CHAPTER 1

The Scientific Study of Adolescent Development

Historical and Contemporary Perspectives

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In the opening sentence of the preface to the first edition of his classic, *A History of Experimental Psychology*, Edwin G. Boring (1929) reminded readers that "psychology has a long past, but only a short history" (p. ix), a remark he attributed to the pioneer of memory research, Hermann Ebbinghaus. A similar statement may be made about the study of adolescents and their development.

The first use of the term *adolescence* appeared in the fifteenth century. The term was a derivative of the Latin word *adolescere*, which means to grow up or to grow into maturity (Muuss, 1990). However, more than 1,500 years before this first explicit use of the term *adolescence,* both Plato and Aristotle proposed sequential demarcations of the life span, and Aristotle in particular proposed stages of life that are not dissimilar from sequences that might be included in contemporary models of youth development. He described three successive, seven-year periods (infancy, boyhood, and young manhood) prior to the full, adult maturity.

About 2,000 years elapsed between these initial philosophical discussions of adolescence and the emergence within the twentieth century of the scientific study of this period of life (with the publication in 1904 of G. Stanley Hall's two-volume work on adolescence). Across the subsequent (at this writing) 106 years, the history of the scientific study of adolescence has had three overlapping phases (Steinberg & Lerner, 2004). These phases in the history of the field, which we discuss in the pages that follow, are illustrated in Figure 1.1.

THE FIRST PHASE OF THE SCIENTIFIC STUDY OF ADOLESCENCE

G. Stanley Hall's (1904) two-volume work, *Adolescence*, launched the scientific study of adolescence as a field framed by an evolutionary (Darwinian) conception of the basic process accounting for change across this period of life. As explained by Overton (2006), the approach to understanding development that was epitomized by Hall's theory reflected a nativist, and hence split, view of change (wherein nature, as opposed to nurture, is regarded as the fundamental basis of development). Hall's view also established the field for years to come as one that adhered to a biologically based, deficit view of adolescence.

Fancying himself as the "Darwin of the mind" (White, 1968), Hall sought to translate the ideas

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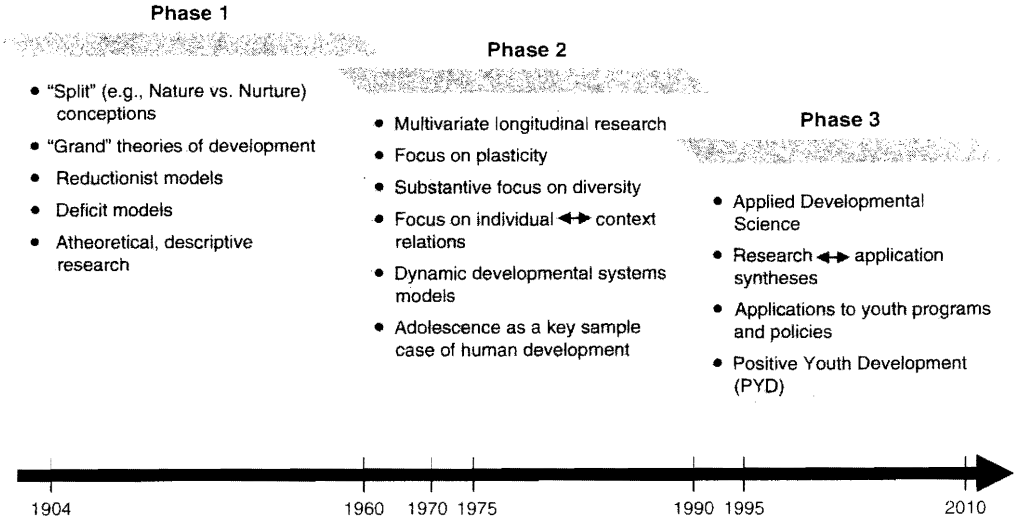

