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ADOLESCENCE:
OPPORTUNITIES AND CHALLENGES

Edited by:

Dante Cicchetti & Sheree L. Toth

Mt. Hope Family Center
University of Rochester

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List of Contributors

- JAY BELSKY, PH.D.
The Pennsylvania State University, University Park, PA 16802
- JACK BLOCK, PH.D.
University of California at Berkeley, Berkeley, CA 94720
- DAVID A. BRENT, M.D.
Western Psychiatric Institute and Clinic, University of Pittsburgh,
Pittsburgh,
- RONALD E. DAHL, M.D.
Western Psychiatric Institute and Clinic, University of Pittsburgh School of
Medicine, Pittsburgh, PA 15213
- DAVIDO DUPREE, PH.D.
Graduate School of Education, University of Pennsylvania, Philadelphia, PA
19104
- JACQUELYNNE S. ECCLES, PH.D.
Institute for Social Research, University of Michigan, Ann Arbor, MI 48106
- CYNTHIA T. GARCÍA COLL, PH.D.
Department of Education, Brown University, Providence, RI 02912
- PER F. GJERDE, PH.D.
University of California at Santa Cruz, Santa Cruz, CA 95064
- DANIEL P. KEATING, PH.D.
Ontario Institute for Studies in Education and Canadian Institute for
Advanced Research, Toronto, Ontario, CANADA M5S 1V6
- ROBERT KEGAN, PH.D.
The Massachusetts School of Professional Psychology and The Clinical
Development Institute, Harvard University, Cambridge, MA 02138
- CATHERINE LORD, PH.D.
The University of Chicago, Chicago, IL 60637
- SARAH E. LORD, PH.D.
Institute for Social Research, University of Michigan, Ann Arbor, MI 48106
- DARLA J. MACLEAN, PH.D.
Brock University, St. Catherines, Ontario, CANADA L2S 3A1
- GRACE MORITZ, A.C.S.W.
Western Psychiatric Institute and Clinic, University of Pittsburgh, Pitts-
burgh, PA 15213

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II Round Holes, Square Pegs, Rocky Roads, and Sore Feet: The Impact of Stage-Environment Fit on Young Adolescents' Experiences in Schools and Families

Jacquelynne S. Eccles, Sarah E. Lord, & Robert W. Roeser

There has been a dramatic increase over the last 10 to 15 years in research attention to adolescence. Adolescence is a particularly good developmental period to study the ontogeny of individual differences in adjustment given the multitude of changes that can co-occur during this period. Very few developmental periods are characterized by so many changes on so many different levels—changes due to pubertal development, social role redefinitions, cognitive development, school transitions, and the emergence of sexuality. The core developmental tasks that accompany these changes include achieving a greater sense of autonomy from parents, confronting issues related to sexuality and expanded peer relationships, and establishing a coherent sense of personal competence and identity. In addition, the early adolescent is often faced with adjusting to the demands of a new school environment that places more emphasis on extrinsic motivation and relative ability, teacher control, and involvement in a variety of extracurricular activities. All of these changes can challenge adolescents' evolving sense of self and can offer newfound opportunities for identity exploration and social role definition. These concurrent changes in both the individual and in his or her surrounding social contexts during the period of adolescence make it an ideal focus for the study of human development.

With the nature and pace of the challenges associated with the developmental changes of adolescence also come opportunities for adolescents to embark on different developmental trajectories—trajectories that can result in either positive or negative developmental outcomes. While for many early adolescents the challenges

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of this period can promote positive growth and adjustment, for others the multiple changes can render them vulnerable to self-esteem and mental health difficulties, as well as to peer pressure for involvement in a variety of risky and problem behaviors. As a result, a substantial portion of America's adolescents are not doing very well: between 15 and 30% (depending on ethnic group) drop out of school before completing high school; adolescents have the highest arrest rate of any age group; and increasing numbers of adolescents consume alcohol and other drugs on a regular basis (Office of Educational Research and Improvement, 1988). In addition, studies have shown academic failure to co-occur with many of the other problem behaviors that are increasingly manifest during adolescence, such as disruptive behavior, truancy, delinquency, substance abuse, and teenage pregnancy (Donovan & Jessor, 1985; Dryfoos, 1990; Rosenbaum, 1976).

In addition to an increased incidence in behavioral problems, the prevalence of several types of clinical dysfunctions also increase during this developmental period (Carnegie Council on Adolescent Development, 1989; Kazdin, 1993). For example, there is an increase in the prevalence of depression and eating disorders, particularly among females (e.g., Kazdin, 1993; Lewinsohn, Hops, Roberts, & Seeley, 1993; Petersen, Compas, Brooks-Gunn, Stemmler, Ey, & Grant, 1993). Perhaps most serious, the incidence of attempted and completed suicide increases dramatically with the onset of adolescence (e.g., Hawton, 1982).

Given the fact that many of these problems begin during the early adolescent years (Carnegie Council on Adolescent Development, 1989), the question of *Why?* arises. Is there something unique about this developmental period that puts individuals at greater risk for difficulty as they pass through it? This paper focuses on these questions and advances the hypothesis that some of the "negative" psychological and behavioral changes associated with adolescent development result from a mismatch between the needs of the developing adolescent and the opportunities afforded them by their social environments. Consistent with the view elaborated by Higgins and Parsons (1983), we suggest that the unique transitional nature of early adolescence results, at least in part, from an interaction between the developmental characteristics of early adolescents and the social contexts in which they live. We assert that the manner in which these changes are negotiated by the adolescent and the other members of their social worlds can either facilitate or undermine positive adjustment. In particular, we advance the hypothesis that some of the negative psychological and behavioral changes associated with adolescent development result from a mismatch between the needs of developing adolescents and the opportunities afforded them by their social environments. We provide examples of how this mismatch develops and operates in two particularly relevant social environments: the school and the home.

Before discussing how changes in these social contexts influence changes in adolescent functioning and behavior, we first discuss how our studies of "normative" development during this period can be framed within a developmental psychopathology framework. We then review the evidence on the "problematic" psychological and behavioral changes associated with the period of early adolescence.

Normative Adolescent Development as a Domain of Developmental Psychopathology

In this chapter, we have adopted a developmental psychopathology organizational framework to address the question of why early adolescence seems to be a time of heightened risk of maladjustment for some young people. From this perspective, it is assumed that information about individual differences in patterns of normative adolescent development can provide useful information for understanding the processes associated with the development of more serious psychopathology. Patterns of positive and negative adjustment within a normative sample can be used to identify potential risk and protective factors for the development of more serious problems, and may provide clues to the etiology and processes associated with both normative and pathological development. Such information can be used not only to inform theory but, more practically, to guide prevention and intervention strategies. While the individual differences discussed in this chapter may not necessarily reflect functional impairments at a clinical level, some of the negative changes noted in early adolescence are quite debilitating (e.g., school dropout, drug/alcohol addiction, teen pregnancy, AIDS), and potentially have long-term detrimental consequences for an adolescent's future.

Problematic Changes Associated with Early Adolescent Development

Research on academic motivation, achievement, and mental health issues during adolescence has expanded considerably over the last two decades (Cicchetti & Toth, 1993; Eccles & Midgley, 1989; Simmons & Blyth, 1987; Zaslow & Takanishi, 1993). While many negotiate this period with few difficulties, evidence does suggest that adolescents today face greater risks to their current and future well-being than at any time previously documented (Barber & Crockett, 1993; Takanishi, 1993). Early adolescence marks the beginning of a downward spiral for some that eventuates in academic failure, school dropout, delinquency, and substance abuse (see Dryfoos, 1990; Finn, 1989; Simmons & Blyth, 1987). The research documenting these negative changes is reviewed in the next section.

Changes in Academic Motivation and Achievement

Evidence from several sources suggests that early adolescence is marked by important changes in individuals' psychological functioning, particularly with regard to school adjustment. For example, developmental declines have been documented for such motivational constructs as interest and feelings of belonging in school (Epstein & McPartland, 1976; Roeser, Midgley, & Maehr, 1994); intrinsic motivation (Harter, 1981); self-concepts / self-perceptions (Eccles, Midgley, &

Adler, 1984; Harter, 1982; Simmons, Blyth, Van Cleave, & Bush, 1979), and confidence in one's intellectual abilities, especially following failure (Parsons & Ruble, 1977). There are also reports of age-related increases during early adolescence in such negative motivational and behavioral characteristics as test anxiety (Hill, 1980) and general academic worries (Schulenberg, Asp, & Petersen, 1984; McGuire, Mitic, & Neumann, 1987), learned helpless responses to failure (Rholes, Blackwell, Jordan, & Walters, 1980), and a focus on self-evaluation rather than task mastery (Nicholls, 1980). Finally, Simmons and Blyth (1987) found a marked decline in some early adolescents' school grades as they moved into junior high school, with the magnitude of this decline being predictive of subsequent school failure and dropout.

In sum, these studies, using data from normative adolescent samples, suggest a negative pattern of changes for a large number of young adolescents. These changes are problematic because scholastic anxiety and stress, loneliness and isolation, and feelings of low academic competence are all known to be risk factors for the psychological well-being of early adolescents as they make the transition to a new school environment and need to contend with new social and academic demands (e.g., Harter, Whitesell, & Kowalski, 1992; Kennedy, 1993; Lord, Eccles, & McCarthy, 1994). While these changes do not necessarily indicate a negative developmental trajectory characterizing all adolescents, such changes do suggest that substantial numbers of young people are at risk for poor adjustment and, potentially, for more serious negative outcomes in terms of mental health. These changes may be especially problematic among those who were most at risk before they entered the adolescent years.

Changes in Prevalence of Mental Health and Problem and Risky Behaviors

While the evidence on the prevalence of clinical dysfunctions during adolescence is not extensive, some studies do report negative changes in the psychological adjustment and well-being of some adolescents during this period. For instance, there is an increase in depressive symptomatology and disorders, especially among young women (Cohen, Cohen, Kasen, Velez, Hartmark, Johnson, Rojas, Brook, & Streuning, 1993; Elliott, Huizinga, & Menard, 1989; Kazdin, 1993; Petersen et al., 1993). While Elliott et al. (1989) found no increase in emotional problems other than depression across adolescence, other studies document an increase in eating disorders, particularly in females (e.g., Casper, Eckert, Halmi, Goldberg, & Davis, 1980; Garfinkel & Garner, 1982; Lewinsohn et al., 1993; Petersen et al., 1993).

In terms of behavioral problems, there is evidence of increases in the prevalence rates of both conduct disorders for boys and oppositional defiant disorders for both boys and girls that meet the DSM-3R criteria during middle adolescence (Cohen et al., 1993). Other evidence suggests that the rates of specific risky and problem behaviors also rise (Masten, 1988), with the prevalence of behaviors such as lying and cheating becoming especially high (Offord & Boyle, 1988). In addition, the number of youth who report current use of substances such as cigarettes, alcohol, marijuana, and cocaine also show significant increases across adolescence (e.g.,

Achenbach, Howell, Quay, & Conners, 1991; Newcomb & Bentler, 1988). Moreover, for a small percentage of adolescents, heavy use of substances such as marijuana, alcohol, and cocaine also increase.

Finally, studies show that school-related problem behaviors become more prevalent in adolescence (e.g., Achenbach et al., 1991; Dryfoos, 1990). According to Dryfoos (1990), rates of school truancy and suspension increase considerably from early to late adolescence. Among 10-14 year olds, 7% report being suspended and 18% report truanting school in a one year span. Among 15-17 year olds, these figures increase to 15% and 53% respectively. Boys have slightly higher rates of these behaviors than girls, and whites are more likely to be truant than are blacks (Dryfoos, 1990). These findings parallel other studies that have shown increases in school-related misconduct during adolescence, with boys reporting more antisocial behavior (Buchanan, Eccles, & Becker, 1992; Offord & Boyle, 1988; Simmons & Blyth, 1987).

