Chapter 4

SOCIALIZATION AND SELF-DEVELOPMENT

Channeling, Selection, Adjustment, and Reflection

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INTRODUCTION

Adolescence is a crossroads from childhood to adulthood. Childhood experiences and biological characteristics are transformed into interests, competencies, and self-beliefs and begin to play an increasingly important role as the adolescent starts to make his or her way toward adult life. This development is channeled by a variety of opportunities and constraints in the adolescent's social and institutional environments: Not all is possible, but many things are. Out of these alternative pathways the adolescent has to select the ones that appeal to him or her, or, in some cases, to significant others. Not everything is attained, and surprises are part of the game. Therefore, ways to deal with problems and unexpected events are developed. Along with these efforts and adventures, adolescents begin to know themselves and to make reflections about who they are. Young people are not alone in their efforts. Most of them live with their parents but spend increasing amounts of time with their peers and friends. In these relations, advice is given, interests raised, goals negotiated, solutions compared, and outcomes evaluated. The aim of this chapter is to review what is currently known about the ways in which adolescents make their ways into adulthood.

Adolescents face two broad challenges during the transition from childhood to adult life: the entrance into production and reproduction fields of the culture and society. Entrance into production includes becoming an economically independent individual who is able to make his or her living in the society and economic system. This developmental trajectory consists typically of a complex set of decisions concerning schooling, education, and career. In turn, entrance into the reproduction domain includes a pattern of sequential commitments to romantic relationships, building up intimate relations, founding a family, and taking care of children. Although there is a lot of variation in how these two broad challenges are approached, dealt with, and solved, these seem to be the key challenges in all cultures and societies. The reasons for this are simple. When adolescents

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participate in these two processes, they become the agents in the reproduction of the society, its economy, and its way of life (Nurmi, 1993). Moreover, working through these two general challenges builds up a basis for the adolescent's individuation from his or her childhood family, as well as for his or her entrance into adult life and identity.

An increasing amount of research has been carried out on adolescence during the past two decades. The majority of the studies has focused on examining adolescents' behavioral characteristics, parental behaviors, or some other seemingly objective features of adolescence. This research has provided important information about how adolescents behave in many environments and about how this behavior changes with age. Much less research has been carried out on how the adolescent's mind works and the kinds of consequences this adolescent psychology has for young people's further development. There are, however, a few relevant topics examined in the field of adolescent research, such as self-concept, aspirations, coping, and identity. Some more recent topics that are becoming popular in personality and social psychology are personal goals, social strategies, problem solving, causal attributions, and identity narratives. These topics have also begun to gain increasing attention in adolescent research.

In this chapter I review research on how adolescents' minds work as they move to adulthood, that is, what they think and feel about their lives as adolescents, what kinds of interests they have, the kinds of tools they develop to deal with the challenges of adolescence, and the ways in which they make stories about themselves later on. When reviewing this research I used a few principles to make scientific generalizations of the empirical research. The first principle is that before we make any generalization about the findings, they should be replicated. Second, the source of the information on which the results are based is considered. In some cases, such as parenting, information from both parents and adolescents is a valid source of information. However, when the interest is in a particular person's thinking, such as the mother's educational goals for their child, the ways in which the adolescent perceives his or her mother's goals is a secondary type of information. Finally, the direction of influence is the key issue in developmental psychology. However, it is difficult to deal with because experimental research and intervention studies are rare. The major way to get evidence for the causality in developmental processes is to use cross-lagged longitudinal data, which makes it possible to control the previous level of the dependent variable before examining the later impacts of the independent variables on the dependent variable.

A typical approach in review chapters such as this is to focus on one particular well-defined research area and to exclude other topics. This approach may be problematic for two reasons. The first is that researchers typically develop different kinds of conceptualizations to deal with more or less the same phenomenon. Focusing on one conceptualization only would mean, in fact, that not all important findings for a particular phenomenon will be reviewed. Consequently, the aim of this chapter is to search for the similarities across a variety of conceptualizations rather than to concentrate on analyzing differences. Second, when focusing on one relatively narrow phenomenon and a related research paradigm, there is a danger of losing sight of adolescent development as a whole. In this chapter I make an effort to integrate research on adolescence under a few umbrella concepts in order to provide a more holistic view of the young person.

In order to attain this goal, I first present a view in which adolescents' socialization is described in terms of four mechanisms: channeling, selection, adjustment, and re-

flection. Then, research on a variety of more traditional concepts, such as future-orientation, occupational aspirations, identity exploration, coping, causal attribution, self-concept, and identity formation, are reviewed under these four headings. A few topics, however, are excluded, such as academic motivation and achievement goals because other chapters in this Handbook focus on them. The role of family and peers as the interpersonal context for adolescent development is also considered. Finally, a few future research directions and methodological issues are discussed.

CHANNELING, SELECTION, ADJUSTMENT, AND REFLECTION

During the adolescent years, an individual moves from being a member of the parents' family to a full member of society. This development is characterized by four key mechanisms (Figure 4.1): First, adolescents grow up in changing environments that *channel* their developmental trajectories. A variety of sociocultural factors like cultural beliefs, institutional structures, and historical events form such environments, which also change rapidly from one age period to another (Nurmi, 1991). Such sociocultural and institutional structures define an opportunity space for the adolescent that channels his or her future-oriented motivation, thinking, and behavior. Second, as suggested by life span theorists (Brandstädter, 1984; Lerner, 1983), adolescents are not passive targets of environmental influences; rather, they *select* their developmental environments and future life paths. Many psychological mechanisms are responsible for this selection: Motives, interests, and personal goals direct adolescents' exploration, planning, decision making, and commitments and lead them to specific educational tracks, peers groups, and leisure activities. Third, as a consequence of their efforts to select the direction of their lives, adolescents end up having specific outcomes and receive feedback about their successes and failures. Feedback about developmental outcomes, particularly about failures and negative events, requires that young people *adjust* their goals, plans, and thinking in order to cope successfully with the future challenges of their developmental trajectories. Many psychological mechanisms, such as reconstruction of goals, coping, and causal attributions, are responsible for this adjustment. Finally, after receiving information about the outcomes of their efforts and ending up in a particular life situation and social position, adolescents typically *reflect* about a variety of issues concerning themselves and their lives: They construct conceptualizations about themselves and tell stories to their parents and peers aimed at building up a coherent personal identity (Figure 4.2).

Channeling: Developmental Tasks, Role Transitions, and Institutional Careers

Adolescents grow up in environments that consist of a variety of social expectations set by their parents, teachers, and peers; many demands and standards are defined by so-

Channeling → Selection → Adjustment → Reflection

Figure 4.1 Channeling, selection, adjustment, and reflection.

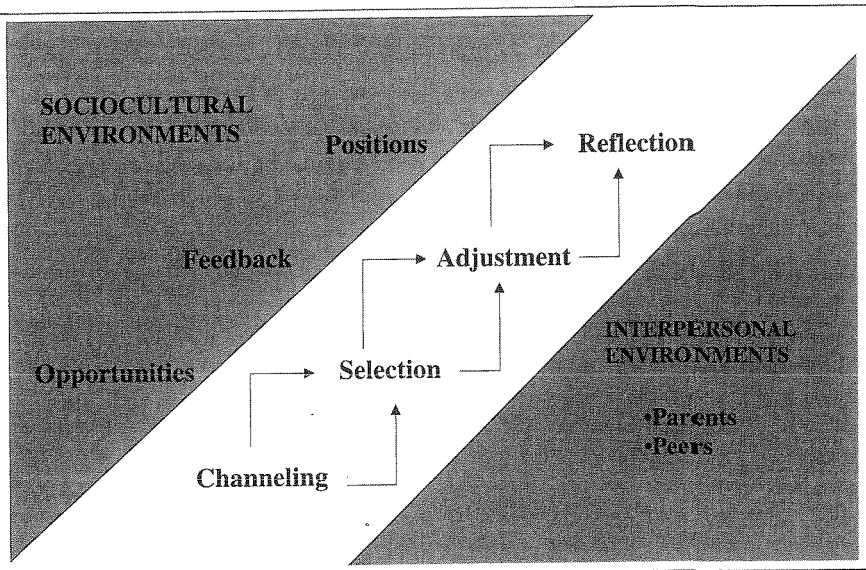

Figure 4.2 Channeling, selection, adjustment, and reflection in sociocultural and interpersonal environments.

cial and institutional sources, such as school curriculums, coaches, and classmates; and a variety of opportunities is created by educational systems and the economy (Figure 4.2). It has been suggested that these age systems are important for adolescent development because they create predictable, socially recognized road maps for human lives (Hagestad & Neugarten, 1985).

One major feature of such environments is that they are closely related to a person's age. Parental expectations, educational standards at school, and opportunities for educational decisions, for example, change from one age to another. Although these kinds of age-graded environments are in most part similar to adolescents of a particular age living in a certain society, they also differ along many factors, such as gender, social stratum, ethnic background, and family characteristics. Perhaps because, by definition, psychologists interested in adolescence have been committed to individuals' thinking and behavior, they have often overlooked the role of such environmental structures.

These age-graded differences in individuals' developmental environments have been described in the life span theory of human development in a variety of conceptualizations. These are discussed next.

Developmental Tasks

The first concept used to describe age-graded contexts was that of the developmental task. The concept was introduced by Havighurst (1948), who defined it as "a task which arises at or about a certain period of time in the life of an individual, successful achievement of which leads to his happiness and success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society and difficulty with later tasks" (p. 2). Havighurst's original conceptualization of the origins of developmental tasks was broad. He saw them as motivated by normative demands, physical maturation, and personal values and aspirations.

According to Havighurst (1948), developmental tasks consist of normative expectations and requirements to do or achieve something at a certain age. Even though key themes of these tasks, such as work, human relationships, and ideology, are the same across the life span, different life stages are characterized by different tasks. Developmental tasks also include beliefs about appropriate behavior and about outcomes that are interpreted as a successful way of handling a specific task. Similarly, these tasks consist of beliefs about inappropriate behavior that is evaluated as a failure. The influence of developmental tasks on individual thinking is mediated by the behavior of and feedback from other people, such as parents, peers, and teachers.