FIGURE 1.1 Three phases in the history of the scientific study of adolescent development

of Ernst Haeckel (e.g., 1868, 1891), an early contributor to embryology, into a theory of life-span human development. Haeckel advanced the idea of recapitulation, that the adult stages of the ancestors comprising a species' evolutionary (phylogenetic) history were repeated in compressed form as the embryonic stages of the organism's ontogeny. Hall extended Haeckel's idea of recapitulation beyond the prenatal period in order to fashion a theory of human behavioral development. To Hall, adolescence represented a phylogenetic period when human ancestors went from savagery to civilization. This transition, according to Hall, made adolescence a period of storm and stress, a time of universal and inevitable upheaval.

Although other scholars of this period (e.g., Thorndike, 1904) quickly rejected Hall's recapitulationism on both empirical and methodological grounds (e.g., see Lerner, 2002, for a discussion), other theorists of adolescent development used a conceptual lens comparable to Hall's, at least insofar as his biological reductionism and his deficit view of adolescence were concerned. Anna Freud (1969), for instance, saw adolescence as a biologically based, universal developmental disturbance. Erik Erikson (1950, 1959) viewed the period as one wherein an inherited maturational ground plan resulted in the inescapable psychosocial crisis of identity versus role confusion. When theorists rejected the nature-based ideas of psychoanalysts or neopsychoanalysts, they proposed equally one-sided, nurture-oriented ideas (and hence also used split conceptions) to explain the same problems of developmental disturbance and crisis. For example, McCandless (1961, 1970) presented a social-learning, drive-reduction theory to account for the developmental phenomena of adolescence (e.g., regarding sex differences in identity development) that Erikson (1959) interpreted as associated with maturation (see Lerner & Spanier, 1980, for a discussion).

Although the developmental theory of cognition proposed by Piaget (e.g., 1969, 1970, 1972) involved a more integrative view of nature and nurture than these other models, he also saw nature and nurture as separable (and hence split) sources of development, ones that just happened to interact (but, because they were separate and split, did not alter the status or quality of each other over the course of their interaction). The predominant focus of Piaget's (1970) ideas was on the emergence of formal logical structures, and not on the adolescent

period per se. The absence of concern in Piaget's theory with the broader array of biological, emotional, personality, social, and societal concerns that had engaged other theorists' discussion of adolescence did not stop a relatively minor and historically transitory interest in Piaget's ideas as a frame for empirical understanding of the adolescent period (Steinberg & Morris, 2001). However, as Steinberg and Morris (2001) have explained, only a short while after this period of heightened interest in using the onset of formal operations as an explanation for everything adolescent, the influence of Piaget's theory on mainstream empirical work in the study of adolescence would become as modest as that associated with the other grand theories of the period, such as those authored by Erikson or McCandless.

The waning of these grand theories across the first phase of the study of adolescence, a phase that lasted about 70 years, was due—at least in part—to the fact that the sorts of Cartesian "splits" (see Overton, 2006) emphasized in the ideas of these theorists created false dichotomies—not only nature versus nurture, but also continuity versus discontinuity, stability versus instability, constancy versus change, or basic versus applied—that limited the intellectual development of the field. Seen through the contemporary, postmodern lens of relational models of development (e.g., Overton, 2006), conceptions that recognize the fundamental, integrative character of influences across the levels of organization comprising the ecology of human development (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2006; Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Elder & Shanahan, 2006), scholarship-pursuing unidimensional conceptions of human development focused on, at best, ecologically invalid assessments of components of youth behavior or, at worst, counterfactual characterizations of the bases of individual structure and function (Gottlieb, Wahlsten, & Lickliter, 2006; Hirsch, 2004).