Although these types of changes are not extreme for most adolescents, there is sufficient evidence of a gradual decline in various indicators of mental health, self-perceptions, academic motivation, performance, and positive school behaviors and a gradual increase in school problems and antisocial behaviors over the early adolescent years to make one wonder what is happening (see Eccles & Midgley, 1989, for review). It seems plausible that the problems of academic alienation, poor school performance, and minor delinquency evident in early adolescence are linked to more negative outcomes such as depression and other emotional difficulties, substance abuse, and school dropout that are manifest later in adolescence (e.g., Dryfoos, 1990; Eggert, Seyl, & Nicholas, 1990; Finn, 1989; Hawkins, Catalano, & Miller, 1992; Newcomb & Bentler, 1988). But, in fact, few studies have addressed these associations. As Finn (1989; p. 118) notes, "the educational processes linking school failure to behavior problems have received very little attention . . . leaving unanswered the question: 'What mechanisms cause these two sets of outcomes to co-occur?'" Because we know that achievement-related affects, cognitions, and behaviors (e.g., Ames, 1992a, 1992b; Nicholls, 1984), and problem behaviors all cluster together (e.g., Donovan & Jessor, 1985; Jessor & Jessor, 1977), we can extend Finn's question to inquire into the processes underlying the co-occurrence of maladaptive patterns of school motivation, mental health, and behavior during early adolescence.

While the relation of academic motivation, achievement, and mental health during adolescence is not highly developed in the literature, it seems clear that academic engagement and achievement is likely to be critical to continued patterns of personal adjustment during this period of development and may serve as a protective factor against many of the negative outcomes that are manifest later in adolescence, including problem behaviors and mental health problems (Bloom, 1976; Cowen, 1991; Rae-Grant, Thomas, Offord, & Boyle, 1989). Conversely, academic underachievement and alienation in early adolescence are likely to be risk factors for later adjustment. Promising lines of inquiry linking adolescents' school experiences with their general mental health are being undertaken. For instance, several authors have discussed the relation between negative self-perceptions of academic

and social competence and internalized and externalized distress (e.g., Achenbach et al., 1991; Cole, 1991; Gold & Mann, 1985; Kennedy, 1993; Lord et al., 1994).

Changes in Family Interactions

In considering studies documenting changes in family interactions during adolescence, similar types of declines have been noted. Again, although the findings are neither universal nor indicative of major disruptions for most adolescents and their families, evidence suggests that there is a temporary increase in family conflict, particularly over issues related to autonomy and control, during the early adolescent years (see Buchanan et al., 1992; Collins, 1990; Hauser, Powers, & Noam, 1991; Hill, 1988; Montemayor, 1986; Paikoff & Brooks-Gunn, 1991; Smetana, 1988a, 1988b, 1989; and Steinberg, 1990, for recent reviews). For example, Hill and Steinberg, in both their observational and self-report studies, have found increased conflict between mothers and their sons and daughters during the early and middle adolescent years, particularly for early maturing adolescents (e.g., Hill, 1988; Steinberg, 1981, 1987, 1988).

Unraveling the Processes Related to Negative Changes During Adolescence

A variety of explanations have been offered to explain the negative changes often associated with adolescence. For example, Simmons and her colleagues have suggested that the concurrent timing of the junior high school transition and pubertal development accounts for the declines in the school-related measures and self-esteem (e.g., Blyth, Simmons & Carlton-Ford, 1983; Simmons & Blyth, 1987). Drawing upon cumulative stress theory, they suggest that declines in motivation and mental health indicators occur because so many young adolescents must cope with at least two major transitions: pubertal change and the move to middle or junior high school. To test this hypothesis, Simmons and her colleagues compared the pattern of change on early school-related outcomes for adolescents who moved from sixth to seventh grade in a K-8, 9-12 system with the pattern of change for adolescents who made the same grade transition in a K-6, 7-9, 10-12 school system. This work unconfounds the conjoint effects of age and school transition operating in most developmental studies of this age period. These researchers find clear evidence, especially among girls, of greater negative change among adolescents making the junior high school transition between grades 6-7 than among adolescents remaining in the same school setting across these grades. But are these differences due to the cumulative impact of school transition and pubertal change for girls who moved to a junior high school at grade seven or are they due to differences in the nature of the school environments in these two educational structures? Or are the differences due to both of these sets of experiences? Simmons and her colleagues (see Simmons and Blyth, 1987) now argue for the latter.

Similarly, Eccles and her colleagues have suggested that the change in the nature of the learning environment associated with the junior high school transition is a plausible explanation for the declines in the school-related measures associated with the junior high school transition (Eccles et al., 1984; Eccles & Midgley, 1989). Drawing upon person-environment fit theory (see Hunt, 1975), Eccles and Midgley (1989) proposed that the motivational and behavioral declines evident during early adolescence could result from the fact that junior high schools are not providing appropriate educational and social environments for early adolescents. According to person-environment fit theory, behavior, motivation, and mental health are influenced by the fit between the characteristics individuals bring to their social environments and the characteristics of these social environments. Individuals are not likely to do very well, or be very motivated, if they are in social environments that do not meet their psychological needs. If the academic and social environments in the typical junior high school do not fit with the psychological needs of adolescents, then person-environment fit theory predicts a decline in motivation, interest, performance, and behavior as adolescents move into and through this environment. This is the perspective elaborated next in this paper. This perspective is then extended to the family context, focusing on the possible mismatch between adolescents' need for greater autonomy from parental control and the opportunities for such autonomy provided by adolescents' parents.

Stage-Environment Fit and School-Related Changes

Various explanations have been offered for the declines in academic motivation and general mental health associated with early adolescence. In this section, the possible role that the school context may play in precipitating these declines is discussed. To understand this role, two types of evidence regarding school effects are presented: evidence drawn from studies that follow the standard environmental influences approach and evidence from studies that adopt a developmental variant on the person-environment fit paradigm, or as Eccles and Midgley have termed it, the "stage / environment fit" approach (see Eccles & Midgley, 1989).

General Environmental Influences

Work in a variety of areas has documented the impact of various classroom and school environmental characteristics on motivation. For example, the big school/small schools literature has demonstrated the motivational advantages of small schools, especially for marginal students (Barker & Gump, 1964). Similarly, the teacher efficacy and teacher-student relationship literatures document the importance of high teacher efficacy and positive teacher-student relations for positive teacher and student motivation (Brookover, Beady, Flood, Schweitzer, & Wisenbaker,

1979; Fraser & Fisher, 1982; Moos, 1979, 1991). Finally, work in motivational psychology has demonstrated the important influence of academic learning environments that stress task mastery and self-improvement (Ames, 1992b; Maehr & Midgley, 1991; Nicholls, 1984) and student participation and self-control (deCharms, 1980; Deci & Ryan, 1985, 1987) on student's motivational beliefs, affect, learning strategies, and achievement.

While this list is by no means exhaustive, the main point is that there may be systematic differences in some of these characteristics of educational environments between typical elementary classrooms and schools, and typical junior high classrooms and schools, and that these differences may account for some of the motivational and behavioral changes seen among early adolescents as they make the transition into middle or junior high school. Indeed, evidence is emerging that suggests that with increasing grade level, especially around the transition to middle-level schools, the characteristics of school environments become less facilitative of continuing achievement and positive personal development. For example, there is diminished support for the development of competence, for feelings of belongingness, and for opportunities for autonomy in these environments (Higgins & Parsons, 1983). If the school environment does become less facilitative of development as the adolescent progresses into middle-level schools, then some of the motivational and mental health problems seen at early adolescence may be a consequence of these negative changes in the school environment, rather than characteristics of the developmental period per se (see Higgins & Parsons, 1983, for a full elaboration of this argument).

A Stage-Environment Fit Approach

A slightly different analysis of the possible environmental causes of the motivational and mental health changes associated with the junior high school transition draws on the idea of person-environment fit. Such a perspective leads one to expect negative consequences for individuals when they are in environments that do not fit well with their needs (Hunt, 1975; Lewin, 1935). At the most basic level, this perspective suggests the importance of looking at the fit between the needs of early adolescents and the opportunities afforded them in the traditional junior high school environment. A poor fit would help explain the declines in motivation and mental health associated with the transition to junior high school.

An even more interesting way to use the person-environment fit perspective is to put it into a developmental framework. Hunt (1975) argued for the importance of adopting a developmental perspective on person-environment fit in the classroom:

along which growth toward independence and less need for structure is the long-term objective. (Hunt, 1975, p. 221)

Here, Hunt was suggesting that teachers should provide the optimal level of structure for children's current levels of maturity, while at the same time providing a sufficiently challenging environment to pull the children along a developmental path towards higher levels of cognitive maturity.

While Hunt's consideration of person-environment fit was geared towards facilitation of optimal learning style and cognitive adaptation, there is good reason to believe that a developmentally appropriate environment will promote positive emotional development as well. Indeed, as at any developmental period, developmental and social psychologists have long argued for the importance of integration of the cognitive and emotional aspects of individuals' psychologies for optimal self-development and adjustment. It could be argued that emotional development is of equal importance to the overall well-being of early adolescents and yet support for such emotional development is largely ignored in the designs of classrooms in which early adolescents spend a substantial amount of time. While the importance of the integration of cognition and affect has been addressed in work pertaining to the mental health and psychological well-being of infants and young children (e.g., Beehly & Cicchetti, 1987; Hesse & Cicchetti, 1982), little work has focused on the link between these two dimensions in adolescence. Much as Vygotsky employed the notion of a "zone of proximal development" for describing the role of adult scaffolding for facilitating the cognitive and affective development of the toddler, adults maintain a similarly important role in continuing to scaffold both cognitive and emotional development during the adolescent years.

What we find especially intriguing about this suggestion is its application to an analysis of the motivational and mental health declines associated with the junior high school transition. If it is true that different types of educational environments may be needed for different age groups to meet developmental needs and to foster continued positive growth, then it is also possible that some types of changes in educational environments may be especially inappropriate at certain stages of development, such as the early adolescent period. In fact, some types of changes in the educational environment may be developmentally regressive. Exposure to such changes is likely to lead to a particularly poor person-environment fit, and this lack of fit could account for some of the declines in motivation seen at this developmental period.

In essence, then, we are suggesting that it is the fit between the developmental needs of the adolescent and the educational environment that is important. Imagine two trajectories: one a developmental trajectory of early adolescent growth, the other a trajectory of environmental change across the school years. We believe there will be positive motivational and mental health consequences when these two trajectories are in synchrony with one another; that is, when the environment is both responsive to the changing needs of the individual and offers the kinds of stimulation that will propel continued positive growth. In other words, transition to a facilitative and developmentally appropriate environment, even at this vulner-

Maintaining a developmental perspective becomes very important in implementing person-environment matching because a teacher should not only take account of a student's contemporaneous needs by providing whatever structure he presently requires, but also view his present need for structure on a developmental continuum

able age, should have a positive impact on children's perceptions of themselves and their educational environment. In contrast, negative motivational and mental health consequences will result if the two trajectories are out of synchrony. In this case, transition into a developmentally inappropriate educational environment should result in the types of motivational and psychological declines that have been identified as occurring with the transition into junior high school. This should be particularly true if the environment is developmentally regressive; that is, if it doesn't provide the adolescent with appropriate opportunities for continued positive growth.

This analysis suggests a set of researchable theoretical and descriptive questions. First, what are the developmental needs of the early adolescent? Second, what kind of educational environment would be developmentally appropriate in terms of both meeting these needs and stimulating further development? Third, what are the most common changes experienced by young adolescents as they move into middle school or junior high school? Finally, and most important, are these changes compatible with the physiological, cognitive, psychological, and social changes early adolescents are experiencing? Or is there a developmental mismatch between maturing early adolescents and the classroom environments they experience before and after the transition to the junior high school—a mismatch that results in a deterioration in academic motivation, performance, and general psychological adjustment for some adolescents?

Systematic Changes in School Environments With the Transition into Junior High School

We believe that there are developmentally inappropriate changes in a cluster of classroom organizational, instructional, and climate variables, including task structure, task complexity, grouping practices, evaluation techniques, motivational strategies, locus of responsibility for learning, and quality of teacher-student and student-student relationships. Additionally, we believe that these changes contribute to the negative change in students' motivation and achievement-related beliefs assumed to coincide with the transition into junior high school. Although relatively little research has been done, the little that exists supports these suggestions.