Typical developmental tasks for adolescence include achieving mature relationships with peers and forming a sex-role identity, preparing for marriage and family life, achieving emotional independence from parents, and preparing for an economic career, including planning education. Tasks for early adulthood include finding an occupation, selecting a partner and starting a family, rearing children, and finding a congenial social group (Havighurst, 1948). Although Western societies have changed substantially during the last few decades, more recent descriptions of developmental tasks are very similar to those of Havighurst (e.g., Strough, Berg, & Sansone, 1996).

Social Constraints and Role Transitions

In the decades since Havighurst's (1948) theory, similar conceptualizations have arisen. For example, Neugarten, Moore, and Lowe (1965) considered how age norms and social constraints indicate a prescriptive timetable for ordering major life events. According to them, these sociocultural patterns operate in a society as a system of social controls. On the basis of these normative beliefs, people's behaviors at a certain age can be described as early, late, or on time. Two decades later, similar ideas were put forward, such as role transitions and developmental standards (Elder, 1985). The conceptual differentiation between normative and nonnormative life events suggested by Baltes, Reese, and Lipsitt (1980) also emphasizes the importance of age-graded life-course patterns.

Institutional Careers

Most of the conceptualizations concerning age-graded environments have focused on normative structures and cultural beliefs in certain societies. By doing so, they have overlooked the fact that age-graded changes in institutional patterns also play an important role. For example, schooling and educational systems form age-related tracks that influence individuals' behavior and decisions at a specific age. These types of changes have been described earlier in terms of institutional careers (Mayer, 1986), tracks (Klaczynski & Reese, 1991), and action opportunities (Grotevant, 1987). The major feature that distinguishes these concepts from developmental tasks and role transitions is that they are based on specific institutional and organizational, or even legal, structures, rather than on cultural beliefs. During adolescence individuals are faced with many institutional transitions, particularly in the domain of education and work.

Selection: Goal Construction, Planning, Exploration, and Commitments

Adolescence is characterized by many challenges, demands, and options (Caspi, 2002). Because of this variety of opportunities and restricted individual resources, such as

Table 4.1 Channeling, Selection, Adjustment, and Reflection Mechanisms in Terms of Previous Research

Channeling	Selection	Adjustment	Reflection
Developmental tasks	Personal goals	Coping	Identity
Role transitions	Cognitive strategies	Goal reconstruction	Self-concept
Institutional careers	Problem solving	Causal attributions	Self-esteem
Anticipations of life span transitions	Explorations		Narratives
	Commitments		

time and energy, adolescents must focus on dealing with some of the future challenges available for them. This selection process (Baltes & Baltes, 1990) has been described in previous literature in terms of a variety of psychological mechanisms (Table 4.1).

Goal Construction

One of the key psychological mechanisms responsible for how an adolescent directs his or her development and selects from a variety of environments is motivation (Nurmi, 1993, 1997). On one hand, a young person has individual motives that are based on his or her earlier life history and experiences and on a variety of individual characteristics, such as personality traits and temperament. On the other, he or she is faced with a "space of opportunities" defined by the developmental tasks and by institutional tracks (Poole & Cooney, 1987). An individual constructs personal goals by comparing his or her individual motivation to the opportunities available in his or her environment (Nurmi, 1991; Nuttin, 1984). Such comparison provides a basis for realistic and attainable goals. Personal goals then help the individual to move to a direction that would satisfy his or her individual motivation (Salmela-Aro, Nurmi, Saisto, & Halmesmäki, 2000).

Previous research on adolescents' and young adults' motivation and personal goals arose from three different theoretical frameworks. One is personality psychology, in which many researchers have recently conceptualized motivation in terms of self-articulated personal goals. For example, Little (1983) described motivation in terms of personal projects, Markus and Nurius (1986) as possible selves, and Nurmi (1991) as future goals. Despite the differences in terminology, all these concepts refer to personal goals that (a) are based on more abstract individual motives (Nuttin, 1984), (b) exist within a system of hierarchically organized superordinate and subordinate motivational structures (Leontjev, 1977), (c) refer to some culturally defined task (Cantor, 1990; Nurmi, 1991), and (d) are realized by constructing different means-end structures (Nuttin, 1984). In this framework, personal goals are typically analyzed according to the domains of life they concern, such as education, work-career, family-marriage, leisure activities, property, and self-related–existential types of goals (Little, 1983; Nurmi, 1991).

Another line of research on motivation originates from research on adolescents' future orientation and time perspective (Nurmi, 1991). Thinking about the future is assumed to be of particular importance during the adolescent years because young people must deal with a variety of challenges concerning the transition into adulthood. Besides interest in the contents of adolescent goals, hopes, and fears concerning the future, this framework has typically examined how far into the future adolescents goals,

interests, and concerns extend. In addition, the ways in which adolescents think and feel about their goals have been a focus of research (Nurmi, 1989a; Trommsdorff & Lamm, 1980).

The third line of research on adolescent motivation originates in more applied types of work that have focused on interests, aspirations, and expectations that young people have concerning one particular life domain. Typical life domains on which these studies have focused include education (Wilson & Wilson, 1992), occupation (Roisman, 2000), and family (Jenkins Tucker, Barber, & Eccles, 2001).

Strategy Construction, Planning, and Problem Solving

Besides personal goals and motivation, selection, to be completed, requires other psychological mechanisms to come into work. For example, adolescents' educational goals need to be complemented by planning and strategy construction (Nurmi, 1989a). Similarly, fulfilling one's interests in peer groups and intimate relationships requires strategic thinking (Eronen & Nurmi, 1999). When people are faced with a challenge or problem about which they have some experience, they typically apply some personal skills that they have previously developed (Markus & Wurf, 1987). However, when people are faced with new demands and challenges, they need to devise new strategies (Cantor, 1990; Nurmi, 1989a). This strategy construction consists of setting a goal as an anticipated representation of a hoped-for situation and activation of the schemata concerning a particular domain of life, searching for alternative means for goal attainment by means of planning, investing effort in the realization of these plans, regulating the behavior toward goal attainment, and evaluating the behavioral outcomes.

Two major frameworks have examined this planning and strategy construction among adolescents. The first approach focused on investigating the degree to which young people are involved in decision making and planning in a particular life domain, such as education (Klaczynski & Reese, 1991) and future career (Blustein, Devenis, & Kidney, 1989). Some studies have even examined adolescents' planning simultaneously in several domains (Malmberg, 1996). These studies have typically relied on straightforward self-report instruments.

Another approach has included efforts to identify the kinds of cognitive and behavioral patterns that individuals use in different situations. For example, Cantor (1990) described two types of strategies among young people who were successful in college environments. An optimistic strategy was characterized by straightforward striving for success based on high-outcome expectations and positive past experiences and on the desire to enhance already-strong images of competence. Typical of students using a defensive pessimist strategy was to have defensively low expectations and to feel anxious before performance. These negative expectations do not become self-fulfilling prophecies but serve as a protective attributional cover and motivator of the behavior leading to successful outcomes. Other types of strategies have been associated with poor performance. For example, Berglas and Jones (1978) described self-handicappers who are typically concerned about potential failure in a particular task and therefore concentrate on active task-avoidance in order to create excuses for the feared failure. Another prototypical maladaptive strategy is learned helplessness (Abramson, Seligman, & Teasdale, 1978). Because helpless people lack belief in personal control, they end up passively avoiding the new challenges and demands that they are facing.

Exploration and Commitments

Besides construction of goals and strategies, selection of a particular development trajectory includes also searching for information and making personal decisions. Fo example, process-oriented theories of identity development have described identit formation in terms of two mechanisms: exploration and commitments. Bosma (198 and Grotevant (1987) both suggested that adolescents engage in a variety of explo rational activities and related commitments that reflect their personal values and need Exploration and commitments may also progress differently in different life domain such as education, intimate relationships, and ideology. In this approach, identity ex ploration and commitments are typically measured as continuous variables in differen life domains.

Exploration and commitment are widely used concepts also in research focusing o adolescents' educational and occupational development. For example, vocational choic consists of several subsequent stages, such as exploration, crystallization, choice, imple mentation, and commitment (Harren, 1979). The major interest in this area of researc has been to identify factors that influence such career-related exploration (Kracke & Schmitt-Rodermund, 2001), decision making, and commitments (Phillips, 1982).

Adjustment: Coping, Reconstruction of Goals, and Causal Attributions

In the course of the selection process, adolescents may attain the goals to which they were aiming. However, this is not always the case. In many situations, adolescents fai to reach their goals or do not succeed to the extent they expected. Young people may also face unexpected events that endanger some important aspects of their future lives When adolescents face problems in goal attainment, they need to *adjust* some of their previous goals, cognitions, or behaviors (Figure 4.1). This adjustment process has been described in terms of many psychological mechanisms (Table 4.1).

Coping

When adolescents face problems in goal attainment, they try to find new ways of dealing with them, to avoid the difficult situation, or to avoid related information. These kinds of efforts have been described previously in terms of coping strategies (Folkman, Lazarus, Pimley, & Novacek, 1987). There are several ways to conceptualize coping. According to Seiffge-Krenke (1993), for example, functional coping refers to efforts to manage a problem by actively seeking support, undertaking concrete actions to solve a problem, or reflecting on possible solutions. A dysfunctional coping includes withdrawing from or denying the existence of the problem, avoiding active seeking of solutions, and attempting to regulate the emotions (Seiffge-Krenke, 1993). Understandably, the characteristics of the situation are important in the kind of coping an individual chooses to use. For example, effective coping in changeable situations consists of a greater use of problem-focused coping, whereas in an unchangeable situation effective coping involves a greater use of emotion-focused coping (Compas, Banez, Malcarne, & Worsham, 1991; Folkman et al., 1987). Consistent with this proposition, Blanchard-Fields, Jahnke, and Camp (1995) found that the use of problem-focused coping decreased, whereas passive-dependent coping increased, in use with greater emotional salience.

