In general, past research have not revealed beneficial effects of parental behaviors promoting autonomy and relatedness for non-white, non-middle class samples, and/or for adolescents living in high-risk environments (Baumrind, 1972; Dornbusch et al., 1987; Lamborn, Dornbusch, & Steinberg, 1996; Steinberg, Dornbusch, & Brown, 1992). However, some studies have demonstrated that this type of parenting does predict positive outcomes (e.g. academic competence) across multiple ecological niches (Steinberg et al., 1991). It could be that the relative benefits of this approach to autonomy negotiation vary depending on the outcome examined; this possibility should be addressed in future studies. One additional contradictory finding was revealed in the current study, in that mothers' undermining of autonomy was linked with decreased social acceptance only for high-risk teens. This finding contradicts research that has generally found positive outcomes for parental inhibition of autonomy in high-risk settings; past findings have been interpreted as indicating that maternal undermining of autonomy serves a protective function for high-risk adolescents (e.g. McElhaney & Allen, 1998; Mason et al., 1996). As

most of the previous research on this topic has been cross-sectional, the possibility exists that the positive effects of maternal undermining autonomy are reversed over time, as adolescents are faced with the particular challenges of new roles and interpersonal relationships as young adults. However, given the paucity of effects in the current study, and the overall lack of consistency in the effects that were found, this proposition will require further examination.

#### Overall summary and conclusions

This study utilized observational data, a longitudinal design, and multiple reporters to examine the relationship between parent-adolescent autonomy negotiation during mid-adolescence and changes in adolescents' functioning in close relationships over time. While results were somewhat more complex than expected, overall the hypotheses of the study were supported. Promoting autonomy and relatedness appeared generally beneficial for adolescents' later social adjustment, whereas undermining autonomy was linked with both positive and negative aspects of adolescents' social functioning. Emphasizing the dyadic nature of the autonomy process, both parents' and adolescents' behaviors with regard to autonomy negotiation were important predictors of later functioning, although in some cases they predicted different patterns of effects. For example, parents' behaviors promoting autonomy and relatedness were most consistently linked with decreases in conflict and control in parent-adolescent relationships, whereas adolescents' behaviors promoting autonomy and relatedness were most consistently linked with increasing social competence and intimacy in relationships with peers.

The unexpected findings largely centered around complex interactions between parents' and adolescents' gender, as well as indications of different pathways leading to the same outcomes. The results of this study suggested both that mother-adolescent and father-adolescent relationships may differ, and that the correlates of these relationships vary somewhat by adolescent gender. Results suggested that fathers respond to adolescents' bids for autonomy – regardless of the form that they take – with efforts to increase the amount of control and influence that they have in their teens' lives. Further, there appear to be multiple pathways both to decreased conflict and control in parent-adolescent relationships and to competent functioning with peers. Specifically, both adolescents' promoting *and* undermining of autonomy (particularly with mothers) led to decreasing conflict and control within parent-adolescent relationships. Similarly, both promoting and undermining autonomy led to increases in adolescents' social acceptance over time, despite the fact that undermining autonomy was also linked with decreases in adolescents' interpersonal negotiation skills.

These results highlighted several important areas for future research. First, there is a clear need for further research into mother-adolescent vs. father adolescent interactions, particularly in terms of their differing effects on adolescents' development. Much of the research to date on parent-child relationships has focused on mother-child relationships, such that the unique contributions of each parent are not yet clearly understood. Further, there is also a need for research that carefully examines the interaction between parents' gender and adolescents' gender in predicting positive vs. negative outcomes for adolescents. Finally, while this research has laid important groundwork demonstrating that autonomy negotiation is a key aspect of the

developmental process during adolescence, the mechanisms by which promoting vs. undermining autonomy affect adolescent adjustment are not yet clearly understood. This last issue was particularly highlighted by results of the current study indicating that there may be different pathways to the same outcome.

Several limitations of the current study should also be noted. First, as this sample represented adolescents' at moderate risk for academic failure, further research will be necessary in order to determine whether these results can be generalized to a more normative sample. Second, although the sample overall was relatively diverse with regard to various demographic indicators, the small number of fathers participating in the current study were predominantly from white, middle-class/low-risk environments, which limits the generalizability of these results. Third, while the current study did not generally reveal consistent effects of environmental risk, this question should be explored further given the growing body of research has highlighted the effects of demographic factors on family relationships. Fourth, the modest sample size in the current study limited the power to detect change in outcomes over time, particularly when dividing the sample according to demographic variables such as age or gender. It is possible that some of the contradictory and/or anomalous results might have been due to this limitation. Finally, although this study did employ a longitudinal design, adolescents were followed for a time span of two years, into late adolescence and early adulthood. The short-term follow-up somewhat limits the conclusions that can be drawn from the current data. For example, it remains to be seen whether families engaged in undermining autonomy continue to have increasingly conflictual interactions, or whether the level of conflict in those families

decreases more slowly than families engaged in promoting autonomy and relatedness. In addition, the life trajectories of the adolescents in the study were variable (with some having already left home to begin families and/or careers, and others still residing at home, and/or were attending college), making the implications of these results for relationship functioning in early adulthood are fairly tentative. Finally, although this data highlights clear associations between autonomy negotiation and functioning in close relationships, the nature of correlational data precludes definitive conclusions regarding causal relationships. Replication of these results, as well as further research following samples into later adulthood, will be able to more fully substantiate how parent-adolescent autonomy negotiation may effect adjustment into early adulthood and beyond. Adolescence is often considered a very difficult life phase by teens and parents alike, and such research is necessary to inform interventions aimed at assisting families in better negotiating this very important developmental transition.

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Table 1. Summary of adolescent sample demographic data

	Wave 1 (N=136)	Wave 2 (N=133)
Age	15.88 (sd=0.79)	18.13 (sd=0.99)
Gender	53% male 47% female	53% male 47% female
Racial/ethnic status	61% Caucasian 38% African-American 1% Other	61% Caucasian 38% African-American 1% Other
Family composition	29% two-parent 51% single-parent 20% step-parent	27% two-parent 53% single-parent 20% step-parent
Median family income	\$25,000	\$35,000

Table 2. Summary of peer sample demographic data

	Wave 1 (N=201)	Wave 2 (N=167)
Age	16.27 (sd=1.25)	18.04 (sd=1.79)
Gender	46% male 54% female	44% male 56% female
Racial/ethnic status	62% Caucasian 33% African-American 5% Other	63% Caucasian 32% African-American 5 % Other

Table 3. Overview of Autonomy and Relatedness scales used in the current study

Promoting Autonomy and Relatedness	Undermining Autonomy
Reasons	Blurs/Overpersonalizes
Confidence	Pressures
Validates	Recants/Placates
Engaged	

Table 4. Variables assessing parent-adolescent and peer relationship functioning at both time points

	Parent-adolescent relationships	Peer relationships
Wave 1	Autonomy negotiation Conflict Verbal aggression Adolescent decision-making Disciplinary control Behavioral control	Attachment to peers Social acceptance Competence in close friendships Interpersonal negotiation strategies
Wave 2	Conflict Verbal aggression Adolescent decision-making Disciplinary control Behavioral control	Attachment to peers Social acceptance Competence in close friendships Interpersonal negotiation strategies Interpersonal competence