Remarkably few empirical studies have focused on differences in the classroom or school environment across grades or school levels. Nonetheless, the emerging evidence points to a developmentally regressive change in several aspects of the junior high school environment, including less perceived social support and more of an emphasis on grades and competition (Harter et al., 1992; Midgley, Anderman, & Hicks, 1995; Roeser, Midgley & Maehr, 1994; Roeser, Urdan, & Midgley, 1993). In addition, many of the comparative studies have focused on school-level characteristics, such as school size, degree of departmentalization, and extent of bureaucratization, and not on variables more proximally related to students' beliefs, attitudes, and behaviors. Although differences on these macro-characteristics can have important effects on teacher beliefs and practices and, consequently, on adolescent motiva-

tion, well-being and achievement, until quite recently these links have rarely been studied explicitly. Most attempts to assess the classroom environment have included only one grade level and have related between classroom differences in the environment to student outcomes, particularly scores on achievement tests. Little research has focused on systematic differences in the classroom environments across grade level or between elementary and junior high schools. But looking across the various relevant studies, six patterns emerge with a fair degree of consistency.

First, junior high school classrooms, as compared to elementary school classrooms, are characterized by a greater emphasis on teacher control and discipline and fewer opportunities for student decision making, choice, and self-management (e.g., Brophy & Evertson, 1978; Deci & Ryan, 1987; Midgley & Feldlaufer, 1987; Midgley, Feldlaufer, & Eccles, 1988b; Moos, 1979). For example, Brophy, Evertson, and their colleagues have found consistent evidence that junior high school teachers spend more time maintaining order and less time actually teaching than elementary school teachers (Brophy & Evertson, 1978). In our own work, sixth grade elementary school math teachers reported less concern with controlling and disciplining their students than these same students' seventh grade junior high school math teachers reported one year later (Midgley et al., 1988b).

Similar differences emerge on indicators of student opportunity to participate in decision making regarding their own learning. For example, Ward and his colleagues found that upper elementary school students are given more opportunities to take responsibility for various aspects of their schoolwork than seventh grader students in a traditional junior high school (Ward, Mergendoller, Tikunoff, Rounds, Dadey, & Mitman, 1982). In our work, both seventh graders and their teachers in the first year of junior high school reported less opportunity for students to participate in classroom decision making than did these same students and their sixth grade elementary school teachers one year earlier. In addition, using a measure developed by Lee, Statuto, and Kedar-Voivodes (1983) to assess the congruence between the adolescents' desire for participation in decision making and their perception of the opportunities for such participation, Midgley and Feldlaufer (1987) found a greater discrepancy when the adolescents were in their first year in junior high school than when these same adolescents were in their last year in elementary school. The fit between the adolescents' desire for autonomy and their perception of the extent to which their classroom afforded them opportunities to engage in autonomous behavior had decreased over the junior high school transition. Such discrepancies are likely to be particularly problematic for the early adolescent, given that a key developmental task of this period is to establish a sense of autonomy and personal efficacy, yet these young people are not in environments that afford such opportunities. One can imagine the adolescents' frustration with such an environment, frustration that can adversely impact on both their motivation for academic engagement and achievement and their overall psychological well-being.

Second, junior high school classrooms, as compared to elementary school classrooms, are characterized by less personal and positive teacher-student relationships (see Eccles & Midgley, 1989). For example, in Trebilco, Atkinson, and Atkinson

(1977), students reported less favorable interpersonal relations with their teachers after the transition to secondary school than before. Similarly, in our work, both students and observers rated junior high school math teachers as less friendly, less supportive, and less caring than the teachers these students had one year earlier in the last year of elementary school (Feldlaufer, Midgley, & Eccles, 1988). In addition, the seventh grade teachers in this study also reported that they trusted the students less than did these students' sixth grade teachers (Midgley et al., 1988b). So, at a time period when most early adolescents are confronted with an uncertainty about themselves that derives from the often daunting tasks of establishing a sense of coherent personal identity and negotiating newfound social roles in the face of a myriad of changes, they are met with distrust by the very people who could provide support for them during the negotiation of these tasks. It is no wonder that a significant proportion of early adolescents come to feel alienated from adults and institutions at this time period.

Third, the shift to junior high school is associated with an increase in practices such as whole-class task organization, between classroom ability grouping, and public evaluation of the correctness of work (see Eccles & Midgley, 1989). For example, in the study by Ward and his colleagues, whole-group instruction was the norm in the seventh grade, small-group instruction was rare, and individualized instruction was not observed at all. In contrast, the sixth grade teachers mixed whole- and small-group instruction within and across subjects areas (Rounds & Osaki, 1982). Similar shifts towards increased use of whole-class instruction with most students working on the same assignments at the same time, using the same textbooks, and completing the same homework assignments were evident in our study of the junior high school transition (Feldlaufer et al. 1988). In addition, several reports have documented the increased use of between class ability grouping beginning at junior high school (e.g., Oakes, 1981).

Changes such as these are likely to increase social comparison, concerns about evaluation, and competitiveness (e.g., Eccles et al., 1984; Marshall & Weinstein, 1984; Rosenholtz & Simpson, 1984). They may also increase the likelihood that teachers will use normative grading criteria and more public forms of evaluation, both of which may have a negative impact on many early adolescents' self-perceptions and motivation. These changes may also make aptitude differences more salient to both teachers and students, leading to increased teacher expectancy effects and decreased feelings of efficacy among teachers. In fact, recent work by Midgley, Maehr, and their colleagues does suggest that both teachers and students in middle schools report more emphasis placed on relative ability, competition, and extrinsic rewards in their schools than teachers and students in elementary school settings (Midgley et al., 1995; Roeser, Midgley et al., 1994). Thus, at a time when young people are by nature of the developmental period acutely sensitive to their competencies relative to others, their social environments highlight these comparisons. For many, such competitive environments can lead to grade declines and increasing anxiety about one's competence and, perhaps for some, may help to crystallize a downward spiral toward eventual school dropout.

Fourth, junior high school teachers appear to use a higher standard in judging students' competence and in grading their performance than do elementary school teachers (see Eccles & Midgley, 1989). There is no stronger predictor of students' self-confidence and sense of efficacy than the grades they receive. If grades change, then we would expect to see a concomitant shift in adolescents' self-perceptions and academic motivation. There is evidence that junior high school teachers use stricter and more social comparison-based standards than elementary school teachers to assess student competency and to evaluate student performance, leading to a drop in grades for many early adolescents as they make the junior high school transition. For example, Finger and Silverman (1966) found that 54% of the students in New York State schools experienced a decline in their grades when they moved into junior high school. Similarly, Simmons and Blyth (1987) found a greater drop in grades between sixth and seventh grade for adolescents making the junior high school transition than for adolescents who remained in K-8 schools. Interestingly, the decline in grades is not accompanied by a similar decline in the adolescents' scores on standardized achievement tests, which suggests that the decline reflects a change in grading practices rather than a change in the rate of the students' learning (Kavrell & Petersen, 1984). Imagine what this decline in grades might do to young adolescents' self-confidence, especially in light of the evidence suggesting that the material may be less intellectually challenging than the work in the elementary school grades.

Finally, junior high school teachers feel less effective as teachers, especially for low-ability students. This was one of largest differences we found between sixth and seventh grade teachers. In mathematics, seventh grade teachers in traditional junior high schools report much less confidence in their teaching efficacy than sixth grade elementary school teachers in the same school districts (Midgley et al., 1988b). This is true in spite of the fact that the seventh grade math teachers were more likely to be math specialists than the sixth grade math teachers. Here again, at a time when early adolescents are working to establish a sense of personal competence and efficacy and are in need of adult role models for this task, significant adults in their lives do not themselves feel efficacious in their roles. It is likely that teachers' feelings of low efficacy can adversely affect both the academic motivation and mental health of adolescents not only by means of negative social role modeling, but also in terms of the environments that these teachers then provide for their students. The environments created by teachers who do not feel efficacious may likely reflect an accommodation to the teachers' own insecurities and consequent needs for excessive structure and control—needs that are likely to be in direct contrast to the developmental needs of the adolescents themselves.

The Adolescent in Context: A Developmental Mismatch

Changes such as those noted above are likely to have a negative effect on many adolescents' motivational orientation towards school and mental health at any

grade level. But we believe these types of school environment changes are particularly harmful at early adolescence given what is known about psychological development during this stage of life. As noted earlier, evidence from a variety of sources indicates that early adolescent development is characterized by increases in desire for autonomy and self-determination, peer orientation, self-focus and self-consciousness, salience of identity issues, concern over sexuality, and capacity for abstract cognitive activity (see Simmons & Blyth, 1987).

Simmons & Blyth (1987) have argued that adolescents need a reasonably safe, as well as an intellectually challenging, environment to adapt to these shifts—an environment that provides a “zone of comfort,” as well as challenging new opportunities for growth. In light of these needs, the environmental changes often associated with transition to junior high school seem especially harmful in that they emphasize competition, social comparison, and ability self-assessment at a time of heightened self-focus; they decrease decision making and choice at a time when the desire for control is growing; and they disrupt both social networks at a time when adolescents are especially concerned with peer relationships and may be in special need of close adult relationships outside of the home. We believe the nature of these environmental changes, coupled with the normal course of individual development, results in a developmental mismatch so that the fit between the early adolescent and the classroom environment is particularly poor, increasing the risk of negative motivational and psychological outcomes, especially for adolescents who are having difficulty succeeding in school academically. In the next section, we review research findings relevant to these predictions.

Before turning to our studies, however, it is important to step back and consider briefly why junior high school classrooms might have these characteristics. Several sources have suggested that these characteristics result, in part, from the size and bureaucratic nature of the junior high school as an institution (e.g., Barker & Gump, 1964; Bryk, Lee, & Smith, 1989; Carnegie Council on Adolescent Development, 1989; Simmons & Blyth, 1987). For example, it is likely that such school characteristics as large size, minimal connections to the community, and a rigidly hierarchical system of governance, as well as organizational characteristics such as departmentalized teaching, ability grouping, normative grading, and large student load, undermine the motivation of both teachers and students. It is difficult for teachers to maintain warm, positive relationships with students if they have to teach 25 to 30 different students each hour of the day. Similarly, it is hard for teachers to feel efficacious about their ability to monitor and help all of these students. Finally, it seems likely that teachers will resort to more controlling strategies when they have to supervise such a large number of students.

The consequences of the size and organization of traditional junior high schools on teachers' motivation are likely to be exacerbated by the negative stereotypes about adolescents propagated in this culture by both presumed experts and the mass media (see Miller, Eccles, Flanagan, Midgley, Feldlaufer, & Harold, 1990; Offer, Ostrov, & Howard, 1981). Such stereotypes characterize adolescence as a period of “storm and stress.” The adolescent is often portrayed as impulsive, out of control,

confused, self-absorbed, angst-ridden, rebellious, violent, alienated, and involved in drugs, alcohol, and unremitting sex. Due to these characterizations, the popular view that adolescents need to be tightly controlled until they ultimately “snap out of it” and settle into their adult roles is widespread in this culture. Interestingly, rarely does the media portray the potential role of the social environment in creating a world of alienation for some adolescents. There is also limited discussion in the media of the ways in which the adults in young adolescents' lives could help and support them through this life passage, or ways in which adults could give adolescents socially responsible tasks to engage in so as to exercise their need for establishing adult roles. Finally, there is relatively little attention in the media, or elsewhere, to the many positive things done by early adolescents in their communities and schools. Such coverage is desperately needed to counterbalance the prevalence of sensational reports of adolescents' problem behaviors.