Research on coping shares similarities with research on strategy construction. Because strategies are typically described as a way to attain a goal, they are here summarized under the selection process. In turn, coping is often described as a way to deal with goal nonattainment or with an unexpected event, and therefore it is discussed under adjustment.

Goal Reconstruction

One further way for an adolescent to adjust to the negative outcomes he or she is facing is to reconstruct personal goals. When people fail to actualize their goals for a specific developmental trajectory, they are likely to modify their previous goals or to disengage from them and engage in new kinds of goals as a part of accommodative strategies (Brandtstädter & Renner, 1990). Doing this reconstruction helps the adolescent, after a failure, to keep motivated, stay on a realistic level of functioning, and maintain positive developmental perspectives when facing the next challenging life situation.

Goal reconstruction may lead to either positive or negative developmental changes. For example, not succeeding in a particular sport may lead to a decision of trying another kind of sport, which, in the long run, may result in a person's finding a lifelong hobby. In turn, having problems at school may lead to increasing interest in social activities with peers, which may further increase low achievement. Goal reconstruction on the basis of feedback from goal attainment is one key mechanism of motivational development (Nurmi, Salmela-Aro, & Koivisto, 2002).

Causal Attributions

One mechanism that plays an important role in the adjustment to a failure in goal attainment is an adolescent's interpretation of events afterward. According to Weiner (1986), after the event is interpreted as success or failure, an individual begins to search for the possible reasons for this event. Such causal attributions typically refer to one's own effort, abilities, or skills; alternatively, they refer to the situation, other people, or luck.

Most people apply self-protecting causal attributions in their efforts to deal with negative outcomes in particular (Taylor & Brown, 1988; Zuckerman, 1979); that is, they take credit for success but blame other people and situational factors for failure. The function of this defensive thinking is to cope with negative feedback concerning their self. Lack of such self-protective attributional bias has been shown to increase the likelihood of depressive symptoms. The problem with the use of attributional bias is that it leads to behavioral patterns that do not promote high effort in challenging situations (Berglas & Jones, 1978).

An alternative approach to causal attributions is to conceptualize them from the point of how functional they are for individual behavior. For example, Glaskow, Dornbusch, Troyer, Steinberg, and Ritter (1997) suggested that dysfunctional attributional style implies lack of faith in one's performance capacities and a reluctance to assume responsibility for one's behavior and the outcomes it may generate. Their definition of dysfunctional causal attribution included references to luck, teacher bias, task difficulty for either success and failure, and lack of ability in response to failure. Functional causal attributions refer to ability and effort after success, and effort attribution for a failure.

Reflection: Identity, Narratives, and Self-Concept

One psychological mechanism that plays a particularly important role during adolescence is the way in which individuals perceive and *reflect* their individual characteristics, behavioral outcomes, and social positions as a way to construct self-concept and identity (Figure 4.1; Erikson, 1959; Harter, 1990). Three different conceptualizations that have been used to describe this self-reflection process (Table 4.1) are discussed in the next sections.

Identity

The ways in which an adolescent perceives him- or herself across time and space have been described as identity (Baumeister & Muraven, 1996; van Hoof, 1999). One major assumption of the original identity theory was that the particular social position or the role the adolescent has adopted has consequences for his or her identity (Erikson 1959). During adolescence, individuals explore different alternatives and end up in specific adult roles. Perceiving oneself then in a particular role helps an individual to construct an identity of who he or she is (Baumeister & Muraven, 1996; van Hoof, 1999).

Although identity, by definition, refers to the self-structures of an individual, the vast majority of research in the field has relied on Marcia's (1980) identity status paradigm, which focuses on the processes that are assumed to lead to identity formation rather than identity contents per se. Marcia originally operationalized Erikson's (1959) theory of identity formation in terms of four identity statuses. These were defined in terms of the presence and absence of crises and commitment related to important life decisions: identity diffusion (no current crisis or commitment); moratorium (current crisis, no commitment); foreclosure (commitment, no apparent former crisis); and identity achievement (commitment, previous crisis resolved).

Narratives

Individuals also construct narratives and tell stories about themselves as a way to create an identity (McAdams, 1999). Because one main feature of human cognition is that its contents can be shared by language, telling stories is an important means to increase self-coherence, to support positive self-concept and high self-esteem, to relate one's identity to those of significant others, and to create prototypic identity narratives as a member of a particular culture.

According to McAdams (1999), it is on the brink of adulthood that a person begins to construe his or her life in narrative terms. The implicit goal of this is to create an internalized story of the self that binds together the reconstructed past, perceived present, and anticipated future in a way that confers upon life a sense of unity and purpose. Although identity narratives vary in regard to content and structural features, agency and communion are their typical themes, and they are often situated to a specific moral or ideological setting (McAdams, 1999).

Self-Concept and Self-Esteem

Adolescents receive a substantial amount of feedback concerning their skills and competencies during selection and adjustment processes. For example, how well an adolescent is doing at school and the kinds of feedback he or she receives from peers and

parents have consequences for what a person thinks about him- or herself (Harter, 1990). This self-concept has been among the most popular research fields in adolescent psychology.

Although the concept of self has been expanded to refer to a wide variety of mechanisms, the definition of self-concept is straightforward: It refers to relatively stable schemata of oneself that are generalized to the extent that they refer to an individual's view of him- or herself across different situations. A person has a self-concept to the extent that he or she has a coherent structure within which the multitude of self-relevant thoughts and feelings achieve organization (Nowalk, Tesser, Vallacher, & Borkowski, 2000). By contrast, self-esteem is typically defined as the ways in which individuals evaluate themselves according to normative or self-related standards. For example, positive self-esteem might be assumed, by definition, to be caused by having more success than expected, and negative self-esteem stems from having less success than expected.

CODEVELOPMENT: PARENTS AND PEERS

Although socialization and self-development, as evidenced in channeling, selection, adjustment, and self-reflection processes, are often described as an individual development, they are closely embedded in the adolescent's interpersonal relationships (Nurmi, 2001). When thinking about their future life and related decisions, young people often negotiate with, ask advice from, or reject information given by their parents and teachers. Similarly, they model their peers and discuss their future lives with their friends (Figure 4.2).

Three topics are particularly interesting in this context. First, to what extent is adolescent socialization directed by parents, or do the outcomes of the adolescent socialization activate certain kinds of parenting? Second, to what extent are adolescents influenced by their peers, or do they rather select a peer group according to their own interests and characteristics? Third, how are adolescents' relationships to their parents and peers related in the process of socialization into adulthood?

Adolescents and Parents: Cause or Effect?

Parent-adolescent relationships have been among the most examined topics in adolescent development (Steinberg, 2001). Although family relationships have been theoretically conceptualized as bidirectional interaction between the adolescent and his or her parent (Bell, 1979; Lerner, 1982), empirical researchers seem to make a strong presumption that it is parenting that influences adolescent development (Crouter, MacDermid, McHale, & Perry-Jenkins, 1990; Jacobson & Crockett, 2000). This seems to be the case even for most recent research even though many researchers have challenged this view and suggested that children also impact their parents' child-rearing patterns (Harris, 1995; Kerr, Stattin, Biesecker, & Fedder-Wreder, in press; Lerner, 1982; Lerner & Spanier, 1978).

This issue of the extent to which parents' attitudes, behaviors, and child-rearing patterns influence their adolescents' development, or whether it is children's thinking and behaviors that have an impact on their mothers' and fathers' parenting, is of key im-

portance for this chapter. On the one hand, there are good reasons to assume th ents influence the ways in which their adolescent children deal with the transiti adulthood. There are at least three possible ways: First, parents may direct the opment of their children's interests, goals, and values by communicating expec and setting normative standards; second, they may influence the ways in whic adolescent child deals with various developmental demands by acting as role and providing tutoring; and finally, they may contribute to the ways in which cents evaluate their success in dealing with these demands by providing supp feedback (Nurmi, 1991). On the other hand, the adolescent's success in dealing key demands of his or her age-graded environments may well influence his or h ents' expectations concerning their child's future; adolescents' competencies a ing skills may evoke the use of certain parenting styles among the parents; and cents' behavior may cause extra stress for parents, which then influence their th behavior, and even well-being (Figure 4.2).

Adolescents and Peers: Selection or Causation?

Aside from parents, peers and friends are involved in the ways in which adolesce with the transition into adulthood (McGuire et al., 1999). Adolescents in a pa peer group exhibit many similarities compared with adolescents in other grou homophily of the peer groups has been reported in many characteristics, such rations (Kandel, 1978), school work (Cohen, 1977), and problem behavior (Degirmenciogly, & Pilgrim, 1997). Two major mechanisms have been suggest responsible for this homophily. First, peer groups may be important socia agents in adolescents' development. In this case, adolescents become similar peers because peers provide role models, feedback, and a platform for social c isons (Ryan, 2001). Second, adolescents may select peer groups having memb share similar characteristics and interests with those they have themselves, or t leave groups that do not fit with their characteristics or motivation (Cohen Overall, selection and socialization into peer groups might be assumed to pla portant role in the ways in which adolescents deal with the transition into ad (Figure 4.2).

Parents or Peers

Starting from early adolescence, children spend increasing amounts of time w peers both at school and after school (Larson & Richards, 1991), whereas th less time with their parents (Collins & Russell, 1991). Some researchers have s that children's decreasing closeness to their parents is associated with their i orientation toward the peers. For example, Steinberg and Silverberg (1986) s that the transition from childhood to adolescence is marked more by a tradi pendency on parents for dependency on peers rather than a straightforward g autonomy.

Parents and peers play different roles in individuals' attempts to negotiate th through adolescence. For example, Tao Hunter (1985) found that adolescents c

with their parents particularly topics that related to adolescents' social and economic functioning in adulthood (i.e., academic, vocational, and social-ethical issues). By contrast, they discussed with their friends particularly issues concerning interpersonal relations. Another important issue is the extent to which adolescents' relationships with their parents and peers are associated. Fuligni and Eccles (1993) found that adolescents who perceived high parental strictness and little opportunity for decision making were higher in extreme peer orientation. In the following literature review I also examine what is known about the role of parents and peers in adolescents' socialization to adulthood.