However, these theories were limited by the fact that they either focused exclusively on nature (e.g., genetic or maturational) (e.g., Freud, 1969; Hall, 1904), focused exclusively on nurture (e.g., McCandless, 1961), or weakly combined multiple sources of influence in ways that retained an emphasis on one or the other sources of development (usually on nature) as the prime basis of development (e.g., Erikson, 1959, 1968). As such, these theories were becoming increasingly out of step with empirical evidence indicating that variation associated with complex relations between organismic (biological) and contextual (proximate to distal) ecological variation, including culture and history, were involved in the course of adolescent development. While this evidence began to accumulate during the first phase in the scientific study of adolescence, it would not be until the end of the second phase and the emergence of the third phase of development of the field that these data, and other findings related to them, would be integrated into dynamic, integrative models of development (Steinberg & Lerner, 2004). Indeed, during the first phase of the field, the major empirical studies of adolescence were not primarily theory-driven, hypothesis-testing investigations. Instead, they were atheoretical, descriptive studies (McCandless, 1970). As such, even theory and research were split into separate enterprises. Moreover, there was also a split between scholars whose work was focused on basic developmental processes and practitioners whose focus was on community-based efforts to facilitate the healthy development of adolescents.

In other words, the divergence between the "grand" theories of the adolescent period and the range of research about adolescence that would come to characterize the field at the end of the twentieth century actually existed for much of the first phase of the field's development. The "classic" studies of adolescence conducted between 1950 and 1980 were not investigations derived from the theories of Hall, Anna Freud, McCandless, Piaget, or even Erikson (work associated with the ideas of Marcia, 1980, notwithstanding). Instead, this research was directed to describing (note, *not* explaining;

McCandless, 1970; Petersen, 1988) patterns of covariation among pubertal timing, personal adjustment, and relationships with peers and parents (e.g., Jones & Bayley, 1950; Mussen & Jones, 1957), both within and across cultural settings (e.g., Mussen & Bouterline Young, 1964); the diversity in trajectories of psychological development across adolescence (e.g., Bandura, 1964; Block, 1971; Douvan & Adelson, 1966; Offer, 1969); and the influence of history or temporality (i.e., as operationalized by time of testing– or cohort-related variation) on personality development, achievement, and family relations (e.g., Elder, 1974; Nesselroade & Baltes, 1974). Petersen (1988, p. 584) described the quality of the classic empirical work on adolescence by noting that:

> Most . . . research fell into one of two categories: (a) studies on behavioral or psychological processes that happened to use adolescent subjects, or (b) descriptive accounts of particular groups of adolescents, such as high school students or delinquents.

Despite its separation from the grand theories of adolescence that dominated the field during its first phase of scientific development, this body of early research, and the subsequent scholarship it elicited (e.g., see reviews by Lerner & Galambos, 1998; Petersen, 1988; and Steinberg & Morris, 2001), made several important contributions to shaping the specific character of the scientific study of adolescence between the early 1980s and late 1990s. As elaborated later in this chapter, this character involved the longitudinal study of individual–context relations among diverse groups of youth, the deployment of innovative quantitative and qualitative, ethnographic methods (see chapters 2 and 3, this volume), and the use of such scholarship for purposes of both elucidating basic developmental processes and applying developmental science to promote positive youth development across the adolescence period and within the diverse settings of their lives (e.g., Hamburg, 1974; Lerner, 2004, 2005; Steinberg, 1996; Steinberg & Levine, 1997).

These contributions to the study of adolescence acted synergistically with broader scholarly activity within developmental science pertinent to the theoretical, methodological, and applied features of the study of human development across the life span. A classic paper by Hamburg (1974) did much to provide the foundation for this integration, making a compelling case for viewing the early adolescent period as a distinct period of the life course and providing an exemplary ontogenetic window for understanding the key individual–context relational processes involved in coping and adaptation (processes that, we will explain, were conceptualized as bidirectional and mutually influential and that provided the potential for systematic change, for plasticity, across the adolescent period). Based on such evidence, Petersen (1988, p. 584) noted:

> Basic theoretical and empirical advances in several areas have permitted the advance of research on adolescence. Some areas of behavioral science from which adolescence researchers have drawn are life-span developmental psychology, life-course sociology, social support, stress and coping, and cognitive development; important contributing areas in the biomedical sciences include endocrinology and adolescent medicine. The recent maturation to adolescence of subjects in major longitudinal studies . . . has also contributed to the topic's empirical knowledge base.