In sum, the characteristics of the school environments in which early adolescents spend a substantial portion of time are not likely to be conducive to meeting the developmental needs of early adolescents (e.g., the need for increasing autonomy, for a sense of competence, and for continued relatedness). Indeed, such environments could be considered to be developmentally regressive. As a consequence, we predict that these environments are likely to undermine the cognitive and emotional development of young adolescents and have negative implications for both their academic motivation and overall psychological well-being. More specifically, we predict that, as adolescents move into classrooms characterized by more teacher control and discipline and less student participation in decision making, their values and attitudes towards academics will suffer. Similarly, when adolescents encounter junior high classrooms that are perceived as less supportive and warm compared to their elementary school environments, their attitudes and values should become more negative. Finally, we hypothesize that the increases in instructional practices that stress social comparison and tougher grading standards and the decreases in teachers' feelings of efficacy between elementary and junior high environments will have a detrimental impact on adolescents' ability self-concepts.

The Impact of Classroom Environmental Changes on Early Adolescents' Motivation: The Michigan Study of Adolescent Life Transitions (MSALT)

To test the predictions outlined above, we conducted a large-scale two-year, four wave longitudinal study of the impact of changes in the school and classroom environments on early adolescents' achievement-related beliefs, motives, values, and behaviors (Michigan Study of Adolescent Life Transitions, MSALT). The sample was drawn from 12 school districts located in middle-income communities in southeastern Michigan. Approximately 1500 early adolescents participated at all four waves of the study. These adolescents moved from the sixth grade in an

elementary school into the seventh grade in a junior high school during the course of the study. As is typically the case, the students did not move as a group into the junior high school—they were assigned to various different classes when they arrived at the junior high school. Questionnaires were administered in the students' math classes at school during the fall and spring terms of the two consecutive school years. A few of our key findings are reviewed below.

Teacher Efficacy

One of the largest differences we found between the sixth and seventh grade teachers was in their confidence in their teaching efficacy: The seventh grade teachers reported less confidence than the sixth grade teachers. Although the relation between teacher efficacy and student beliefs and attitudes is yet to be firmly established, Brookover et al. (1979), using schools as the unit of analysis, found positive correlations between teachers' sense of efficacy and students' self-concept of ability and self-reliance. Given these associations, differences in teachers' sense of efficacy before and after the transition to junior high school could contribute to the decline in early adolescents' beliefs about their academic competency and potential.

To test this hypothesis, we divided our adolescent sample into four groups based on median splits of their math teachers' ratings of their personal teaching efficacy (see Midgley, Feldlaufer, & Eccles, 1989, for a full description of this study). The largest group (559 of the 1329 included in these analyses) moved from a high efficacy sixth grade math teacher to a low efficacy seventh grade math teacher. Another 474 adolescents had low efficacy teachers both years, 117 moved from low to high efficacy teachers, and 179 had high efficacy teachers both years. Thus, fully 78% of the children in our sample moved to a low teacher efficacy math classroom in the seventh grade. The potential impact of such a shift on the motivation and self-perceptions of early adolescents, especially those having difficulty mastering the academic material is frightening. We know, in particular, that low teacher expectations for students undermine the motivation and performance of low achieving students (Eccles & Wigfield, 1985). Moving from a high to a low efficacious teacher may produce a similar effect.

As predicted, the adolescents who moved from high efficacy to low efficacy math teachers during the transition (the most common pattern) ended their first year in junior high school with lower expectancies for themselves in math, lower perceptions of their performance in math, and higher perceptions of the difficulty of math than the adolescents who experienced no change in teacher efficacy or who moved from low to high efficacy teachers. Also as predicted, teacher efficacy beliefs had a stronger impact on the low achieving adolescents' beliefs than on the high achieving adolescents' beliefs. By the end of the junior high school year, low achieving adolescents who had moved from high to low efficacy math teachers suffered a dramatic decline in their confidence in their ability to master mathematics. This drop may signal the beginning of the downward spiral in school motivation that

eventually leads to school dropout among so many low achieving adolescents. It is important to note, however, that this same decline was not characteristic of the low achieving adolescents who moved to high efficacy seventh grade math teachers, suggesting that the decline is not a general feature of early adolescent development but rather a consequence of the learning environment experienced by so many early adolescents as they make the junior high school transition. Whether a similar pattern characterizes other subject areas remains to be demonstrated.

Teacher-Student Relationships

As reported earlier, we also found that student-teacher relationships deteriorate after the transition to junior high school. Research on the effects of classroom climate indicates that the quality of student-teacher relationships is associated with students' academic motivation and attitudes toward school (e.g., Fraser & Fisher, 1982; Moos, 1979; Trickett & Moos, 1974). Consequently, there is reason to believe that transition into a less supportive classroom will have a negative impact on early adolescents' interest in the subject matter being taught in that classroom. In a sample of 1300 students, we looked at the effect of differences in perceived teacher support before and after the transition to junior high school on the value early adolescents attach to mathematics (see Midgley, Feldlaufer, & Eccles, 1988a, for a full description of this study). As predicted, the early adolescents who moved from elementary teachers they perceived to be low in support to junior high school math teachers they perceived to be high in support showed an increase in the value they attached to math. In contrast, the early adolescents who moved from teachers they perceived to be high in support to teachers they perceived to be low in support showed a decline in the value they attached to mathematics. Again we found evidence that low achieving students are particularly at risk when they move to less facilitative classroom environments after the transition.

Both of these studies show that the declines often reported in studies of early adolescents' motivational orientation are not inevitable. Instead, these declines are associated with specific types of changes in the nature of the classroom environment experienced by many early adolescents as they make the junior high school transition. The studies also show that a transition into more facilitative classrooms can induce positive changes in early adolescents' motivation and self-perceptions. Unfortunately for all adolescents, but especially for low achieving adolescents, our findings also indicate that most adolescents experience a negative change in their classroom experiences as they make the junior high school transition.

Person-Environment Fit in Classroom Decision Making

Neither of these studies, however, directly tested our stage-environment fit hypothesis. To do this, one must directly assess person-environment fit and relate

this fit to changes in adolescents' self-perceptions and motivation. Data from MSALT provide an opportunity to do this analysis. Both the adolescents and the teachers in this study were asked to rate whether students were allowed to have input into classroom decisions regarding seating arrangements, classwork, homework, class rules, and what to do next and whether students *ought* to have input into each of these decisions. (These items were developed by Lee et al., 1983). These questions can be used in the following ways: (1) to plot the developmental changes in adolescents' preferences for decision making opportunities in the classroom, (2) to determine changes in the opportunity for them to participate in decision making, and (3) to determine the extent of match or mismatch between their preferences and the opportunities actually afforded them in the school environment. Grade-related changes in this match can then be related to developmental changes in the adolescents' self-perceptions and school-related motivation.

Developmental and Grade-Related Changes in Fit

As noted earlier, both early adolescents and their teachers reported that there was less opportunity for participation in classroom decision making at the seventh grade than at the sixth grade. In contrast, there was an increase both across the school transition and over time during the seventh grade year in the early adolescents' desires for more participation in classroom decision making. As a consequence of these two divergent patterns, the congruence between early adolescents' desires for participation in classroom decision making and their perceptions of the opportunities available to them was lower in the seventh grade than in the sixth grade (Midgley & Feldlaufer, 1987).

The Motivational Consequences of a Poor Developmental Stage-Environment Fit

As outlined earlier, person-environment fit theory suggests that the mismatch between young adolescents' desires for autonomy and control and their perceptions of the opportunities in their learning environments should result in a decline in the adolescents' intrinsic motivation and interest in school. But more importantly from a developmental perspective, the exact nature of the mismatch should also be important. As noted earlier, given the appropriate developmental progression towards increased desire for independence and autonomy during the early adolescent period, adolescents who experience decreased opportunities for participation in classroom decision making along with an increased desire for greater participation in such decisions (i.e., a "can't but should be able to" mismatch) should be more at risk for negative motivational outcomes than adolescents experiencing other forms of mismatch (such as the "can but shouldn't be able to" mismatch).

In a longitudinal analysis of the Lee et al. (1983) items, Mac Iver and Reuman (1988) provided some support for this prediction. They compared the changes in

intrinsic interest in mathematics for adolescents reporting different longitudinal patterns in their responses to the actual and preferred decision-making items across the four waves of data. Consistent with the prediction, it was the adolescents who perceived their seventh grade math classrooms as putting greater constraints on their preferred level of participation in classroom decision making than their sixth grade math classrooms who evidenced the largest and most consistent declines in their intrinsic interest in math as they moved from the sixth grade into the seventh grade. These are the students who are experiencing the type of developmental mismatch we outlined in our discussion of stage-environment fit.

Person-Environment Mismatch as Lack of Attunement: Implications for Psychological Well-Being

Another way to think about the issue of person-environment fit is in terms of adult attunement, or sensitivity, to the autonomy, competence, and relatedness needs of the developing adolescent. Attunement to these needs can be conceptualized in terms of providing appropriate environments for supporting the developmental needs of young adolescents. Such attunement can also be conceptualized in terms of sensitivity to the psychological experiences and emotional well-being of the adolescents in these contexts. While a central task of early adolescent development is to establish a greater sense of autonomy, there is also a continued need for support and relatedness from significant adults. Indeed, adult support and responsiveness may be particularly important at this period of development for two reasons: (1) It is a time of multiple changes, and exposure to multiple changes increases vulnerability self-esteem and mental health difficulties; and (2) it is a time of increasing salience of the peer group and increasing exposure to opportunities for involvement in risky behaviors. However, although the peer culture becomes increasingly important at adolescence relative to the elementary years, adult figures can retain their significance as bases and scaffolds from which the adolescent can explore new identities and negotiate newfound expectations for more adult roles and responsibilities if they are available and responsive to the needs of the adolescents (e.g., Eccles, Midgley, Wigfield, Buchanan, Reuman, & Mac Iver, 1993; Hartup, 1989; Ryan & Lynch, 1989). The literature in stress and coping has pointed to a positive relationship with an adult as a key protective factor for children at risk for psychosocial problems (see Garnezy, 1983; Rutter, 1981).

The discussion to this point has highlighted the available evidence for the negative impact of a poor developmental stage-environment fit on constructs relevant to students' academic competence and values. There is also evidence to suggest that the characteristics of these school environments can undermine teachers' ability to be attuned to the emotional needs of their adolescent students. This could decrease the probability of teachers being a protective influence during this difficult transitional period. For example, in our study of MSALT adolescents who made the transition to a seventh grade junior high school, we found that over and

above prior achievement level and self-esteem in the sixth grade, adolescents' perceptions of competence in academic, social, physical appearance, and athletic domains were facilitative of gains in self-esteem across the transition to junior high school, while worries and self-consciousness about performance in these domains were predictive of declines in self-esteem across this transition (Lord et al., 1994). Are the teachers aware of the importance of these psychological predictors of adjustment to junior high school? Do they know which adolescents are and which are not adapting well to the transition? Our findings suggest not. Unlike the results for the adolescents' report of self-esteem, students' worries and self-consciousness about academics were positively rather than negatively related to teachers' ratings of adolescents' adjustment to junior high. Apparently, indicators of anxiety such as academic nervousness and self-consciousness that are related to declines in adolescents' self-esteem are seen as indicators of good adjustment by the teachers. Perhaps the teachers interpret students' nervousness and self-consciousness about their performance as indicators of positive motivation and concern on the part of the student. These findings suggest that early adolescents may be receiving positive feedback from their teachers for the very characteristics that are linked to declines in self-esteem. It is likely that receiving positive feedback for characteristics that are internally distressful could increase adolescents' psychological distress.

Another interesting discrepancy emerged in the results for teachers and adolescents in the MSALT data: In contrast to the pattern of predictors of change in the adolescent reports of their self-esteem, sixth grade academic performance was a much stronger predictor of teachers' ratings of the adolescents' adjustment than was sixth grade self-esteem. Apparently, teachers' view of early adolescents' adjustment to junior high school is primarily related to the adolescents' academic performance. In contrast, the strongest predictors of increases in adolescents' reports of their self-esteem following the junior high school transition were self-concepts, lack of self-consciousness, and developmentally appropriate authority relations at home. These findings are of concern since it appears that teachers think that a student is adjusting well to the junior high school transition as long as she or he is doing well academically. But the student data indicate that achievement level is not a good predictor of adjustment to this school transition. Since teachers are in a very good position to identify adolescents at psychological risk, it is unfortunate that they appear so unaware of their students' psychological state until the problem begins to affect the students' academic achievement.