RESEARCH ON SOCIALIZATION INTO ADULTHOOD

Earlier in this chapter, adolescent development into adulthood was described in terms of four processes (Table 4.1). In the following sections I review the research on what we know about the channeling, selection, adjustment, and reflection processes among adolescents. For each process, the research on the nature of the processes, the developmental changes, major antecedents and consequences, and the role of family and peers are reviewed.

Channeling: Anticipations of Developmental Tasks and Transitions

Age-graded developmental tasks, role transitions, and institutional tracks were expected to channel the ways in which adolescents direct their future development and select their environments. Previous research supports this by showing that adolescents have relatively detailed conceptions of their age-related developmental environments (i.e., the timing of a variety of developmental tasks, role transitions, turning points, and institutional tracks; Crockett & Bingham, 2000; Nurmi, 1989b). They also anticipate their future lives as a sequence of transitions in which school completion is followed by job entry, and then by marriage and parenthood. Moreover, their anticipations of the major turning points is in accordance with the statistics of the median age at which individuals go through these transitions in a particular society (Crockett & Bingham, 2000; Nurmi, Poole, & Kalakoski, 1996). This is not surprising because the cognitive ability to make such estimations has been shown to develop well before the adolescent years, by the age of 8 to 9 years (Friedman, 2000).

Research on how far into the future adolescents' thinking and personal goals extend gives a similar view. Nurmi (1989b, 1991), for example, showed that young people's thinking about the future extends to the end of the second and to the beginning of the third decade of life: Adolescents expected their education-related goals to be actualized, on average, at about the age of 18 to 19, occupation-related goals to be actualized at the age of 22 to 23, and goals related to family at the age of 25 to 26. Adolescents' life course anticipations are also predictive of their subsequent life course events, particularly in the family domain (Hogan, 1985).

Research has also shown gender differences in the life span anticipations. Girls tend to anticipate forming a partnership, establishing a family, and having children earlier than do boys (Malmberg, 1996), which again is in accordance with the statistics.

Among girls, the anticipations of the timing of educational and occupational transition are closely connected to the anticipations of family formation (Crockett & Bingham, 2000). This finding is thought to reflect the fact that girls take into account the role conflicts of these two domains more than boys do (Hogan, 1985).

The Role of Family

Family characteristics are associated with adolescents' anticipations of their life span transitions. For example, high parental education contributes to a later expected age for all major transitions (Crockett & Bingham, 2000; Hogan, 1985). Similarly, adolescents who have grown up in homes of lower socioeconomic standing expect earlier youth-to-adult transitions. In addition, parents' values are associated with their children's expectations: parents who have liberated sex-role attitudes have daughters who expect to leave the parental household earlier than do the daughters of parents with more conservative attitudes (Hogan, 1985).

Moreover, parents' views of their adolescent child's future transitions contribute to the child's future life. Hogan (1985) found in a longitudinal study that mothers' educational aspirations for their daughters predicted the timing of the daughters' marital transitions. Moreover, daughters of mothers who emphasized traditional sex roles were more likely to marry as adolescents compared with other young women. By contrast, daughters of mothers who emphasized the importance of career-preparatory education tend to delay marriage and family.

Selection

Goal Construction

One mechanism that plays an important role in how an adolescent directs his or her development and selects from a variety of environments is the kind of personal goals he or she constructs. Such goals are important, because they help the young person to move to a direction that would satisfy his or her personal motivation.

Transitions and Institutional Tracks One of the key assumptions of this chapter is that adolescents construct their goals by comparing their individual motives to the opportunity space created by their age-graded sociocultural environments. When adolescents are asked about their future hopes and interests, they typically report topics that focus on their personal future lives, such as education, occupation, family, leisure activities, travel, and self-related issues (Nurmi, 1991; Salmela-Aro, 2001). It is interesting to note that there is little variation across societies and cultures in such hopes and interests (for a review, see Nurmi, 1991). During adolescence, individuals become increasingly interested in future occupation, education, and family (Nurmi, 1989b). By contrast, adolescents' interest in leisure activities decreases with age. The majority of the research on developmental changes is based on age-group comparisons, although similar results have been found in longitudinal studies (Nurmi, 1989b).

These results are in accordance with the life span theory of adolescent development (Nurmi, 1991, 1993): A substantial proportion of adolescents' future hopes and interests focus on the major developmental tasks of this period. The finding that ado-

lescents become increasingly interested in these topics with age may reflect the fact that as the transitions come closer, they increasingly motivate adolescents' thinking (Nurmi, 1989a).

Young people not only construct goals that are in accordance with age-graded developmental tasks and role transitions, but they also continuously reconstruct their personal goals to match the specific stages of a particular transition they are experiencing. For example, Salmela-Aro et al. (2000) showed that women who were facing a transition to parenthood not only had goals that reflected this particular transition overall but also reconstructed their goals to match with the specific stages of this transition: Womens' personal goals changed from achievement-related topics to pregnancy, then to the birth of a child, and finally to taking care of the child and motherhood. Moreover, Heckhausen and Tomasik (2002) found that vocational goals become more sober and less glorious when the actual vocational transition moves closer.

A variety of institutional transitions and tracks also provide a basis for adolescents' future-oriented goals. For instance, Klaczynski and Reese (1991) found that college-preparatory high school students held more career-oriented values and educational goals, and projected their future goals further in the future, compared with vocational school students. By contrast, vocational school students' goals focused more on preparation for adulthood and attainment of adult status than did those of college-preparatory high school students. Similar results have been found for the interpersonal domain of life. Salmela-Aro and Nurmi (1997) found that young adults' life situation, such as being married and having children, predicted their subsequent family-related goals. By contrast, being single predicted turning to self-focused, existential goals.

Consequences Individual motivation and personal goals were assumed to play an important role in the ways in which adolescents select their future environments and direct their lives. Along this assumption, Schoon and Parsons (2002) found that adolescents' aspirations at the age of 16 predicted their occupational aspirations during young adulthood. Moreover, Nurmi et al. (2002) found that the more young adults emphasized the importance of work-related goals and the more they thought they progressed in the achievement of such goals, the more likely they were to find work that was commensurate with their education and the less likely they were to be unemployed after graduation. Furthermore, concrete college goals have also been found to predict subsequent college attendance (Pimentel, 1996). Similarly, young adults' family-related goals predict their subsequent moving toward marriage or living in cohabitation relationships (Salmela-Aro & Nurmi, 1997), as well as the actual age of cohabitation and marriage (Pimentel, 1996). By contrast, young adults' self-focused, existential types of goals have been shown to predict subsequent negative life events, such as breaking up of an intimate relationship.

Optimism and Control Beliefs In order to be active agents in the selection of their future developmental trajectories, adolescents' personal goals need to be evidenced in their positive thinking about the future and belief in personal control. The research suggests not only that a majority of adolescents show much interest in their future but also that they are relatively optimistic about it and believe in their personal control (e.g.,

Brown & Larson, 2002; Nurmi, 1989a). Moreover, adolescents construct the view
their personal future in ways that support their optimism. For example, they do co
sider negative life events, such as divorce (Blinn & Pike, 1989), alcoholism, and unen
ployment (Malmberg & Norrgård, 1999), to be less likely in their own future life tha
in that of other people.

In addition, adolescents' beliefs concerning the future become more internal an
optimistic with age (Nurmi, 1989a). However, present institutional environments a
associated with the ways in which adolescents attribute causes for their behavioral ou
comes. For example, Klaczynski and Reese (1991) found that college-preparatory hig
school students made more internal attributions for positive educational outcome
than did vocational school students. Moreover, Malmberg and Trempala (1998) showe
that vocational school students were less optimistic about their success in the futur
than were secondary school students.

Adolescents' Fears Adolescents also have fears and worries about their future that ar
typically concerned with three major topics (Nurmi, 1991). First, young people typi
cally report concerns related to dealing with normative developmental tasks, such a
becoming unemployed, failing at school, and facing a divorce (Solantaus, 1987). Sec
ond, some adolescents are concerned about possible negative life events that may
happen to their parents and family members, such as health problems and divorce.
The third class of adolescents' fears concern society-level events, such as nuclear war
(Solantaus, 1987) or environmental problems (Poole & Cooney, 1987). These differ-
ences in adolescents' fears and concerns reflect the historical time and topics that are
discussed in the mass media and in public during a particular era (Nurmi, 1991). For
example, the high rates of concerns related to nuclear war were typical in Western Eu-
rope in the early 1980s, whereas concerns about global issues such as pollution have
been reported in subsequent decades (Nurmi, Salmela-Aro, & Ruotsalainen, 1994).

Personal Goals as Interpersonal Negotiation The construction of personal goals is not
solely the outcome of individual cognitive processing but is shared by other people, such
as parents, friends, and peers (Nurmi, 2001). For example, Meegan and Berg (2001)
found that college students appraised the majority of their goals as either directly or in-
directly shared, whereas only a minority of their goals were considered purely as their
own. When Malmberg (1996) asked adolescents about the key sources of information
concerning future education, occupation, and family life, parents were reported as the
most used sources followed by peers, school friends, the mass media, and schools.

The Role of the Family The kinds of goals adolescents have for their own future and
the kinds of goals parents overall have for their adolescent child's future are closely sim-
ilar: Both adolescents' and parents' goals concerning adolescents' future lives typically
concern education, occupation, family, and leisure activities, whereas the fears of both
groups concern health-related issues, education, and work (Lanz, Rosnati, Marta, &
Scabini, 2001). Similarly, parents and their adolescent child share similar kinds of edu-
cational goals (Trusty & Pirtle, 1998), educational aspirations (Bandura, Barbaranelli,
Caprara, & Pastorelli, 2001), occupational aspirations (Jodl, Michael, Malanchuk, Ec-
cles, & Sameroff, 2001), and values overall (Kasser, Ryan, Zax, & Sameroff, 1995). In

addition, mothers and fathers play a similar role in adolescents' future-oriented goals (Trusty & Pirtle, 1998).