The emergence of the relationship between the specific study of adolescence and more general scholarship about the overall course of human development provided the bridge to the second phase in the study of adolescent development. Indeed, in a review of the adolescent development literature written during this second phase, Petersen (1988, p. 601), predicted that, "Current research on adolescence will not only aid scientific understanding of this particular phase of life, it also may illuminate development more generally." Future events were consistent with Petersen's prognostication.

THE SECOND PHASE OF THE SCIENTIFIC STUDY OF ADOLESCENCE

From the late 1970s through this writing, the adolescent period has come to be regarded as an ideal "natural ontogenetic laboratory" for studying key theoretical and methodological issues in developmental science (Lerner & Steinberg, 2004; Steinberg & Lerner, 2004). There are several reasons for the special salience of the study of adolescent development to understanding the broader course of life-span development.

The Emergence of Adolescence as the New Focal Period Within the Life Span

The prenatal and infant periods exceed adolescence as ontogenetic periods of rapid physical and physiological growth. Nevertheless, a first reason for the adolescent period emerging in the 1970s as a time in ontogeny engaging the focused interest of developmental scientists was that the years from approximately 10 to 20—"the adolescent decade"—not only include the considerable physical and physiological changes associated with puberty but also mark a time when the interdependency of biology and context in human development is readily apparent (see chapters 4 and 5, this volume). Second, and in a related vein, as compared to infancy, the cognitive abilities, social relationships, and motivations of adolescents can, through reciprocal relations with their ecology, serve as active influences on their own development.

Third, the study in adolescence of these relations between active individuals and their varied and changing contexts serves as an ideal means to gain insight about bidirectional, mutually influential person–context relations. In post-Cartesian, postmodern conceptions of development, these relations were regarded as constituting the basic process of human development (Overton, 2006). Indeed, Overton (1973), as well as other developmental scientists working during the 1970s and early to mid-1980s (for instance, Baltes, 1979; Baltes & Schaie, 1973; Bronfenbrenner, 1979; Lerner, 1978; Dixon & Nesselroade, 1983; Riegel, 1975, 1976; Sameroff, 1983), began to forward developmental models that rejected reductionist biological or environmental accounts of development and, instead, focused on the variables from interdependent, or fused, levels of organization as constituting the developmental system and its multilayered context (e.g., Collins et al., 2000; Gottlieb et al., 2006; Thelen & Smith, 2006).

These developmental systems models have provided a metatheory for research on adolescent development, and have been associated with more midlevel (as opposed to grand) theories, models that have been generated to account for transformations in individual–context relations within selected domains of development. Instances of such midlevel developmental systems theories are the stage–environment fit model used to understand achievement in classroom settings (e.g., see chapter 12, this volume), the goodness-of-fit model used to understand the importance of temperamental individuality in peer and family relations (Lerner et al., 2003), and models linking the developmental assets of youth and communities in order to understand positive youth development (Benson, 2006; Damon, 2004).

A fourth and related reason for the focus by developmental scientists on the study of the adolescent period arose because of the growing emphasis on developmental systems theoretical models. By the end of this second phase in the study of adolescence (during the second half of the 1990s), these dynamic, developmental systems models were regarded as defining the cutting edge of theory in developmental science (Damon & Lerner, 2006, 2008). The multiple individual and contextual transitions into, throughout, and out of the adolescent period involve the major institutions of society (e.g., family, peers, schools, the workplace, and the neighborhood or community). As such, the study of the individual's relations to

these contexts engaged scholars interested in the dynamics of both ecological and individual levels of organization. Focus on adolescents' varied relations across the ecology of human development afforded a rich opportunity for understanding the nature of multilevel systemic change.