Although these results are disappointing, they are not surprising. The finding that fewer of the students' psychological characteristics predicted to the teachers' rating of the students' adjustment to junior high probably reflects the increased student anonymity and decreased student-teacher connections implicit in the junior high setting. Because of the increased number of students and the departmentalized classrooms in these settings, teachers are not likely to get to know each of the students on a personal basis. It follows that teachers' criteria for assessing students' adjustment would be limited and would be based on their knowledge of the students' performance level. Again, while adolescents' need for empathic and

developmentally responsive support from teachers increases, opportunities for such supportive contact decline.

While this diminished sensitivity is probably in large part due to the structure of large, departmentalized junior high environments, the low attunement of teachers to their students may also reflect the teachers' lack of understanding about what early adolescents are up against at this period and about what adolescents need from the adults in their lives. Currently, teachers rarely receive any special certification or education about adolescence as a developmental period (Braddock & McPartland, 1992). Teacher education reform initiatives have indeed recommended such education and training in order to better train teachers for working with this age group, yet such reform has been slow in the making.

In sum, these results are cause for concern since they indicate that many teachers of early adolescents are not very well attuned to the experiences and needs of adolescents making the transition to junior high school. In addition to having negative psychological implications for adolescents, this lack of attunement also reduces the likelihood that teachers can identify adolescents at risk in time to help them get the additional services and support they may need. Thus, teachers aren't as able to provide the safety net that early adolescents need as they move through this challenging developmental period and as they adapt to new educational settings. Consequently, adolescents may not be receiving what they need emotionally from the adults in their school environments during the transition to junior high school.

The Consequences of Lack of Fit / Nonattunement in School for Early Adolescents' Competence, Motivation, and Mental Health

The research discussed thus far highlights the importance of understanding early adolescents' development in terms of the fit between their psychological needs and the school context in which they spend a good portion of their waking hours. A key challenge for adolescents is to develop a coherent personal identity that integrates personal competencies with the expanding social roles and experiences that accompany this developmental period (Erikson, 1959). The contexts in which adolescents develop can either facilitate, or undermine, this process of identity development. We have presented evidence that school environments that are not attuned to the developmental needs of the adolescent have implications not only for adolescents' motivation for school achievement, but also for their psychological well-being. Indeed, middle and junior high school environments can be developmentally regressive and can thus inhibit the growth of personal competencies that are intimately tied with an individual's affective self-appraisals and experiences. As we noted earlier, academic achievement is thought to be critical to continued patterns of personal adjustment during this time and may indeed help to serve as a protective factor against negative outcomes later in adolescence, including problem behaviors

and mental health problems (Bloom, 1976; Cowen, 1991; Rae-Grant et al., 1989). Conversely, academic underachievement and alienation in early adolescence are risk factors for later adjustment. While few studies have directly looked at the relations among academic learning environments, academic engagement, and mental health measures (e.g., Maehr, Midgley, Pintrich, & De Groot, 1992), the results we have presented thus far suggest that school environments that do not provide for the needs of adolescents may be related to patterns of alienation and school disengagement that eventuate in more serious negative life trajectories.

We have recently begun to examine more closely how academic engagement, motivation, and psychological well-being are interrelated during the period of early adolescence in order to gain a better understanding of the patterns of factors that could put early adolescents at risk for later problems (Roeser, Lord, & Eccles, 1994). For these analyses, we used data from the first wave of a longitudinal study of approximately 1400 early adolescents and their families living in a large mid-Atlantic county. This study (The Maryland Adolescent Growth in Context Study, MAGICS; Principal Investigator: Jacquelynne Eccles) is a collaborative effort of the MacArthur Foundation Research Network on Successful Adolescent Development (Chair: Richard Jessor). It was designed to assess how parents, schools, neighborhoods, and peers influence the academic, psychological, and social development of adolescents. The target youths, primary caregivers (approximately 92% mothers), and secondary caregivers (approximately 75% fathers) were interviewed in their homes. Of the target youth, 50.9% were male and 62% were African American. The sample includes a wide socioeconomic range of families with mean income of \$45,000–\$49,999. Both the interview and the questionnaire contained items assessing parent and adolescent perceptions of parent involvement in school and at home; parenting style; family environment and relationships; self-concepts in school, social, and extracurricular domains; and parent and adolescent adjustment.

Using the MAGICS data, we examined the profiles of academic competence, motivation, and psychological well-being for groups of adolescents who displayed varying levels of academic alienation (Roeser et al., 1994). School disengagement, or alienation, was operationalized using both psychological and behavioral measures. Psychological alienation was assessed by negative attitude towards school (not liking school), school disengagement (e.g., classes are boring, school is a waste of time) and devaluing the importance of a good education. Behavioral alienation was assessed by student and parent reports of the adolescents' school problem behaviors, including skipping classes and being suspended or expelled from school. Students in the upper quartile of the psychological alienation from school scale who also evidenced high rates of school problems were designated as the most alienated. Another group of alienated adolescents was created from those in the upper quartile of the psychological alienation scale who did not evidence as many school problems. Finally, a low alienation group was comprised of those adolescents in the lower quartile of the psychological alienation from school scale. We then tested the association between the level of school alienation and an array of indicators of self-perceptions of com-

Table 1. Group Comparisons¹ by Level of School Alienation for Motivation and Achievement, School Behaviors, and Mental Health Measures

Descriptive Variables	Low Psychological Alienation From School		High Psychological Alienation From School		Significance
	Few School Problems		Some School Problems		
	Group 1 (N = 342)	Group 2 (N = 306)	Group 2 (N = 306)	Group 3 (N = 61)	
<i>Motivation and achievement</i>					
Academic self-concept	5.97 ^a	4.74 ^b	4.74 ^b	4.42 ^c	F(2,696) = 153.59**
Academic importance ²	6.55 ^a	4.26 ^b	4.26 ^b	4.15 ^b	F(2,700) = 485.55**
Academic liking ²	4.28 ^a	2.63 ^b	2.63 ^b	2.66 ^b	F(2,701) = 700.91**
Feelings of belonging in school	4.37 ^a	3.68 ^b	3.68 ^b	3.54 ^b	F(2,699) = 67.85**
School is important now / future	4.41 ^a	2.63 ^b	2.63 ^b	2.66 ^b	F(2,701) = 137.37**
Grades	4.33 ^a	3.73 ^b	3.73 ^b	3.60 ^c	F(2,696) = 61.32**
Parent's concern about child's education / performance ³	-0.22 ^a	0.06 ^b	0.06 ^b	0.87 ^c	F(2,694) = 84.92**
<i>School behaviors</i>					
Percent skipping school	4 ^a	14 ^b	14 ^b	33 ^c	F(2,691) = 28.36**
Percent suspended from school ⁴	11 ^a	12 ^a	12 ^a	100 ^c	F(2,704) = 228.65**
Percent failing a class ⁴	14 ^a	27 ^b	27 ^b	100 ^c	F(2,704) = 131.44*
<i>Mental Health</i>					
Self-worth	3.98 ^a	3.36 ^b	3.36 ^b	3.35 ^b	F(2,704) = 55.42**
Resourcefulness	3.90 ^a	3.26 ^b	3.26 ^b	3.34 ^b	F(2,701) = 60.35**
Depression	1.71 ^a	2.03 ^b	2.03 ^b	2.22 ^b	F(2,701) = 23.36**
Anger	2.04 ^a	2.65 ^b	2.65 ^b	3.09 ^c	F(2,704) = 62.77*

¹ Tukey HSD mean comparisons were used to test all possible pairs. Different superscripts for a particular variable across groups indicates a significant mean difference at the $p \leq .05$ level for all possible pairs. / ² These variables were part of the "Psychological Alienation Scale" used to designate groups, and are presented for descriptive purposes. / ³ This parent report measure was used to validate the levels of academic alienation groupings. It represents a measure of parent concern about their child's academic life. / ⁴ These variables were part of the "School Problems Scale" used to designate groups and are presented for descriptive purposes. / * $p \leq .05$ / * $p \leq .01$.

petence, academic values and feelings, academic grades, and mental health indicators. Means and significance levels for the three groups on both student and parent reports of the adolescent's motivation and mental health are presented in Table 1.

Overall, the results from both the adolescent and parent reports suggest a strong association between school alienation and competence, motivation and mental health during early adolescence. Relative to those seventh graders who were not alienated, the profile of measures that differentiated adolescents who were highly alienated from school included lower academic values and ability self-concepts, lower self-esteem and less personal resourcefulness, and higher reported anger and depressive symptomatology than less alienated adolescents. Highly alienated students also reported less teacher social support, poor overall evaluations of the quality of their schools, and more negative teacher expectancies for them in school. While our data do not allow us to draw causal conclusions, these results are consistent with findings from other work indicating that at-risk students increasingly encounter alienating environments as they progress through school (e.g., Eccles et al., 1993; Finn, 1989; Kagan, 1990; Strahan, 1988).

Another worrisome set of differences also distinguished the three groups: Relative to low alienated students, the high alienated adolescents reported being involved in peer groups characterized by more antisocial characteristics (e.g., involvement in drugs, vandalism, gangs, unprotected sex) and fewer prosocial characteristics (e.g., value school, good education). These findings are particularly troubling given that there is evidence that adolescents who are alienated from conventional groups (e.g., school and family) often establish strong social bonds with antisocial peer groups in order to obtain a sense of belonging (see Elliott et al., 1989; Fuligni & Eccles, 1992). Elliott and his colleagues (1989) showed that the social rewards (e.g., sense of belonging) gained from bonding to antisocial persons or groups can serve as positive feedback for continued involvement with the group, and they concluded that those adolescents who were alienated from conventional bonds and bonded to antisocial peer groups were at most risk for involvement in serious delinquency and substance abuse. Given the increased peer pressure during early adolescence, and the higher vulnerability of the developing adolescents to such pressure, it is likely that involvement in these peer groups may put these young adolescents on a developmental trajectory towards further negative outcomes, such as school dropout, gang and drug involvement, teen pregnancy, or death.

Overall, the work reviewed above and our own studies begin to address the issue of the intertwined nature of academic motivation, achievement, and personal adjustment during adolescence and highlight the importance of the school context for influencing adolescents' motivational, psychological, social, and behavioral well-being. The results suggest the developmentally inappropriate school environments during early adolescence can contribute to putting substantial numbers of young people at risk for the negative trajectories that some lives take during this critical period. We turn now to a discussion of the role of another powerful social context for the adolescent: the family.

Stage-Environment Fit in Perceived Control in the Family

Evidence from several investigators suggests that adolescents' relationships with their parents also undergo a stressful period during early and middle adolescence (e.g., Eccles et al., 1993; Hill, 1988; Montemayor, 1983; Steinberg, 1990). Because adolescence is a time for renegotiating the power and authority relationships within the family, this stress is often focused on issues of control and autonomy within the family. When children are young, their relationships with their parents are asymmetrical in terms of power and authority. But as children in this culture mature, they need to take more and more responsibility for themselves until, ultimately, they leave their natal home and take primary responsibility for their own lives. In the optimal situation in this culture, parents will reinforce and stimulate this process of developing autonomy, while at the same time providing sufficient structure and control to protect their adolescent from the dangers and risks in their social worlds. But it is very likely that the renegotiation processes associated with these developmental trajectories will not be smooth. It is not easy for parents to determine the optimal balance of autonomy versus control for their children at all ages. Accordingly, from a stage-environment fit perspective, one would predict strained relationships whenever there is a poor fit between the child's desire for increasing autonomy and the opportunities for independence and autonomy provided by the child's parents.