Research has also shown that parental characteristics, beliefs, and parenting practices are associated with the kinds of goals adolescents have. High level of education among parents, involvement in adolescents' school programs (Wilson & Wilson, 1992), high levels of parental advice (Jenkins Tucker et al., 2001), close identification with the parent (Jodl et al., 2001), low levels of parental control and positive family interaction (Glasgow et al., 1997), and nurturance (Kasser et al., 1995) are associated in adolescence with high educational aspirations, interest in future education and occupation, and internality and optimism concerning the future.

Unfortunately, the vast majority of this research is based on cross-sectional data. Consequently, we cannot be sure that it is parents who contribute to the kinds of goals their adolescent children have. Although parents' goals and values may provide a basis for those of adolescents by means of modeling, advice, and negotiating (Nurmi, 2001), there are several alternative explanations. First, both parents' and adolescents' goals may be influenced by the same sources, such as socioeconomic background and related cultural values. Second, it is possible that adolescents' aspirations, such as emphasizing the importance of education and subsequent high achievement, are reflected also in parents' aspirations concerning their children. Third, it is possible that the kinds of aspiration and goals adolescents have concerning education, for instance, influence their parents' child-rearing patterns. In addition, siblings also play a role in the ways in which adolescents think about their future (Jenkins Tucker, Barber, & Eccles, 1996).

Role of Peers Adolescents report that the peer group is an important context in which future-related issues are discussed (Malmberg, 1996). Young people and their peers share similar kinds of goals and aspirations (Hallinan & Williams, 1990; Kandel & Lesser, 1969). Particularly intimate friends and those of the same gender share similar goals (Hallinan & Williams, 1990; Kandel & Lesser, 1969). There is also evidence that parental relationships may moderate the association between adolescents' and their peers' goals. For example, Fuligni and Eccles (1993) showed that adolescents who perceived few opportunities to be involved in decision making at home tended to seek more advice from their peers concerning the future compared with those who had more opportunities. Because these studies were cross-sectional, we cannot be sure whether adolescents are influenced by their peers or whether young people select the peers who have similar aspirations as they have themselves.

Well-Being The life span theory of motivation suggests that personal goals that match with the age-graded developmental tasks of a particular age are adaptive and that they subsequently contribute to individual well-being (Nurmi, 1993, 2001). Both cross-sectional research (Emmons, 1991) and longitudinal studies (Salmela-Aro & Nurmi, 1997) have shown that young adults who report interpersonal and family-related goals show also a higher level of well-being and lower levels of depressive symptoms than do other young people. Moreover, Salmela-Aro, Nurmi, Saisto, and Halmesmäki (2001) found that the reconstruction of personal goals to match with the particular stage-specific demands of a certain transition promote young peoples' well-being. Women who were facing a transition to parenthood, and who adjusted their personal goals to

match with the particular stage-specific demands of this transition, such as topics related to family, spouse, and the birth of the child, showed a decrease in depressive symptoms; those who disengaged from such goals showed an increase in depressive symptoms

There is a strong consensus that thinking about self- and identity-related issues is not only a natural part of adolescence and young adulthood but also one developmental task of this life period (Bosma & Kunnen, 2001; Erikson, 1959; Marcia, 1980). From this point of view, it is surprising that one of the most often replicated findings in the research literature is that self-focused, existential kinds of goals are associated with low well-being (Salmela-Aro et al., 2001). Moreover, there is a transactional pattern between well-being and self-focused goals: An increase in self-focused goals leads to an increase in depressive symptoms, whereas a high level of depressive symptoms increases the focus on self-related goals (Salmela-Aro & Nurmi, 1997; Salmela-Aro et al., 2001). However, there seems to be one exception to these results. Self-focused goals lead to high well-being when people are in a kind of moratorium situation in which they are faced with several alternative trajectories. Nurmi and Salmela-Aro (2002) found that although self-related goals predicted a high level of depressive symptoms among those who had just made a transition from school to a new job, self-focused goals decreased the level of depressive symptoms among those who were continuing their studies in another institution or who were at home with their children.

Norm-Breaking Behavior Stattin and Kerr (2001) found that adolescents who reported self-focused values (personal satisfaction and enjoyment) were more likely in later periods to become engaged in risky behaviors, such as norm breaking, risky sex, smoking, and drinking, and to associate with delinquent friends, compared with adolescents who have other-focused values (concern for others' well-being and the common good). Oyserman and Markus (1990) found that although delinquent adolescents had as much as other young people goals concerning future occupation and education, the majority of their concerns reflected a fear of becoming a criminal. These results suggest that adolescents have realistic anticipations of the dangers of their future.

Planning and Strategy Construction

Another mechanism that plays an important role in the selection of specific developmental trajectories during adolescence is the kinds of tools young people develop to attain their goals.

Development Planning skills increase with age during childhood (Pea & Hawkins, 1987). Although most children have acquired basic planning skills by the age of 10 to 11 years (Oppenheimer, 1987), such skills continue to develop up to the early 20s (Dreher & Oerter, 1987; Pasupathi, Staudinger, & Baltes, 2001). In addition, future-related knowledge and complexity of strategies increase with age (Nurmi, 1989b).

The Kinds of Strategies Määttä, Stattin, and Nurmi (2002) made an effort to identify naturally occurring subgroups of adolescents on the basis of the kinds of strategies they deploy in achievement contexts. They were able to identify four kinds of patterns by use of clustering by cases analysis: the users of an optimistic strategy, those deploying defensive pessimism, self-handicappers, and those showing helplessness. Not only did

these match well with the strategies described in previous literature, but individuals deploying them also differed along a variety of well-being and outcome measurements, such as academic achievement, academic adjustment, self-esteem, and well-being, according to theoretical hypotheses. Similarly, Eronen, Nurmi, and Salmela-Aro (1997) identified three kinds of strategies in interpersonal contexts. They were planning-oriented, avoidant, and impulsive strategies.

Antecedents of Strategy Use A few cross-lagged longitudinal studies show that academic achievement and related feedback provide a basis for the strategies that young people deploy at later points in academic contexts. For example, a low level of academic achievement and dissatisfaction with grades predict increases in failure expectation and task avoidance (Nurmi, Aunola, Salmela-Aro, & Lindroos, 2002). They also predict turning to the use of self-handicapping (Eronen, Nurmi, & Salmela-Aro, 1998). Similarly, research in social contexts suggests that success in dealing with previous interpersonal challenges contributes to the kinds of strategies individuals deploy later in life. For example, frequent peer contacts and good social adjustment increase the use of a planning-oriented and impulsive social strategy, whereas less frequent peer contacts and loneliness lead to the use of an avoidant social strategy (Eronen et al., 1997; Nurmi & Salmela-Aro, 1997).

Role of Family There is little research on the ways in which parents contribute to adolescents' strategy construction. Aunola, Stattin, and Nurmi (2000b) showed that adolescents from authoritative families applied high levels of adaptive achievement strategies; in turn, adolescents from neglectful families applied maladaptive strategies to a greater extent. Moreover, perceived secure attachment to parents and positive family interaction are associated with active problem solving and planning (Greenberger, McLaughlin, & Caitlin, 1998), whereas lack of parental care is associated with a high level of self-handicapping (Greaven, Santor, Thompson, & Zuroff, 2000).

Because these findings are based on cross-sectional data, we do not know whether family characteristics and parenting have an impact on adolescents' strategy construction or vice versa. However, Rueter and Conger (1998) found in a cross-lagged longitudinal study a reciprocal relationship between parenting and adolescent problem-solving behavior. On the one hand, negative parental behavior predicted a decline in adolescents' flexible problem solving, whereas nurturant parenting increased it. On the other hand, adolescents' disruptive and inflexible behavior decreased subsequent nurturant parenting.

Consequences of Strategy Use Research in university environments has shown that the deployment of optimistic and defensive pessimistic strategies increases the individual's academic satisfaction, whereas the deployment of a self-handicapping strategy predicts low academic achievement and academic dissatisfaction (Eronen et al., 1998; Nurmi et al., 2002). Similarly, Elliott, Godshall, Shrout, and Witty (1990) found that self-appraised problem solving was predictive of grade point average among college students. Moreover, the deployment of maladaptive strategies, such as passive avoidance, leads to problems in dealing with the transition from school to work, such as unemployment (Määttä, Nurmi, & Majava, 2002).

There is similar evidence in affiliate situations. For example, young people with a planning-oriented and impulsive social strategy later reported frequent peer contacts and social adjustment, whereas those who showed pessimistic and avoidant social strategies had less frequent peer contacts and high levels of loneliness (Eronen et al., 1997; Nurmi & Salmela-Aro, 1997). Eronen and Nurmi (1999) showed further that the impact of social strategies on young people's popularity and unpopularity was mediated through their social behavior and person perception.

Well-Being The kinds of strategies that individuals deploy have been found to be associated with their well-being. For example, Määttä, Stattin, et al. (2002) showed that adolescents who reported the use of optimistic or defensive pessimistic strategies in achievement contexts reported lower levels of depressive symptoms than did those who deployed self-handicapping and helpless patterns. D'Zurilla and Sheedy (1991) found that general problem-solving ability was associated with a low level of subsequent psychological stress. In addition, Rudolph, Lambert, Clark, and Kurlakowsky (2001) found that maladaptive self-regulatory beliefs increased school-related stress and depressive symptoms. There is also evidence of a cumulative recursive pattern. For instance, Davila, Hammen, Burge, Paley, and Daley (1995) found in a longitudinal study that functional interpersonal problem solving decreased depressive symptoms. In turn, high depression also led to the use of less functional problem solving.