Finally, there was also a practical reason for the growing importance of adolescence in the broader field of developmental science: As noted by Steinberg and Morris (2001), the longitudinal samples of many developmental scientists who had been studying infancy or childhood had aged into adolescence. Applied developmental scientists were also drawn to the study of adolescents because of the historically unprecedented sets of challenges to the healthy development of adolescents that arose during the latter decades of the twentieth century (Dryfoos, 1990; Lerner, 2007). In addition, scholars became engaged in the study of adolescents because of interests in age groups other than adolescents! For example, interest in infants often entailed the study of teenage mothers, and interest in middle and old age frequently entailed the study of the "middle generation squeeze," wherein the adult children of aged parents cared for their own parents while simultaneously raising their own adolescent children (Steinberg & Steinberg, 1994).

The Emerging Structure of the Field of Adolescent Development

The scholarly activity that emerged at about the close of the 1970s was both a product and a producer of a burgeoning network of scholars from multiple disciplines. In 1981, the late Herschel Thornburg launched a series of biennial meetings (called the "Conference on Adolescent Research") at the University of Arizona. During these meetings (which occurred also in 1983 and 1985), the idea for a new scholarly society, the Society for Research on Adolescence (SRA), was born. The first meeting of the SRA was held in Madison, Wisconsin, in 1986, and Thornburg was elected the first president of the organization.

Across more than the next two decades, with biennial conventions in Alexandria, Virginia (1988); Atlanta (1990); Washington (1992); San Diego (1994); Boston (1996); again in San Diego (1998); Chicago (2000); New Orleans (2002); Baltimore (2004); San Francisco (2006); and again Chicago (2008), and through the leadership of the SRA presidents that succeeded Thornburg—John P. Hill, Anne C. Petersen, E. Mavis Hetherington, Sanford M. Dornbusch, Jeanne Brooks-Gunn, Stuart T. Hauser, Laurence Steinberg, W. Andrew Collins, Jacquelynne Eccles, Elizabeth Susman, Vonnie McLoyd, and Reed Larson—the organization and the field it represented flourished. Between 1986 and 2008, attendance at SRA biennial meetings rose from a few hundred to nearly 2,000. The Society launched its own scholarly journal in 1991, the *Journal of Research on Adolescence* (Lerner, 1991), grew from approximately 400 members in 1986 to more than 1,200 members in 2008, and attracted disciplinary representation from scholars and practitioners in psychology, sociology, education, family studies, social work, medicine, psychiatry, criminology, and nursing.

Impetus to this growth in scholarly interest in the study of adolescence also was stimulated by the publication in 1980 of the first handbook for the field. Edited by Joseph Adelson (1980), the *Handbook of Adolescent Psychology* was published as part of the Wiley Series on Personality Processes. The volume reflected the emerging multidisciplinary interest in the field (with chapters discussing levels of organization ranging from biology through history, including an interesting historical chapter on youth movements), the growing interest in systems models of adolescent development (e.g., in the chapters by Elder, 1980, and by Petersen & Taylor, 1980), the importance of longitudinal methodology (Livson & Peskin, 1980), and the increasing interest in diversity (i.e., there was a five-chapter section on "Variations in Adolescence"). Importantly, as reflected in several chapters on the problems of adolescence, there was still ample representation in

the volume of the deficit view of adolescence. Nevertheless, the 1980 *Handbook* included information pertinent to normative development and to developmental plasticity, that is, to the potential for systematic change across development—change that, within developmental systems models, was regarded to derive from individual–context relations. Finally, presaging an emphasis on positive youth development that would crystallize during the third phase in the history of the field (Damon, 2004; Lerner, 2005, 2007), there were several chapters that discussed the positive individual and social features of youth development.