Early adolescence seems a likely developmental period for asynchrony in the desire for and opportunities for autonomy to emerge within the family context. Many of the developmental changes during early adolescence can precipitate increased family conflict around issues of control and autonomy within the family. These changes include the early adolescents' expanding social contacts with same-age peers and the families of their new friends, their cognitive maturation and ability to understand social roles in a more complex way, and their emerging sexuality. Evidence suggests that increased parent-child stress may be related to each of these developmental changes in adolescence.

Social changes in the world of adolescents substantially increase the opportunity for them to experience independence outside the home. The transition to junior high school, and cultural beliefs regarding "appropriate" amounts of adult supervision for children of different ages lead to a dramatic increase in the amount of unsupervised age-mate contact during this developmental period (Higgins & Parsons, 1983). This increase creates the opportunity for adolescents to spend a lot of time in relationships that are likely to be more symmetrical in terms of interpersonal power and authority. The opportunity to be exposed to a broader range of families is also likely to increase with the junior high school transition because these schools are typically larger and draw their attendance from a more diverse range of neighborhoods and communities. This broadened exposure, in turn, may lead early adolescents to question the legitimacy of their parents' rules (Higgins & Parsons, 1983; Laupa & Turiel, 1986; Smetana, 1988a & b, 1989; Tisak, 1986).

These new social experiences, together with the increasing cognitive capacities to understand, integrate, and coordinate diverse social perspectives, may lead early adolescents to question their parents' authority and to push for a more symmetrical relationship with their parents. Finally, parents, in response to their children's emerging sexuality and increased involvement with opposite sex peers, may become more concerned about their children's safety and may actually become more restrictive than they were during the period of middle childhood. This enhanced restrictiveness, in turn, might further exacerbate the perceived asynchrony in the child's mind between desired autonomy and actual provisions within the family. However, as the family adjusts to these changes, one would expect new authority relationships to emerge and the strain to decrease over the adolescent years (see Montemayor, 1983).

Perhaps the best support for this analysis comes from the work of Smetana (1988a, 1988b, 1989). Drawing on evidence regarding age changes in children's understanding of moral versus social conventional reasoning, and their understanding of the legitimacy of adult authority, Smetana has conducted in-depth interviews with adolescents and their parents about authority relationships within the family and about the nature and origin of conflicts in the family. Like others, she finds that most parent-adolescent conflicts focus on day-to-day mundane issues, like cleaning one's room, curfew, and so forth. The conflicts often result because adolescents now define these issues as personal issues (e.g., issues that the individual should decide), while the parents still define these issues as conventional issues (e.g., issues for which parents have some right to establish "rules"). In cross-sectional comparisons, Smetana found a linear age-related increase in the adolescents' view that most such issues are personal rather than conventional. Shifts in the parents' views were less systematic. But most importantly for the stage-environment fit hypothesis, the greatest increase in mismatch between the adolescents' and their parents' views occurred during the early adolescent period (grades 5-8) and mirrored increases in reported conflict (Smetana, 1989).

We are in the process of examining similar issues in our study of adolescent development (the MSALT study described earlier). We assessed family decision making in two ways: Both the adolescents and their parents responded to two items derived from the Epstein and McPartland (1977) scale of family decision making (e.g., "In general, how do you and your child arrive at decisions?" [1 = I tell my child just what to do; 3 = We discuss it and then we decide; 5 = I usually let my child decide]; and "How often does your child take part in family decisions that concern herself or himself?" [1 = never; 4 = always]). The adolescents were also asked to rate how they thought decisions ought to be made in their family, and the extent to which they think "their parents treated them more like a kid than like an adult."

Consistent with the analyses reported earlier for schools, we found both an increase over time in adolescents' desire for greater participation in family decision making and positive associations between the extent of the adolescents' participation in family decision making and indicators of both intrinsic school motivation and positive self-esteem (Flanagan, 1986, 1989; Lord et al., 1994; Miller & Taylor, 1986; Yee, 1986, 1987; Yee & Flanagan, 1985). Even more interesting from the

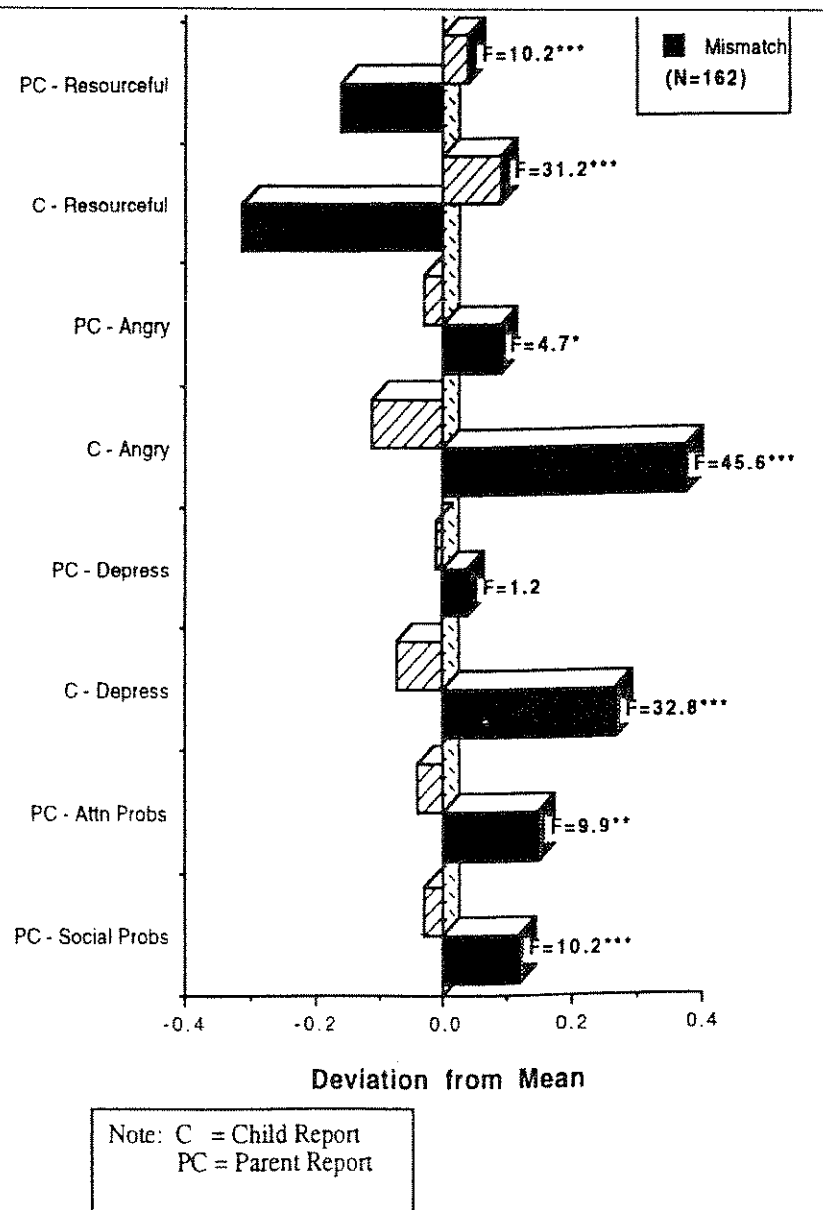
stage-environment fit perspective, the parents reported that they included their children more in family decision making than the children perceived to be true (Flanagan, 1986; Yee, 1987). Furthermore, for girls in particular, the discrepancy between the adolescents' and the parents' perception of the opportunities for the adolescents to participate in family decision making increased over the four waves of our study (Yee, 1987). Finally, and most important, the pattern of changes in early adolescents' self-esteem and intrinsic versus extrinsic motivation for school work were systematically, and predictably, related to changes in their perceptions of the opportunity to participate in family decision making at home. As our developmental stage-environment fit perspective on adult control implies, the adolescents who reported decreasing opportunities to participate in family decision making showed decreases in their self-esteem and intrinsic motivation over the period of this study; the opposite pattern of change occurred for the adolescents who reported increasing opportunities to participate (Flanagan, 1989; Yee, 1987).

The opportunity to participate in family decision making also predicted positive adjustment to the junior high school transition (Eccles, McCarthy, Lord, Harold, Wigfield, & Aberbach, 1990; Lord et al., 1994). Sixth graders who perceived their families as supportive of their involvement in decision making and as nonintrusive showed increases in their self-esteem across the transition to junior high, while the self-esteem of those adolescents who felt their parent(s) did not provide them with opportunities to be involved in decision making and thwarted their efforts to be autonomous declined across this transition. These effects were over and above the influence of sixth grade self-esteem, actual academic ability, ability self-concepts, and worries about adjustment to the transition (Lord et al., 1994). Thus, not only may a mismatch between authority relationships in the home precipitate increased conflict, it may also be detrimental to the adolescents' school-related motivation, self-esteem, and overall psychological well-being.

We have demonstrated the salience of support for autonomy in decision making for the psychological well-being of adolescents in two other studies that represent more ethnically diverse populations. For example, in a cross-sectional study of 11-15-year-old adolescents living with their family in low- to low-middle socioeconomic neighborhoods in inner-city Philadelphia, relative to other dimensions of parenting, parents' support of decision-making opportunities and parent-adolescent mutuality in problem-solving situations were the strongest predictors of adolescent psychological adjustment (Lord, 1994). In addition, in the MAGICs study described earlier, we have demonstrated patterns of negative associations between early adolescents' perceptions of lack of involvement in family decision making and a broad range of indicators of adolescents' psychological well-being (Eccles & Lord, 1993). In this study, seventh grade adolescents were grouped according to the degree of congruence between their perceived involvement in family decision making and the degree to which they thought they should be involved in such decision making.

Figure 1 illustrates these results: Relative to those seventh graders who were satisfied with their involvement in decision making, adolescents who reported that

Figure 1. Main Effect of Decision-Making Synchrony Versus Mismatch for Adolescent Adjustment Measures: Maryland Adolescent Growth in Context Study, Grade 7



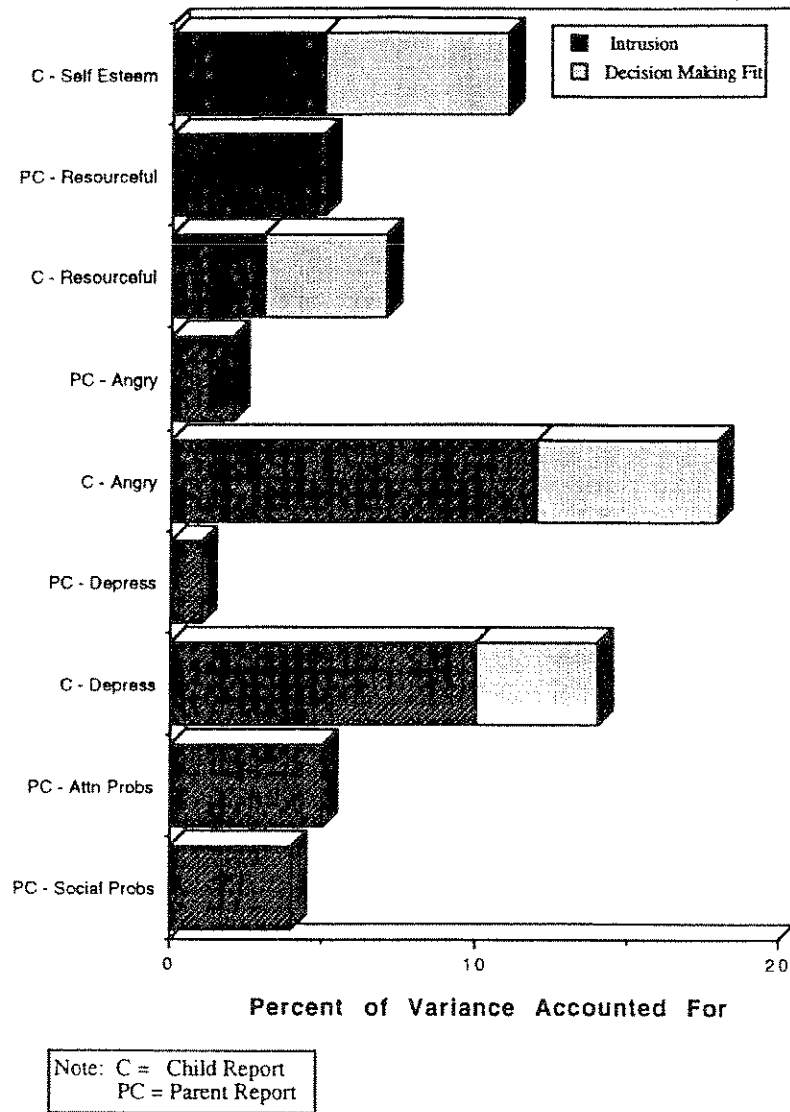
they were not as involved in family decision making as they thought they should be reported lower self-esteem, more depressive symptomatology (particularly girls), more anger, and less personal resourcefulness. These differences were found for both adolescents' self-report and parents' report of their adolescent's adjustment. Furthermore, those adolescents who reported a poor fit between their desire for opportunities to participate in decision making and the opportunities provided also reported that their parents were more intrusive and overprotective (e.g., "treat me more like a kid than an adult," "tries to protect me too much"). Finally, as can be seen in Figure 2, multivariate analyses revealed that these two constructs, decision-making match and perceived parental intrusiveness, independently contributed to adolescents' self-reported adjustment indicators when both were entered into a multiple regression equation.