Problem Behavior It has been assumed that the use of maladaptive strategies would lead to low achievement and other kinds of problems at school (Nurmi, 1993). Consistent with this idea, underachieving adolescents have been found to apply a self-handicapping type of achievement strategy (Nurmi, Onatsu, & Haavisto, 1995). Moreover, adolescents who had serious problems in socialization in terms of dropping out of vocational education and being unemployed deployed a maladaptive strategy characterized by expecting failure, active task-avoidance, and lack of self-protective causal attributions (Nurmi, Salmela-Aro, & Ruotsalainen, 1994). Määttä, Stattin, et al. (2002) reported that adolescents who deploy either self-handicapping or helplessness strategies in achievement contexts also show higher levels of norm-breaking behavior than do those who reported the use of optimistic or defensive-pessimistic strategies. The results, however, are based on cross-sectional data.

Exploration and Commitments

Exploring information about the future and making commitments are important parts of the selection mechanism. Research indicates that the major foci of adolescents' explorations and commitments pertain to major age-graded developmental tasks. For example, Bosma (1985) found that school, occupation, leisure activities, friendship, and parents were among the most important topics of adolescents' identity exploration and commitment.

Age Differences Research has shown that compared to younger age groups, older adolescents report higher levels of exploration in educational, occupational, and relational domains of life (Kalakoski & Nurmi, 1998; Meilman, 1979; Nurmi, Seginer, & Poole, 1995). There is also a similar trend for the level of commitment, although the re-

sults are not as clear. Kalakoski and Nurmi (1998) found that the amount of exploration and commitments that adolescents reported reflected the timing of upcoming educational transitions: Young people who were about to face an educational transition reported higher levels of exploration and commitment related to future education than did those who had a longer time before the same transition.

The Role of the Family Only a few studies have researched the role of the family in exploration and commitments. Kracke (1997) found that parental authoritativeness, openness to adolescent issues, and concern with promoting career exploration were positively associated with career exploration of their adolescent children. Moreover, Blustein, Walbridge, Friedlander, and Palladino (1991) found that adolescents' positive attachments to both parents were positively related to progress in commitment to career choice. Kracke and Schmitt-Rodermund (2001) found that child-centered parenting increased adolescents' occupational exploration.

Adjustment

Coping

One assumption of this chapter is that when adolescents face problems in goal attainment or unexpected events, they try to find new ways of dealing with the situation. This process has been conceptualized in terms of coping (Folkman et al., 1987).

Age Differences Previous research suggests that as adolescent age, they deploy a broader range of coping strategies (Compas, Connor-Smith, Saltzman, Harding Thomsen, & Wadsworth, 2001; Williams & McGillicuddy-DeLisi, 2000). However, results on the developmental changes in the kinds of coping adolescents use is less clear. Although most studies show that emotion-focused coping increases with age (Compas, Malcarne, & Fondacaro, 1988; Seiffge-Krenke, 1993), not all studies agree (Stern & Zevon, 1990). Similarly, some studies suggest that problem-focused coping increases with age during adolescence (Seiffge-Krenke, 1993), whereas others have not found such change (Blanchard-Fields et al., 1995; Compas et al., 1988). Recent reviews of the topic present contradictory conclusions as well (Compas, 1987; Hauser & Bowls, 1990). One reason for these mixed findings may be that the coping modes that adolescents deploy are closely associated with the kinds of situations they are facing. If the situations that adolescents face as they grow older vary across their developmental environments, this may explain the different patterns of age differences that have emerged in different studies.

Antecedents One major antecedent of coping is individuals' temperament. For example, highly reactive individuals have a lower threshold of initial response, are slower in recovery, and display greater reactivation of stress after repeated exposure to it (Compas et al., 2001). However, most research on the topic has been carried out among children. It has also been suggested that a number of other individual differences, such as self-efficacy, self-esteem, and intelligence (Compas, 1987; Hauser & Bowls, 1990), provide a basis for the kinds of coping young people deploy. However, little research has been carried out on the topic.

Consequences There is considerable cross-sectional research about the possible consequences of coping, for example in academic settings. However, results are contradictory. For example, Compas et al. (2001) suggested in a literature review that problem-focused coping is associated with high levels of competence, whereas Zeidner (1995) forwarded a more pessimistic conclusion suggesting that there is no consensus about which coping strategy is most effective and adaptive in promoting academic outcomes.

Family There is some evidence suggesting that authoritative and positive parenting is associated with problem-focused coping, whereas more negative parenting is related to emotion-focused coping. For example, Stern and Zevon (1990) found that a negative perception of the family environment was associated with the use of emotionally based coping strategies, whereas positive perceptions of family climate were related to the use of more problem-focused coping. Dusek and Danko (1994) found that adolescents who perceived their parents as more authoritative and indulgent used more problem-focused coping, whereas perceiving parents as more firm and monitoring was associated with emotion-focused coping. This evidence, however, is based on cross-sectional findings and therefore should be interpreted cautiously.

Peers Little research has been carried out on the role of peers in adolescents' coping. In one study among Chinese students, Tao, Dong, and colleagues (Tao, Dong, Pratt, Husberger, & Pancer, 2000) found that the students' use of problem-focused coping patterns was positively, and the use of emotion-focused coping pattern was negatively, associated with peer support.

Well-Being The majority of the research on the consequences of coping has focused on internalizing and externalizing problem behavior. Following a review of the literature, Compas et al. (2001) suggested that emotion-focused and disengagement coping were associated with poorer psychological adjustment, whereas problem-focused and engagement coping were associated with better psychological adjustment (see also Compas et al., 1988; Recklitis & Noam, 1999). Muris, Schmidt, Lambrichs, and Meesters (2001) found also that passive coping was associated with high levels of depressive symptoms, and active coping with low levels of them. Because this research was based on cross-sectional studies, it is hard to know whether it is a certain kind of coping that leads to low adjustment or vice versa.

Goal Reconstruction

Research on how adolescents reconstruct their goals based on their previous successes and failures is almost absent. In one of the few studies, Nurmi and colleagues (Nurmi & Salmela-Aro, 2002; Nurmi et al., 2002) found that young adults reconstructed their personal goals to suit their current life situation following their successes and failures in dealing with the transition from school to work. For example, those who were successful in dealing with the transition showed a decreasing interest in goals that were no longer adaptive in their current life situation, such as educational goals. By contrast, young adults who had problems in finding work decreased their focus on the goals in this particular life domain and turned to other kinds of goals, such as educational and self-focused goals (Nurmi & Salmela-Aro, 2002). Moreover, young adults who found

work that was commensurate with their education appraised their work-related goals later on in life as increasingly achievable and as arousing positive emotions; those who had become unemployed showed a reverse pattern (Normi et al., 2002).

Nurmi and Salmela-Aro (2002) found further that the ways in which young adults reconstructed their goals after certain outcomes contributed to their subsequent well-being. For example, high focus on work-related goals decreased depressive symptoms among those who had received a job, whereas the same goal pattern increased depressive symptoms among those who had not been able to find a job. Among the latter group, lack of work-related goals but high interest in education-related goals seemed to lead to high well-being. These results emphasize the importance of reconstructing one's goals to match with the particular life situation by disengaging from previous goals that are no longer adaptive.

Causal Attributions

The ways in which adolescents attribute the causes of their successes and failures might be assumed to have consequences for their well-being, self-concepts, and behaviors in future situations. Despite the importance of the topic, relatively little research has been carried out on it.

Antecedents The feedback young people receive from their previous efforts to deal with a particular task has consequences for the causal attributions they subsequently make. For example, Georgiou (1999) found that a high level of achievement among young adolescents was associated with attributing success to one's own effort and ability, whereas low achievement was related to attributing it to external factors. Moreover, Määttä, Nurmi, et al. (2002) found in a cross-lagged longitudinal study that young adults' problems in dealing with the transition from school to work decreased their use of self-protecting causal attributions. There is also evidence that positive self-concept is associated with the use of self-protecting attributions. For instance, Marsh (1984) found that preadolescents with positive self-concept were likely to internalize responsibility for success but not for failure.

Consequences There is considerable research showing that the lack of self-protecting causal attributions is associated with problems at school (e.g., Määttä, Nurmi, et al., 2002) and after finishing school (e.g., Nurmi et al., 1994). Glasgow et al. (1997) found in a cross-lagged longitudinal study that dysfunctional causal attributions lowered adolescents' willingness for classroom engagement and for doing homework. Nurmi et al. (2002) found that ability attributions after success predicted subsequent academic achievement among young adults.

The Role of the Family There is evidence suggesting that parents have an impact on adolescents' use of self-protecting causal attributions. For example, Greenberger et al. 1998) found that secure attachment to parents was associated with a tendency to explain successes and failures in self-enhancing ways. Similarly, Aunola et al. (2000b) found that adolescents from authoritative or permissive families reported higher levels of self-protecting causal attributions than did those from authoritarian or neglected families.

Well-Being One key assumption in the literature is that individuals deploy self-protecting causal attributions as buffers against negative feedback in a particular task. The few cross-sectional studies in the field show that deployment of negative attributional style or lack of the use of self-protecting attributions is associated with depression (Joiner & Wagner, 1995). In one longitudinal study, Määttä, Nurmi, et al. (2002) found not only that young adults' problems in dealing with the transition from school to work decreased their use of self-serving causal attributions but also that, if this happened, it had a negative impact on their well-being.

Reflection

Identity

During the socialization process adolescents enter into certain adult roles and positions that have consequences for the ways in which they reflect themselves in terms of identities and self-structures. The vast majority of research on identity has relied on Marcia's (1980) identity status paradigm, in which identity formation is operationalized in terms of four identity statuses (i.e., identity diffusion, moratorium, foreclosure, and identity achievement).

Age Differences The main idea of Marcia's original theory was that adolescents proceed from less advanced identity statuses to more advanced ones. On the basis of reanalysis of several empirical data sets, Waterman (1999) suggested that the findings support Marcia's theory: The largest proportion of early adolescents seems to be in identity diffusion or identity foreclosure statuses, and their proportion was lower in older age groups. By contrast, few preadolescents were reported to be in the identity achievement status, but the proportion of the individuals in this group was higher among older adolescents. The percentage of adolescents in moratorium status seems to peak at the age of 17 to 19, after which it decreases. Meeus, Iedema, Helsen, and Vollebergh (1999) came to a similar conclusion in their review. In a longitudinal study using identity statuses as continuous variables, Streitmatter (1993) found that foreclosure and diffusion scores decreased across a 2-year period of high school, whereas moratorium scores increased. No change in achievement scores was found.