The publication of a handbook, the organization of a successful scholarly society, and the initiation of that society's scholarly journal all underscored the growing interest in and the scientific maturity of research on adolescent development. This intellectual milieu and the scholarly opportunities it provided attracted a broad range of scholars to the field, some for reasons that had little to do with adolescence per se, but others because they came to see themselves as experts on the second decade of life. By the mid-1980s, a growing cadre of scientists would identify themselves as adolescent developmentalists.

The Study of Adolescence as a Sample Case for Understanding Plasticity and Diversity in Development

Scholars interested primarily in the instantiation of developmental processes within other periods of the life span (e.g., infancy; Easterbrooks & Graham, 1999; or adult development and aging; Brim, 1966; Nesselroade & Baltes, 1974) or in disciplines other than developmental psychology (e.g., life course sociology; Burton, 1990; Elder, 1974, 1980) became adolescent developmentalists as well. This attraction inheres in the "window" that the period provides to understanding how development, at any point across the life span, involves the relations of diverse and active individuals and diverse, active, and multitiered ecologies (Bronfenbrenner, 1979, 2005; Bronfenbrenner & Morris, 2006).

As suggested by Steinberg and Morris (2001), the one scientific concern that arguably was most significant in transforming the field of adolescent development beyond a focus on this single developmental period into an exemplar for understanding the breadth of the human life span was the emerging focus within developmental science on the ecology of human development (e.g., Bronfenbrenner, 1979, 2005; Bronfenbrenner & Morris, 2006). The integrated, designed, and natural ecology was of interest because its study was regarded as holding the key to understanding the system of relations between individuals and contexts that is at the core of the study of human development and to providing evidence that theories about the character of interactions within the developmental system (e.g., Collins et al., 2000; Horowitz, 2000; Gottlieb, 1997, 1998; Gottlieb et al., 2006; Thelen & Smith, 2006) were more useful in accounting for the variance in human ontogeny than theories whose grounding is exclusively nature (e.g., behavioral genetic or sociobiological; e.g., Plomin, 2000; Rowe, 1994) or exclusively nurture (e.g., social learning or functional analysis; Gewirtz & Stingle, 1968; McCandless, 1970).

A second set of broader issues that engaged developmental science in the study of adolescence pertained to understanding the bases, parameters, and limits of the plasticity of human development (which, as we have noted, reflects the potential across ontogeny for systematic change in the structure or function of attributes of the individual). The presence of plasticity across the life span legitimates an optimistic view about the potential for interventions into the course of life to enhance human development. In the second phase of the history of the field, the focus on plasticity encouraged growth in scientific activity in the application of developmental science to improve life outcomes, and gave impetus to the idea that positive development could be promoted among all people (Lerner, Fisher, & Weinberg, 2000) and, in regard to the adolescent period, among diverse youth (Lerner, 2005).

This idea of "positive youth development" (PYD) flourished in the third phase of the history of this field. That is, because plasticity means that the particular instances of human development found within a given sample or period of time are not necessarily representative of the diversity of development that might potentially be observed under different conditions, the PYD perspective is based on the belief that the potential for plasticity among all youth constitutes a fundamental resource for healthy development; if supportive families, schools, communities, programs, and policies could be created for youth, their potential for plasticity could be actualized as change in positive directions (chapter 14, this volume).

Finally, while the coalescing of developmental scientists interested in positive youth development would not occur until the third phase of the history of the field, within the second phase developmentalists pursuing an interest in the developmental system and the plasticity in ontogenetic change that it promoted recognized the need to develop and deploy methods that could simultaneously study changes in (at least a subset of) the multiple levels of organization involved in the development of diverse individuals and contexts. Accordingly, multivariate longitudinal designs were promoted as key to the study of the relatively plastic developmental system, as were the development of empirical tools, such as change-sensitive measures, sophisticated data analysis techniques, and strategies such as triangulation of observations within and across both quantitative and qualitative domains of inquiry.