These results suggest that decision-making fit and perceptions of parental intrusiveness tap unique, though related, aspects of adolescents' developmental autonomy needs. While the desire to be involved in decision making reflects adolescents' growing need for establishing a sense of personal efficacy within their environment, adolescents' perceptions of parent intrusiveness represents their need for personal space and clear relational boundaries. It is interesting to note that in our analysis of the academic alienation among these same early adolescents described earlier (Roeser et al., 1994), we found that the academically alienated adolescents were also more likely to report poor decision-making fit in their families than their peers.

Several qualifications to the results presented above are warranted. First, the one-point-in-time, correlational nature of data from MAGICS restricts our ability to model the causal direction of the relation between stage-environment mismatch and adolescent mental health. For instance, while the results are consistent with our hypothesis that a stage-environment mismatch results in a negative change in self-esteem over time, they are also consistent with the hypothesis that characteristics of the child create the mismatch. It may be, for example, that parents are indeed more protective and controlling of their children (and thereby are perceived as more intrusive) if they are worried about their child's development (e.g., if the child is already becoming involved in risk taking or problem behavior, or if the child is depressed). Since we are collecting longitudinal data on this sample, we will be able to model these two directional hypotheses in the near future.

Overall, these results on different samples provide good preliminary support for the hypothesis that a misfit, or lack of attunement, between parents and their adolescents is negatively related to both the adolescents' academic motivation and their psychological well-being. A developmentally responsive environment can help adolescents develop certain competencies (such as autonomy, psychosocial maturity and competence, and high self-esteem) that can, in turn, serve as protective factors for successfully coping with change and adversity. Parents who are able to support adolescent needs for developmentally and contextually appropriate levels of autonomy likely exert a facilitative effect on their adolescents' psychological functioning and academic motivation. By providing such opportunities for participation in decision making, parents help their adolescents develop a sense of

Figure 2. Percent of Variance Accounted for in Adolescent Mental Health Indicators by Parent Intrusion and Decision Making Fit: Maryland Adolescent Growth in Context Study, Grade 7.



personal efficacy in part because adolescents can see that their parents respect their opinions and trust them to be involved in important decisions. Parents who use more controlling strategies when interacting with their children may convey to them that they are not to be trusted to undertake activities independently and that they are not considered competent (Maccoby and Martin, 1983).

The Interplay Among Biological, Psychological, and Social Context Factors: Biology and the Notion of Fit

Another way to look at developmental change is to look for interindividual differences at the same time point between same-aged children of different maturational levels. During early adolescence, the extent of pubertal development provides a good indicator of individual differences in physical maturation, particularly for females. There is some evidence to suggest that pubertal maturation is associated with stage-environment mismatch effects within both schools and families.

Maturational Differences in the Desire for Autonomy in School

Using data from our MSALT study, we related an indicator of physical maturation to female adolescents' desire for input into classroom decisions using the Lee et al. (1983) items. Consistent with the intraindividual longitudinal pattern of age-related change reported above, the more physically mature female adolescents expressed a greater desire for input into classroom decision making than did their less physically mature female peers (Miller, 1986). Unfortunately, as was true for the longitudinal results, the more physically mature females did not perceive greater opportunities for participation in classroom decision making. Although the females with varying degrees of pubertal development were in the same classrooms, the more physically mature females (i.e., the early developers) reported *fewer* opportunities for participation in classroom decision making than did their less mature peers (i.e., the on-time and late developers).

These maturational differences were even more striking when we looked at the within-year changes in these female adolescents' perceptions of the opportunities they had to participate in classroom decision making. We calculated the mean change in their perceptions of opportunities from the fall to the spring testing waves. We then looked at this change as a function of their pubertal status. The early-maturing females reported less opportunity to participate in classroom decision making in the spring term than they had reported in the *previous* fall term. In contrast, the late-maturing females in these same classrooms showed an increase over the course of the school year in these opportunities (Miller, 1986). How can this be, given that these adolescents were in the same classrooms? Did the teachers actually treat these adolescent females differently (i.e., did the teachers respond to

earlier physical maturity with more controlling behavior)? Or did the adolescents perceive a similar environment differently (i.e., did the early maturing adolescents perceive the same level of adult control as providing less opportunity for self-determination than did the later maturing adolescents)?

Evidence from educational psychology, developmental psychology, and general psychology suggests that either or both of these explanations could be accurate: Teachers do respond differently to various children in the same classroom depending on a variety of characteristics (Brophy & Evertson, 1976), and people do perceive similar environments differently depending either on their cognitive or motivational orientation or both (see Baron & Graziano, 1991; Ryan & Grolnick, 1986). More detailed classroom observations are needed to determine the exact nature of the relation between teachers' behavior and adolescents' perceptions.

But more important for the issues central to this chapter, the degree of mismatch between these female adolescents' desires for input and their perceptions of these opportunities in their classroom environment was related to their pubertal status: There was a greater degree of mismatch among the more physically mature female adolescents than among the less mature. In fact, by the end of the school year, almost twice as many early-maturing females reported experiencing the "can't but should" type of mismatch (e.g., answering "no" to the question "Do you get to help decide what math you work on during math class?" but "yes" to the question "Should you have a say about this?") as did their less physically mature classmates.

We find this last set of results especially interesting in light of the findings of Simmons and her colleagues (e.g., Simmons & Blyth, 1987; Simmons et al., 1979). They found that the pubertal status of female adolescents at the time of the junior high school transition is related to changes in their self-esteem and their self-reports of truancy and school misconduct: The more physically mature females reported the highest amount of truancy and school misconduct after they made the junior high school transition. Simmons and her colleagues suggest that experiencing both school and pubertal transitions simultaneously puts these girls at particular risk for negative outcomes. Additionally, it is possible that the size of the mismatch between their desire for a less controlling adult environment and their perceptions of the actual opportunities for participation puts these females at risk for the most negative motivational outcomes.

Similar results characterize our data on interindividual pubertal status effects. Miller and Taylor (1986) tested the relation between female pubertal status and self-esteem. Consistent with other studies (e.g., Simmons & Blyth, 1987), the early-maturing sixth grade girls reported lower self-esteem than their less physically mature classmates. But, consistent with the person-environment fit perspective outlined in this paper, it was only the early maturing girls who also felt they had relatively little opportunity to participate in family decision making who reported lower self-esteem. There was no effect of pubertal status on self-esteem among those sixth grade girls who reported relatively high opportunity to participate in their family's decision making.

Maturation Differences in the Desire for Autonomy in Families

We have just begun to examine the influence of pubertal development on person-environment fit and psychological well-being in the MAGICs study (Lord & Eccles, 1994). Relative to their on-time and late-maturing female peers, early-maturing seventh grade girls felt that their parents were more intrusive. Whether or not this perception represented the adolescents' dissatisfaction with their parent, or a real characteristic of the situation, cannot be ascertained from the cross-sectional data. Indeed, the parents of more mature adolescent females may be more protective of and intrusive with their daughters because of the increased risks that can accompany such maturity (dating, unprotected sex, etc.).

There is also some evidence in MAGICs that the influence of decision making fit and pubertal status may interact to influence indicators of adolescents' psychological well-being. For example, the negative impact of decision making misfit on these adolescents' reports of depressive symptomatology was strongest for the early-maturing females. That is, relative to on-time and late-maturing females, the early-maturing females who also perceived a decision-making misfit in their families reported the highest levels of depressive symptomatology (Lord & Eccles, 1994). While others have documented the important relationships between changing self-images and perceptions (e.g., Petersen et al., 1993) and multiple concurrent life changes (Simmons & Blyth, 1987) for depression in young females, our results implicate stage-environment mismatch as another relevant focus of study for understanding depression in adolescence.

Conclusion

In this chapter, we adopted a developmental psychopathology organizational framework to address the question of why adolescence is a time of heightened risk for maladjustment among some adolescents. We discussed patterns of positive and negative adjustment within normative samples of adolescents, and identified potential risk and protective factors for both academic motivation and general mental health. We highlighted the importance of understanding these patterns of development within the context of home and school environments. In doing so, we argued that optimal development takes place when there is good stage-environment fit, attunement, and synchrony between the needs of developing adolescents and the opportunities afforded them by their social spheres of experience.

In particular, we have provided evidence of the negative effects of the diminished quality of personal relationships with teachers after the transition to junior high school, and have argued that this decline in the quality of relationships is especially problematic during early adolescence when young people are in special need of close relationships with adults outside of their homes. We have also noted

the increase in ability grouping and comparative and public evaluation at a time when young adolescents have a heightened concern about their status in relation to their peers. Finally, we discussed, and provided evidence where available, the negative consequences of these kinds of developmentally inappropriate environmental changes on early adolescents' school motivation, academic self-concepts, and mental health.

We also discussed the role of opportunities for self-determination and participation in rule making, pointing out the particularly important need for a match between the individual's increasing desires for autonomy and self-determination and the opportunities for such autonomy provided both in school and in the home. Although adolescents desire more freedom from adult control than children, they do not want total freedom and they do not want to be emotionally detached from their parents. Instead they desire a gradual increase in the opportunity for self-determination and participation in decision and rule making. Furthermore, evidence suggests that adolescents develop best when these increasing opportunities occur in environments that are emotionally supportive (Baumrind, 1971; Lord, 1994; Ryan & Lynch, 1989).

Unfortunately, our research suggests that many early adolescents do not have these experiences in either the school or the home. After the transition to junior high school in particular, early adolescents are often confronted with a regressive environmental change. Many early adolescents experience a decrease in the opportunity to participate in classroom decision making when they move into junior high school. Not surprisingly, there is also a decrease in intrinsic motivation and an increase in school misbehavior associated with this transition, as well as a decline in indicators of mental health. These changes are most apparent among the adolescents who report experiencing the greatest mismatch between their needs and the opportunities afforded them to participate in classroom decision making. Such motivational and mental health changes are not apparent in adolescents who report the more developmentally appropriate increase in opportunities for participation in classroom decision making.

We have also found evidence suggesting that a similar process is occurring in the family. Excessive parental control is linked to lower intrinsic school motivation, to more negative changes in self-esteem and mental health following the junior high school transition, to more school misbehavior, and to relatively greater investment in peer social attachments. However, since some of the evidence we have presented is correlational, it is possible that excessive parental control is the consequence rather than the cause of these negative adolescent outcomes. Our preliminary longitudinal analyses do suggest, however, that the causal links are at least bidirectional. Similarly, although we have focused on excessive parental control, other studies have documented the negative consequences of *too little* parental control at this age (see Dornbusch, Carlsmith, Bushwall, Ritter, Leiderman, Hastorf, & Gross, 1985; Fuligni & Eccles, 1990; Steinberg, 1990). Clearly, these results point out the importance of creating educational and family environments for early adolescents that provide a better match to young people's developing needs and desires. How could the creation of such developing appropriate environments be accomplished?