Other reviews of the research on identity development have been more critical about the identity status paradigm. For example, in her extensive review of the few cross-lagged longitudinal studies that exist in this area, van Hoof (1999) concluded that progressive changes in the identity statuses are small. She suggested that this lack of change occurred because identity statuses seem to be very stable across time. She also pointed to other findings that do not fit well with Marcia's (1980) theory. For example, one fourth of college and adult respondents are typically still in a diffuse status of identity, which theoretically should be a starting point rather than an end point in identity development.

Although identity, by definition, refers to the ways in which an individual perceives him- or herself, surprisingly little research has been carried out on the relationships between identity statuses and self-concept. In one study, Makros and McCabe (2001) found that adolescents in the foreclosed and achievement statuses had lower levels of self-belief discrepancy than did those in the moratorium and diffused statuses. Dunkel

and Anthis (2001) found that identity exploration was positively correlated with the number of possible selves. Moreover, identity commitment was associated with the consistency in hoped-for selves across time. These are interesting findings because they show that different identity statuses are associated with the ways in which adolescents perceive themselves. Some studies have also examined the mechanisms that are involved in identity formation and constructions of self-knowledge. For instance, Kerpelman and Lamke (1997) found that women who were highly certain about their future career identity engaged more in self-verification than did women who were uncertain.

Role of the Family Very little is known about the antecedents of identity formation. The major finding is that adolescents in the foreclosure identity status have the closest relationships with their parents, whereas adolescents in the moratorium and achievement statuses are more critical toward their parents (Waterman, 1982). Moreover, moratorium and identity-achievement adolescents perceived their relationships with their parents as being more independent and encouraging than did diffused or foreclosed youths (Samuolis, Layburn, & Schiaffino, 2001). Because all these findings come from cross-sectional studies, the associations may well stem from the fact that adolescents' explorations and commitments influence their parental relations rather than vice versa.

Consequences Research on the consequences of identity formation on individuals' later development is practically absent. In one study, Wallace-Broscious, Serafica, and Osipow (1994) found that identity achievement status was positively associated with career decidedness and planning, whereas moratorium and diffusion statuses were negatively related to career planning and decision making.

Well-Being In a literature review, Meeus et al. (1999) suggested that moratorium is the identity status with the lowest level of well-being, whereas foreclosed and identity achievers show the highest levels of well-being. However, because these results are based on cross-sectional data, there is no way to know whether reaching a particular identity status contributes to adolescents' well-being or whether adolescents' well-being contributes to identity status.

Self-Concept and Self-Esteem

The ways in which young people perceive themselves, and the kinds of attitudes they have about themselves, have been among the most popular research topics in adolescent psychology (Harter, 1990).

Development In her extensive review, Harter (1990) suggested first that self-concept development during adolescence is characterized by developmental shifts from relatively concrete descriptions of one's social and behavioral exterior in childhood to more abstract self-portraits that depict one's psychological interior; this change may also mean that self-concept becomes less dependent on concrete feedback to a person. Second, there is an increase in differentiation of self-concept across social roles and contexts in early adolescence, although not all evidence supports this conclusion (Marsh, 1984). Third, there is an increasing integration of self-related concepts in later adolescence (Harter, 1990). Montemayor and Eisen (1977) found that there was an increase

across the adolescent years in self-descriptions referring to occupational role and to existential and ideological topics, as well as decreases in reference to citizenship, territoriality, possessions, and the physical self. These results are in accordance with the notion that expected entrance into adult roles begins to play an increasingly important role in how adolescents perceive themselves.

Findings on the development of self-esteem are contradictory (Baldwin & Hoffman, 2000). Some findings suggest that self-esteem increases during adolescence (e.g., O'Malley & Bachman, 1983), whereas other studies have shown a decrease (Marsh, 1989). One reason for these inconsistent findings may be that self-esteem trajectories are individual and influenced by many contextual factors. For example, Baldwin and Hoffmann (2002) found that adolescents' self-esteem fluctuates significantly and that the developmental pattern of such fluctuations varied among individuals.

Antecedents There is a general consensus that self-concept is influenced by the attitudes of significant others, particularly concerning physical appearance, peer acceptance, and scholastic and athletic competence (Harter, 1990). Some more recent studies have shown that institutional transitions and life events also influence self-concept and self-esteem. In an extensive longitudinal study, for example, Cole et al. (2000) found that the transition to middle school involved a drop in the mean and stability of academic and sports self-concept; academic self-concept further increased after moving out of the middle school environment; and finally, in later adolescence, self-concept began to become increasingly stable. Moreover, school grades (Zimmerman, Copeland, Shope, & Dielman, 1997), as well as stressful life events (Baldwin & Hoffmann, 2002), have been shown to have an impact on adolescents' self-esteem.

The Role of the Family There is considerable evidence that parents contribute to adolescents' self-conceptions and attitudes. For example, being a member of a cohesive family is associated with increased self-esteem over time (Baldwin & Hoffmann, 2002). Moreover, Frome and Eccles (1998) found that parents' perception of their adolescent child's abilities was more highly associated with the child's self-concept of ability than were the actual grades.

CONCLUSIONS

Adolescents' socialization into adulthood and related self-development were conceptualized in terms of four mechanisms: First, it was assumed that the age-graded developmental tasks, role transitions, and institutional tracks define an opportunity space that channels young people's future-oriented motivation, thinking, and behavior. Second, the kinds of motives and personal goals adolescents construct, and the ways in which they explore, plan, construct strategies, and enter into commitments were assumed to be responsible for the ways in which adolescents direct their future development and select their developmental environments. Third, as a consequence of their efforts, adolescents attain outcomes, either successes or failures, which requires them to adjust their previous efforts in terms of goal reconstruction, coping, and the use of self-

protective causal attributions. Finally, after ending up in a particular social position and related life situation, adolescents construct reflections and tell stories about who they are.

Socialization and Self-Development

A review of previous research suggested, first, that adolescents have relatively detailed conceptions of their age-graded developmental environments (i.e., the timing and sequential structure of the transitions and tracks they are facing in the future). It was therefore no surprise that such age-graded structures *channel* adolescents' personal goals and interests: Young people's future hopes and interests were found to focus typically on the major developmental tasks of their own age period. Young people also continuously reconstruct their personal goals to match with the specific stages of a particular transition through which they are going, as well as the institutional tracks in which they are involved.

Both the personal goals adolescents have and the cognitive strategies they deploy, which were assumed to be the major mechanisms in the selection process, were found to contribute to the developmental trajectories they face subsequently, as well as how well they are able to deal with the related challenges and demands. Clear evidence was found from longitudinal studies that adolescents' motives and personal goals predict how their lives will proceed in educational, occupational, and family-related trajectories. Similarly, the kinds of plans and strategies that adolescents apply have consequences for their success in dealing with major challenges at school, at work, and also in interpersonal relationships. However, adolescents become interested in forthcoming developmental tasks and transitions as they grow older, and the tools they have for dealing with these demands and challenges develop rapidly during early adolescence in particular. Although the majority of adolescents deploy adaptive strategies, such as optimistic and task-focused patterns, some of them deploy avoidant strategies as a way to deal with a fear of failure or anxiety.

This review showed also that adolescents whose goals focus on major age-graded developmental tasks have higher well-being than do those who have other kinds of goals, perhaps because such goals help them to deal with the major demands and challenges they are facing. Although it has been assumed that thinking of self-related issues is a part of adolescents' lives, strong evidence was found that self-focused, existential type of goals are detrimental to young people's well-being. Moreover, the deployment of adaptive strategies led not only to higher levels of success in academic and interpersonal domains of life but also, in the longer run, to higher well-being.

There is also considerable evidence that parents and their adolescent children share similar kinds of goals concerning the adolescent's future. Moreover, positive and authoritative parenting is associated not only with adolescents' high level of interest in major developmental tasks, such as education and occupation, but also with adolescents' use of adaptive strategies, particularly in achievement contexts.

After adolescents have received feedback about the outcomes of their efforts to deal with the major developmental challenges and demands, they have to adjust their previous efforts in terms of coping, reconstruction of goals, and making causal attributions.

Surprisingly, much less research has been conducted on the antecedents and consequences of this adjustment compared with those of selection processes. Research on coping showed that problem-focused coping and engagement coping are associated with higher levels of psychological adjustment, whereas emotion-focused coping seems to lead to maladjustment. However, there was little evidence that coping has clear consequences for individual success in dealing with particular kinds of tasks. Authoritative and positive parenting was shown to be associated with problem-focused coping, whereas more negative parenting is related to emotion-focused coping.

Very little research has been carried out on how adolescents reconstruct their personal goals based on their previous successes and failures. The few studies suggest that adolescents reconstruct their goals on the basis of the feedback they receive concerning goal attainment and that such goal reconstruction contributes to their well-being.

Similarly, little research has been carried out on the role that causal attributions have in the situations in which young people have had problems in dealing with previous demands. The few studies that exist show that problems in dealing with major transitions decrease the use of self-protective causal attributions, which then leads to an increase in depressive symptoms. Dysfunctional causal attributions also lower adolescents' active engagement in school activities, and subsequently their academic achievement.

It was also assumed that entrance into certain roles and social positions has consequences for the identities or self-concepts that adolescents construct. Although the studies suggest that younger adolescents more frequently report less developed identity statuses than do older adolescents, relatively little is know about the developmental antecedents or consequences of these developments.

By contrast, we know much, on a descriptive level, about how self-concept and self-esteem develop during adolescence. However, some of the recent findings have challenged previous theories by suggesting a more dynamic view according to which adolescents' self-concepts fluctuate significantly and follow, in many cases, individual developmental trajectories. This fluctuation has been found to reflect many changes in the individual's development environments, such as school transitions, grades, and a variety of stressful life events.