Defining Features of the Study of Adolescence During Its Second Phase

Three defining features of the second phase of the scientific history of adolescent development are worth noting. First, during its second phase, the empirical study of adolescence emerged as a "relational" field of inquiry. That is, it became an area of scholarship wherein, implicitly (e.g., Block, 1971; Mussen & Bouterline Young, 1964) or, at times, explicitly (e.g., Nesselroade & Baltes, 1974), the key unit of analysis in understanding the development of the person was his or her relation with both more molecular (e.g., biological) and more molar (social group, cultural, and historical) levels of organization (Overton, 2006). In such a relational frame, no one level of organization was seen as the "prime mover" of development.

A second distinctive feature of the field of adolescence within this second phase derived from its relational character. The confluence of the multiple levels of organization involved in the developmental system provide the structural and functional bases of plasticity and of the inevitable and substantively significant emergence of systematic individual differences; that is, such individuality serves as a key basis of the person's ability to act as an agent in his or her own development (Brandtstädter, 2006; Lerner, 2002). Accordingly, the field of adolescence has become an exemplar within the broader study of human development for the study of individual differences and for the person-centered approach to research on human development (Magnusson, 1999a, 1999b; Magnusson & Stattin, 2006).

Third, although there remains a focus within the contemporary adolescent literature on problems of this developmental period (Steinberg & Morris, 2001), the focus on plasticity, diversity, and individual agency—and the strength or capacity of an adolescent to influence his or her development for better or for worse—means that problematic outcomes of adolescent development are now regarded as just one of a larger array of outcomes (e.g., Hamburg, 1974; Hamburg, 1992). Indeed, it is this plasticity that provides the theoretical basis of the view that all young people possess strengths or, more simply, the potential for positive development (Damon, 2004; Damon & Gregory, 2003).

In sum, the second phase in the scientific study of adolescence arose in the early to mid-1970s, as developmental scientists began to make use of the burgeoning empirical research on adolescents; that is, because this work

involved the study of both individual and contextual variation, developmental scientists began to see that the adolescent years provided a "natural developmental laboratory" for elucidating issues of interest across the entire life span (Petersen, 1988). Indeed, while, at the beginning of the 1970s, the study of adolescence—like the comedian Rodney Dangerfield—"got no respect," the reliance on adolescence research to inform fundamental questions in developmental science about how links between diverse individuals and changing contexts textured the course of change across individuals, families, and generations, research on adolescent development began to emerge as a dominant force in developmental science. By the end of the 1970s, the study of adolescence had finally come of age.

To help place this turning point in the context of the actual lives of the scientists involved in these events, it may be useful to note that the professional careers of the editors of this *Handbook* began just as this transition was beginning to take place. Across our own professional lifetimes, then, the editors of this *Handbook* have witnessed a sea change in scholarly regard for the study of adolescent development. Among those scholars whose own careers have begun more recently, the magnitude of this transformation is probably hard to grasp. To those of us with gray hair, however, the change has been nothing short of astounding. At the beginning of our careers, adolescent development was a minor topic within developmental science, one that was of a level of importance to merit only the publication of an occasional research article within prime developmental journals or minimal representation on the program of major scientific meetings. Now, about four decades later, the study of adolescent development is a distinct and major field within developmental science, one that plays a central role in informing, and, through vibrant collaborations with scholars having other scientific specialties, being informed by other areas of focus.

In essence, then, the study of adolescence in its second phase was characterized by an interest in developmental plasticity among diverse youth. Because of this focus, interest also arose in the application of science to real-world problems, a focus that would burgeon in the next phase of the history of the field. Finally, however, the second phase also was marked by the development and use of more nuanced and powerful developmental methods, ones aimed at providing sensitivity to the collection and analysis of longitudinal data pertinent to the multiple levels of organization involved in adolescent development (e.g., Baltes, Reese, & Nesselroade, 1977; Baltes & Schaie, 1973). Together, these intellectual facets of the second phase in the study of adolescent development created the scientific bases for the emergence of a subsequent phase, one that—at this writing—characterizes the contemporary status of the field.

