Successful Adolescent Development Among Youth in High-Risk Settings

Richard Jessor

A new, interdisciplinary paradigm is emerging in developmental psychology. It includes contextual as well as individual variation and is more consonant with the complexity of adolescent behavior and development than traditional research paradigms. Social problems, such as poverty and racial discrimination, and the ways that young people negotiate adolescence successfully, are objects of research. A research program sponsored by the MacArthur Foundation, that embodies the new paradigm, is described.

There are compelling signs that a new paradigm for research on adolescence has been emerging in developmental psychology. Its influence on the form and content of psychological inquiry over the past decade or two is already evident: increased complexity of research objectives; greater reliance on time-extended research designs; expanded attention to the social context; more frequent recourse to concepts from neighboring disciplines; greater interest in research on important social problems; and, more recently, a readiness to study populations of adolescents hitherto largely ignored. It seems appropriate to characterize the evolving paradigm as *developmental behavioral science,* because it reaches beyond the traditional boundaries of psychology to encompass the concerns that neighboring disciplines have with the social environment of human action. Because it is inherently an interdisciplinary paradigm, its implementation continues to present a daunting challenge. Notwithstanding the challenge, developmental behavioral science, as an approach, holds promise for a more comprehensive, more differentiated, and more situated understanding of adolescent behavior and development than has been achieved thus far.

In this article I provide a brief description of a program of research on adolescent development sponsored by the John D. and Catherine T. MacArthur Foundation. The research is part of an effort—still taking form and still largely promissory—to implement the main imperatives of the new paradigm. It will be useful, as prolegomenon, to review the circumstances that paved the way for the emergence of the paradigm and to identify some limitations of traditional research on adolescence that recent efforts, ours included, have sought to overcome.

The Emerging Paradigm in Historical Perspective

A sense of self-confidence and optimism pervaded psychology right after World War II, but it was quickly replaced by an equally pervasive sense of disquietude, disappointment, and doubt. The meager yield of its sovereign theories of learning—until then, psychology's proudest achievement—and their conceptual ambiguity (Estes et al., 1954) had become painfully apparent. Skepticism was also growing about the generality of findings from controlled laboratory experiments and about the utility of animal models for illuminating complex, verbally mediated human behavior. Koch's (1959) influential "Epilogue" to Volume 3 of *Psychology: A Study of a Science* raised serious questions about the accomplishments of basic or general psychology, and also challenged its epistemological orientation. Less than a decade later, Ring (1967) invoked the term *crisis* to describe the state in which he found his own field of social psychology. The fact that the other social sciences were also experiencing disappointment over their accomplishments (Shweder & Fiske, 1986) raised even larger questions about the limitations of disciplinary inquiry in human affairs.

This time of searching self-examination and, indeed, of widespread malaise, resulted ultimately in salutary consequences both for psychology and for behavioral science more generally. With wider recognition that the prevailing scientific paradigm was constraining and impoverishing, the way was opened for psychologists to challenge long-established rules for making science and to explore new, previously unacceptable alternatives. These have helped to shape the contours of developmental behavioral science.

The key developments that contributed to the newer model of inquiry need only be noted here, as they have been elaborated elsewhere (Jessor, 1991). One change in the zeitgeist was the growing sense that adopting a multidisciplinary perspective was essential and, indeed, unavoidable. Psychology's inability, as a discipline, to encompass the socially organized environment of human action was increasingly seen as a critical shortcoming. In his topological elaboration of the *life space,* for example,

Kurt Lewin (1951) did surround it with a distal environmental region that he called the *foreign hull*. However, despite his recognition of its importance, that region remained totally undifferentiated. The fact that, logically, its structure and content influenced transactions with the life space was never exploited. This example illustrates the need for constructs from other disciplines—such as sociology, anthropology, and economics—that would enable articulation of psychological processes with those of the foreign hull or nonpsychological environment.

A second important development in the discipline was the decline and gradual abandonment of attachment to positivist epistemology. As a philosophy of science, positivism came increasingly to be seen as logically untenable. Its restriction of psychological attention only to so-called objectively observable and operationally definable phenomena also imposed severe limitations on the subject matter of the discipline. A third development, the openness of the postpositivist climate, promoted a "coming to terms with subjectivity" (Jessor, 1981, p. 297)—that is, a wider recognition of the central role of language and meaning in human action, and a new appreciation for inner experience, interpretive data, and the relevance of hermeneutics.