Socialization in Place: Different Developmental Environments

In this chapter adolescent socialization and self-development were conceptualized in terms of four mechanisms that are responsible for the transaction between the developing adolescent, on the one hand, and his or her age-graded sociocultural environment, on the other. It can also be assumed that the substantial amount of variation across societies and cultures in the developmental environments in which adolescents grow up (Brown, Larson, & Saraswathi, 2002; Hurrelmann, 1994) channels their subsequent development in many ways. One key factor that contributes to this variation is education: There are many differences in the educational systems that are reflected in adolescents' thinking and lives across the world (Hurrelmann, 1994; Nurmi, Seginer, et al., 1995; Scnabel, Alfeld, Eccles, Köller, & Baumert, 2002). For example, in many European countries and the United States, streaming in education based on academic achievement begins relatively early (Hurrelmann, 1994), which also influences adolescents' subsequent opportunities. In some other societies, such as Scandinavian coun-

tries, adolescents receive comprehensive education until the age of fifteen without any streaming (Nurmi & Siurala, 1994). These differences in educational transition then cooccur with those of occupational life. For example, a large proportion of young British youths leave school and enter the labor force at the age of 16, which is very different compared to countries that aim at long education for a whole cohort, such as the United States and Scandinavian countries.

There are also many cross-national differences in the transitions related to interpersonal life, such as the age of first marriage and the patterns of starting family life, that influence adolescents' socialization into adulthood in many ways (cf. Martínez, de Miguel, & Fernández, 1994; Roe, Bjurström, & Förnäs, 1994). One further factor along which developmental environments vary is the relative importance of parents and peers in adolescents' lives. Although peers are an important part of adolescents lives in most parts of the world, in some contexts (e.g., in India and in Arab countries) peer groups play a relatively minor role, particularly for girls (Brown et al., 2002).

Besides cross-national differences, adolescents' developmental environments vary also within societies along many factors, such as ethnicity and socioeconomic status. Young people who come from diverse backgrounds face different opportunity structures, age-related normative demands, and standards and are provided different role models and parental tutoring. Such differences then have consequences for the ways in which adolescents direct their lives in the domains of education, occupation, and interpersonal relations; for how they adjust to the outcomes of their efforts; and for the kinds of reflections they construct about themselves during the transition from adolescence to adulthood. For example, in the United States the percentage of adolescents who had completed high school and the percentage of those who have a bachelor degree vary substantially according to ethnicity: Whites show the highest percentages, followed by Blacks, while Latinos show the lowest educational attainment (Kerckhoff, 2002). Such differences are important because they are also reflected in an individual's occupational career and problems with it, such as unemployment.

Another important factor that influences the challenges, opportunities, and standards that adolescents face is the socioeconomic status of their family, which consists of a number of interrelated variables, such as family income and values, parental education, and membership in particular subcultures and communities. For example, family income is a foremost factor in differentiating the paths taken through the transition from adolescence to adulthood in many countries (Mortimer & Larson, 2002). As adolescents have relatively detailed conceptions of their age-graded developmental environments (Crockett & Bingham, 2000), they are probably also conscious of how their social background will influence them. The impact of socioeconomic status is reflected not only in the opportunity structure but also in parents' values and aspirations, which have been shown to influence adolescents' subsequent life paths (Hogan, 1985).

Because the key assumption in this chapter is that adolescents' age-graded developmental environments provide a basis for the ways in which adolescents direct their development and adjust to developmental outcomes, this variation in adolescents' environments across and within countries can be expected to be reflected in many ways in the channeling, selection, adjustment, and reflection processes. For example, Scnabel et al. (2002) showed that academic achievement was predictive of adolescents' career decisions both in Germany and the United States, whereas social background influ-

ences were more pronounced in Germany. Moreover, Nurmi, Seginer, et al. (1995) found that due to earlier and shorter educational transitions, Australian adolescents showed higher levels of exploration and commitments, both in the domain of future education and work, compared with their Israeli and Finnish counterparts. They also expected their goals and hopes related to future education and work to be realized earlier in their lives than did young Finns and Israelis.

Overall, these results are important because they suggest that the different environments in which adolescents grow up produce substantial amounts of variation in their subsequent life paths. Consequently, one must be careful in making generalizations from results found in one sociocultural context to other environments. However, this variation provides researchers with an interesting option to examine the extent to which their theories and findings generalize across different developmental environments.

Socialization in Time: Historical Changes

It is only during the past 100 years that adolescence emerged as an independent and extended life period, mainly due to the extended period of education (Hurrelman, 1994). Moreover, adolescence, as well as how it is defined by society and culture, shows continuous change. Herdandez (1997) summarized the trends in the United States during the past 150 years. According to him, the major changes in the developmental context of children and adolescents during the century before the second world war included the shift to nonfarm work by fathers, a drastic constriction of family size, and enormous increases in educational attainments. After the half century that followed, the key changes have included the increase of labor force participation by mothers, the rise of single parenthood, and a large decline and then substantial rise in child poverty. Although the timing of these historical changes has varied from one country to another, the general patterns are more or less the same in industrialized countries. Moreover, some of the recent changes in developing countries resemble the changes that happened in industrialized societies several decades ago (Brown et al., 2002). The importance of these analyses for adolescent research is that they help us to understand that how things appear in young people's lives at a given moment is not a consequence of unchangeable general laws but rather is influenced by many historical and societal developments.

A few recent trends also modify adolescent development. First, gender differences in adolescents' thinking and interests seem to be changing in industrialized countries. Although girls continue to be more interested in future family and human relationships and boys in material aspects of life, comparisons of research findings across the past 30 years suggest that girls' interests in education and occupation began to exceed those of boys (Nurmi, 2001). These results accord well with the statistics that in many countries the proportion of girls in higher education exceeds that for boys. However, in less industrialized countries the experiences and opportunities of adolescents boys and girls have remained markedly different (Brown & Larson, 2002).

Another still-continuing change is a move from rural areas to urban environments. It has been suggested that living in urban versus rural living environments, along with related differences in the opportunity structures, is reflected in young people's motivation and thinking in many ways. For example, Nurmi et al. (1994) found that adolescents' exploration and commitments related to education and occupation increased

with age in urban environments but not in rural environments. This difference was suggested to be due to the fact that rural environments provide less educational choices than do urban contexts.

The third developmental trend that influences adolescents' lives in most parts of the world is globalization (Brown & Larson, 2002). Besides a move from rural to urban environments and increasing length of education, globalization refers also to the important role of a uniform youth culture as reflected in standard elements of dress, music taste, and entertainment. This development is closely connected to the increasing importance of new information technologies and worldwide media business.

One recent change in adolescents' lives in industrialized countries consists of an increase in so-called turbulences in the transition into job markets. Many young people start their occupational careers in jobs that both they and their employer expect to be temporary. Although it has been suggested that this trend is due to the educational system of the United States (Kerckhoff, 2002), a similar trend is evident in many European countries. The problem of this development is that it may also postpone other transitions during young adulthood, such as gaining independence from parents and starting one's own family.

The final important recent change in adolescent life is the increase in divorce and single parenthood. If this trend continues, it may lead to many changes in adolescent socialization. For example, as most of the single parents are women, increasing amounts of adolescents are living in a situation in which they lack advice and support from their fathers (Jenkins Tucker et al., 2001). This may cause particular problems in adolescent socialization into the adult world, particularly for boys.

Methodological Implications

This chapter summarized the results of research about adolescents' socialization and self-development. Unfortunately, many parts of the literature review concluded that the research included serious methodological limitations.

One typical feature of the reviewed studies was that the direction of influence was presupposed on the basis of cross-sectional findings. This problem was particularly true for the research that focused on the role of parent and peer relations in adolescents development. Consequently, there is a need to enhance the quality of data when examining any developmental mechanisms. One way to do this is to use cross-lagged longitudinal data in which the same variables are repeatedly measured across time. This means that the time for easy solutions to conduct adolescent research is over: Cross-sectional procedures in the examination of developmental processes are in many cases wastes of time and money.

Another way to test the direction of effects is to use intervention studies. This approach has not been typical in the research on adolescents socialization, perhaps because it is not clear what should be targeted in interventions. In the case of problem behaviors, such as criminality and drug abuse, this, of course, is not a problem.

One assumption in this chapter is that adolescent development consists of interactions between the developing individual and his or her changing age-graded environments. The major idea is that age-graded environments channel adolescents motives and interests, and feedback concerning their efforts in dealing with a variety of transi-

tions and challenges leads to the adjustment of previous strategies and goals and th formation of reflections concerning oneself. Examination of such mechanisms require at least two features of the data.

First, as the processes included in socialization might be assumed to change rapidly there is a need for intensive measurements, such as every half year or even less. The problem with traditional longitudinal studies is, namely, that they may not be intensive enough to reach the critical developmental changes. Examination of developmental processes should be preceded by theoretical analysis of the time range during which major developmental processes take place, and this time range should then be applied to define the length of the time intervals between the measurements (Aunola, Leskinen, Onatsu-Arvilommi, & Nurmi, 2002).

The second requirement for the successful examination of processes such as socialization is that studies focus on periods of adolescent development during which key developmental processes take place. It might be assumed that the times when adolescents are facing some major transitions in their lives are such important periods. During early adolescence such transitions are typically scheduled by the individual's age. During late adolescence, they may appear more independently from age, which may require less traditional research designs. One additional aspect of such studies on critical transitions is that if a group of individuals is followed only across a particular transition, the phenomena under focus can be measured intensively.

In sum, the results reviewed in this chapter indicate that we know much about how age-graded sociocultural environments channel adolescent development, as well as about the mechanisms by which adolescents select their developmental environments. There are also data depicting how adolescents reflect themselves as a consequence of these adventures. However, less is known about how adolescents try to adjust their previous efforts as a means to deal with negative feedback and failures. Moreover, the fact that only a few cross-lagged longitudinal studies have been conducted on the role that parents and peers play in adolescent socialization and self-development limits our possibilities to understand the processes taking place in these interpersonal settings.

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