THE THIRD PHASE OF THE SCIENTIFIC STUDY OF ADOLESCENCE

When we wrote the opening chapter of the second edition of the *Handbook of Adolescent Psychology*, this third stage seemed to have just crystallized. Now, as a consequence of the unprecedented growth in theoretically informed research about the adolescent period, the vantage point of writing the opening chapter of the third edition of this work, albeit only six years later, enables us to see clearly that the field is unequivocally embedded within this third period of its growth, one that we have noted involves burgeoning interest in applied developmental science, that is, in evidence-based applications of research about adolescent development. Nevertheless, as we have explained, the roots of this third phase were established within the second phase, by some of the scientific innovators whose work in this phase we have noted.

For instance, more than a third of a century ago, Bronfenbrenner (1974) explained the importance of a science of development that involved the full and bidirectional collaboration between the producers and consumers of scientific knowledge. In turn, Hamburg (1992;

Hamburg & Takanishi, 1996) proposed that the quality of life of adolescents, and their future contributions to civil society, could be enhanced through collaboration among scholars, policy makers, and key social institutions, for instance, community-based youth-serving organizations (e.g., 4-H, Boys and Girls Clubs, scouting), schools, and the media. In our view, Hamburg's (1992; Hamburg & Takanishi, 1996) vision has been actualized.

The idea that the adolescent period provides the ideal time within life to study the bases of positive human development frames what has become a defining feature of the field in its current, third phase. As shown in Figure 1.1, the study of adolescent development is today characterized by a synthetic interest in basic and applied concerns about youth development.

In sum, in what has emerged as the third phase in the history of the scientific study of adolescence, the field of adolescent development serves as an exemplar of developmental science that is of service to policy makers and practitioners seeking to advance civil society and promote positive development (Lerner, 2004, 2007). Indeed, as evidenced by the contributions of this third edition of the *Handbook*, we are in a phase of science defined by theoretically framed, research-based applications to programs and policies that advance understanding of the basic, individual–context relational process of adolescent development and, as well, that enables policy makers and practitioners to collaborate with scientists to enhance the course of development. Evidence-based practice, policy, and advocacy aimed at understanding the bases of, and as well promoting, positive, healthy development among all youth may be the hallmark of this third period.

CONCLUSIONS: ADOLESCENCE AS A FIELD OF SCIENTIST–PRACTITIONER–POLICY MAKER COLLABORATION

The chapters in this *Handbook* both reflect and extend the emphases on individual–context relations, developmental systems, plasticity, diversity, longitudinal methodology, and application that were crystallized and integrated within the second phase of the development of the scientific study of adolescence and that, in turn, are being extended, both quantitatively and qualitatively, in its current, third phase. As evident within each of the chapters in this *Handbook*, the study of adolescence today represents the exemplar within developmental science of excellent conceptual and empirical work being undertaken with a collaborative orientation to making a contribution both to scholarship and to society.

These collaborations, involving the understanding and support of young people, are vital endeavors – for both science and society. The future of civil society in the world rests on the young. Adolescents represent at any point in history the generational cohort that must next be prepared to assume the quality of leadership of self, family, community, and society that will maintain and improve human life. Scientists have a vital role to play in enhancing, through the generation of basic and applied knowledge, the probability that adolescents will become fully engaged citizens who are capable of, and committed to, making these contributions.

The chapters in this *Handbook* demonstrate that high-quality scientific work on adolescence is in fact being generated at levels of study ranging from the biological through the historical and sociocultural. Above all, this *Handbook* demonstrates that the study of adolescent development at its best both informs and is informed by the concerns of communities, practitioners, and policy makers. It is our hope that we have assembled the best information possible to be used to promote and advocate for the healthy and positive development of young people everywhere and to advance developmental science.

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