Towards Developmentally Appropriate School Settings

The current situation in traditional junior high schools seems especially problematic. The existing structure of many junior high schools appears to create a climate that undermines both teacher and student motivation and well-being. The large size of these schools, coupled with departmentalized teaching and large student loads, makes it difficult for teachers and students to form close relationships. In turn, this lack of close relationships, coupled with the generally negative stereotypes about adolescents, could be responsible for the prevalence of low teacher efficacy and high use of controlling motivational strategies in junior high school classrooms.

Turning Points (Carnegie Council on Adolescent Development, 1989) outlines a variety of changes in the structure of middle grades educational institutions (e.g., junior highs, middle schools, and intermediate schools) that would make it easier for both teachers and students to maintain a high sense of self-efficacy and to develop a stronger sense of shared community with each other. One potential strategy for remediating the impersonal quality of traditional junior high schools involves within-school reorganization based on the middle school teaching philosophy. Some characteristics of the middle school philosophy that have been identified as potentially helpful are small house programs, team teaching, and advisory sessions (see Eccles & Midgley, 1989).

Field studies of the more successful middle and junior high schools provide numerous examples of classrooms and schools that have more positive and developmentally appropriate learning environments—for example, higher teacher efficacy, greater opportunity for meaningful student participation in both school and classroom decision making, an academic culture that stresses task mastery and improvement and more positive student-teacher relationships (see Ames, 1992a, 1992b; Bryk et al., 1991; Carnegie Council on Adolescent Development, 1989; Dryfoos, 1990; Eccles & Midgley, 1989; Lipsitz, 1981; Maehr & Midgley, 1991). Young adolescents in these schools do not evidence the same declines in intrinsic motivation and school attachment stereotypically associated with students in junior high schools; they also do not engage in the same amount of school misbehavior as students in more traditional junior high schools. Unfortunately, many junior high schools do not provide such a developmentally appropriate environment (see Eccles & Midgley, 1989). Clearly, future research is needed to determine the impact of various restructuring strategies on adolescent adjustment.

Another type of change that may increase opportunities for adolescents to develop their competencies and intrinsic valuing of learning involves restructuring of the "culture" of the school (e.g. Maehr, 1991; Rutter, 1983). Research has demonstrated that particular constellations of classroom and school-level practices have important consequences on children's and adolescents' competencies. Ability-oriented classrooms, characterized by practices that stress social comparison such as ability grouping, use of competitive activities, salient evaluative feedback that focuses on relative ability, and the use of unidimensional tasks, promote student's comparison of their performance with others, and emphasize the demonstration of

ability relative to others as the goal of learning (Eccles et al., 1984; Maehr, 1991; Maehr & Midgley, 1991; Nicholls, 1984). Ability-oriented academic environments, either through teacher's differential expectations for students of different ability levels, or through other practices that make social comparison salient, may have detrimental impacts on the development of competence in students, especially low-achieving students, by implicitly or explicitly creating hierarchies of competent and less competent students. These hierarchies based on relative ability status may lead students to believe that only relatively high achieving students can be successful in school and may be a disincentive for low achieving students to try (Covington, 1984; Maehr et al., 1992; Marshall & Weinstein, 1984; Weinstein, 1989). The negative affect and self-perceptions that may arise from ability-oriented school practices may also have more powerful effects in the middle school grades when ability information is more readily used by students in forming their impressions of competence (Nicholls, 1990). Finally, previous research lends support to the hypothesis that environments that stress comparative competence likely cause increased anxiety and stress (Hill & Wigfield, 1984; Covington, 1992). In these types of environments, students may decrease effort and forego participating in activities, exhibit maladaptive coping strategies, and exhibit depressive symptomatology rather than fail publicly (Cole, 1991; Covington, 1992; Gold & Mann, 1985; Roeser, Urdan, & Midgley, 1994).

Fortunately, field and intervention studies have elaborated a host of strategies that educators working at both the classroom and school level can implement to move an academic culture from a stress on relative ability and competition ("ability-oriented culture") to a stress on self-improvement, effort, and task mastery ("task-oriented culture") (Ames, 1990; Maehr & Anderman, 1993; Meece, 1991; Midgley, 1993). Intervention strategies to do this have evolved around six major dimensions of the learning environment: (1) Tasks, (2) Authority, (3) Recognition, (4) Grouping, (5) Evaluation, and (6) Time (Ames, 1990; Epstein, 1988). Using the acronym TARGET, Ames (1990) and others (e.g., Maehr & Midgley, 1991) have elaborated new methods of constructing tasks, distributing authority in the classroom, recognizing students for improvement and effort rather than relative ability, grouping students in heterogeneous ways, using effort as a criterion of evaluation, and using time flexibly to allow for new task and grouping approaches to the curriculum. Early results of intervention studies suggest that both elementary and middle schools can move more towards a task-oriented academic culture by changing certain dimensions of classrooms and schools, and that a task-oriented school culture is most appropriate to meeting the developmental needs of children in late childhood and early adolescence (e.g., Ames, 1990; Maehr & Anderman, 1993; Maehr & Buck, 1992; Roeser, Urdan et al., 1994).

In addition to the structural changes that would facilitate a more community-oriented, task-focused environment in schools, there are other changes that schools can implement to foster a more positive, developmentally responsive environment. One such change is the promotion of greater parent involvement in schools. The evidence is fairly strong that parent involvement in school is linked to better

academic performance and overall psychological competence in children (e.g., Comer, 1980; Comer & Haynes, 1991; Epstein, 1990). A school governance that provides a more integral role for parents in policy and curriculum decision making can result in parents feeling more efficacious for influencing their child's education, which, in turn, can be reflected in the adolescent's own improved competence, both academically and psychologically. Indeed, our MAGICS data indicate that by and large seventh graders think it is a good idea for parents to be involved in their school and education. Such involvement should be implemented in such a way to convey to adolescents that the significant adults in their lives care about what goes on in their lives, yet not in a way that could be perceived by adolescents as intrusive upon their personal space. For example, teachers could encourage parent involvement by assigning tasks in which parents and their adolescents work together on tasks or issues that are relevant to the adolescent, such as occupational exploration or delineation of one's family lineage tree (Eccles & Harold, 1993). Tasks such as these encourage parents to be a resource for the adolescents' own self-development.

The promotion of increased parent involvement in school can also be the gateway to greater parent-teacher communication about the child. Such communication can be used to facilitate the integration of the home and school lives of adolescents, enabling both teachers and parents to have a richer picture of what adolescents' lives are like. This integration of contexts would help foster the type of safety zone Simmons and Blyth (1987) advocated as necessary for healthy development during this period—a zone where adolescents can experiment but where the adults are available to catch the adolescent if she or he starts to get into trouble. Again, such communication should not be used as a venue for strict monitoring of adolescents but rather as a means by which teachers and parents can better understand and be attuned to the experiences of their adolescents.

Better efforts could also be made in school environments to increase the degree to which both teachers and parents are attuned to the psychological needs of adolescents. Increased teacher-parent communication could facilitate this. In addition, focus groups in which adolescents are given a forum to openly discuss the issues most relevant to them could provide an excellent opportunity for teachers and parents to learn more about what is happening in the lives of their adolescents. It is also likely that both policy and practice could be greatly informed if we as adults listened to what adolescents themselves are saying about their lives and their social environments.

Overall, each of these reform efforts could serve to increase the degree to which parents and teachers are attuned to the psychological needs of adolescents. For example, classroom environments that stress self-improvement and task mastery would help focus teachers on individual student progress, rather than comparative performance. In addition, facilitated parent involvement in schools and parent-teacher communication could increase the amount of important information shared concerning the progress and wellness of each adolescent in his or her home and school settings. Furthermore, more individualized techniques such as focus groups in which adolescents are given a forum to openly discuss the issues most

relevant to them could provide an excellent arena within which the significant adults in young adolescents' lives could learn more about their contemporary concerns, struggles, and lifestyles.

Towards Developmentally Appropriate Family Settings

There is a similar need for developmentally responsive environments in the family. Existing evidence suggests that there is variability in how families adapt to their children's movement into adolescence and that adolescents fare best in family environments that provide a good fit to their increasing need for autonomy. Adolescents fare more poorly in families that respond to their development either by throwing up their hands and relinquishing control or by cracking down too much. Families, like schools, are confronted with a difficult problem—providing an environment that changes in the right way, and at the right pace, to maintain a good fit with their children's developmentally appropriate needs. Unfortunately, we know less about how to help families achieve this balance than we know about how to design schools that help teachers achieve the right balance. There is a great need for programs that will help parents with this difficult task.

Summary

The contexts in which adolescents develop can either facilitate or undermine an adolescent's pursuit of a unique and coherent personal identity and sense of competence. Adolescents' perceptions of their school and family environments as either satisfying or thwarting their developmental needs for autonomy, feelings of relatedness, and opportunities for competence development contribute in significant ways to adolescents' academic motivation, identity formation, and personal adjustment. In this chapter, we reviewed our findings and other studies that suggest teachers and parents of early adolescents might not be very well attuned to the experiences and needs of children who are making the transition into early adolescence. For teachers, this diminished sensitivity probably reflects the demands of the current structure of many middle level schools. For both teachers and parents, this low attunement to adolescent needs in general may reflect a lack of understanding about what early adolescents are up against during this development time in this historical epoch, as well as a lack of understanding about what adolescents need from the adults in their lives. These findings suggest a need for intervention at different levels of the adolescents' social worlds, including school reform and basic education about what adolescence is about for both parents and teachers. It seems incumbent upon us as professionals in the field to serve as advocates for adolescents and as spokespersons to the public in terms of describing their experiences and needs. As such, part of our task is to disseminate information to both the profes-

sional and lay public in order to dispel stereotypes, as well as to be involved in the design and implementation of changes at the level of policy and organizations that serve adolescents. Such advocacy on the part of social scientists and practitioners can assist young adolescents to both develop a sense of belonging in this society and realize their potential as productive and valued members of this society.

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III An Evolutionary Perspective on Psychopathology in Adolescence

Laurence Steinberg & Jay Belsky

The study of psychopathology during adolescence—and, more particularly, the study of externalizing psychopathology in adolescence—has always been somewhat paradoxical. On the one hand, common opinion holds that a certain degree of “acting out” and “risk taking” during adolescence is normative. Young people, at least in contemporary industrialized societies, are expected to challenge authority, rebel against their elders, and experiment with risky and dangerous activities. In some circles, it is even held that the total absence of such behaviors may indicate some kind of developmental immaturity. Consider, for example, Anna Freud's oft-cited statement on “normal” development during adolescence:

We all know individual children who as late as the ages of fourteen, fifteen, or sixteen show no . . . outer evidence of inner unrest. They remain, as they have been during the latency period, “good” children, wrapped up in their family relationships, considerate sons of their mothers, submissive to their fathers, in accord with the atmosphere, ideas and ideals of their childhood background. Convenient as this may be, it signifies a delay of normal development and is, as such, a sign to be taken seriously. (1958, pp. 264-265)

Freud's stance notwithstanding, common opinion also holds that the problem and risk-taking behaviors in which adolescents engage are, in fact, genuinely problematic—not only to society but to the individuals who engage in them. Delinquency, violence, drug and alcohol abuse, and sexual promiscuity among the young command the constant attention of the popular media. Adolescent risk taking and behavior problems drain an immense share of the economic resources of the legal and mental health systems, not only in the United States, but in most industrialized countries. Even more minor adolescent behavior problems, such as oppositionalism, truancy, precocious sexual activity, experimentation with drugs, and rebellion against parental authority, are frequent sources of worry to parents and among the chief reasons that families with teenagers seek the help of mental health professionals (Steinberg & Levine, 1990).

This tension—between viewing adolescent behavior problems as normative and viewing them as disturbed—has existed for as long as experts have been writing about the period. Nearly 40 years ago, Freud (1958) coined her wonderful oxymoron, “normative disturbance,” to describe the paradox. Put most succinctly, the *paradox of normative disturbance* is this: The very behaviors we have come to expect