A fourth major development was the reinvigoration of interest in context and setting and place in a way that was simply beyond the grasp of the psychological notion of *stimulus*. The need for a language of description for context and setting that could capture its meaning and its significance for action was made salient in psychology by the person–situation debate (Magnusson, 1981). Fully situated explanatory efforts predicated on a thorough understanding of context began to be more widely appreciated in psychology. Finally, the antinomy between basic and applied research, so often an invidious distinction, was being rejected by more and more investigators. Research on important social problems, conventionally dismissed as *applied*, was increasingly being seen instead as a particularly advantageous way of testing theory in full social context and thereby gaining a greater claim on external validity. Again, it was Kurt Lewin (1951) who led the way, espousing the desirability of theory-oriented research on social problems. More recently, in the same spirit, Featherman (1991) has argued that "problem-focused research provides the seedbed for breakthroughs in fundamental theory and methods"; he added the reminder, parenthetically, that to carry out such research requires we "modify our commitment to the preeminence of disciplinary science" (p. 75).

This handful of historical developments is, of course, not exhaustive; taken together, however, they reflect some of the profound dynamics that have helped in recent decades to transform the larger discipline of psychology. That transformation has provided the opportunity for developmental psychologists to pursue approaches to research more apposite to the complexity of the phenomena under investigation. What I have referred to here as developmental behavioral science is one such approach: multidisciplinary in perspective; concerned with inner experience and meaning as well as with overt behavior; attentive, equally, to the socially organized context and to the individuality of the person; driven by an interest in important societal problems; and committed to an understanding of the process of development and change over time in both the person and the social setting.

The Emerging Paradigm and Traditional Research on Adolescence

Despite impressive advances in recent years in our understanding of behavior and development over the adolescent stage of the life course, there are troubling lacunae that become even more apparent when viewed from the perspective of developmental behavioral science.

For a particularly egregious example, neither research nor theory in the adolescent field has had much to say about young people growing up in poverty. As a matter of fact, a large segment of the American adolescent population has been excluded from our studies—those who are poor. At the end of an important volume sponsored by the Carnegie Council on Adolescent Development and designed to take stock of the current state of knowledge about adolescence, the editors remarked, "Perhaps the most striking observation across all the chapters in this volume is the degree to which research on normal development has been restricted to middle class whites" (Feldman & Elliott, 1990, p. 488), and, they added, "The poor youth of this nation receive little explicit attention in this volume" (p. 492). How are we to understand such an extraordinary gap in our knowledge?

Certainly, in light of recent statistics, it cannot be dismissed as too trivial to warrant scientific concern. "During early 1988, nearly one of every five adolescents [ages 13 to 18] was a member of a family with an income below the poverty line" (Sum & Fogg, 1991, p. 37); that implies a segment of youth numbering about 4 million. When the proportion of adolescents aged 13 to 18 living in poverty is examined by race and ethnicity, the percentage in 1988 was 11% for Whites, 37% for Hispanics, and 44% for Blacks. A recent report by the U.S. Congress, Office of Technology Assessment (1991) showed close to 8.5 million of the 31 million adolescents aged 10 to 18 in the United States living at or below 150% of the federal poverty level. Keeping in mind the bureaucratic arbitrariness that enters into defining the so-called poverty line and the worsening plight of those at the bottom of the economic ladder, these figures in all likelihood underestimate the extent of poverty among America's youth.

The lacuna of scientific knowledge about poor youth and about the context of poverty is disturbing; it illustrates as well as anything could the parochial limitations of traditional adolescent research and the importance of implementing more fully a developmental behavioral science approach. Driven by an interest in social problems, the latter approach could hardly avoid focusing on a problem such as poverty. More important, perhaps, the multidisciplinary orientation it entails would enable an articulation of the social, cultural, and economic context of poverty while, at the same time, delineating the pervasive

individual differences that exist among those growing up poor. Its imperative that developmental knowledge be fully situated makes it incompatible with a psychology of adolescence that is confined largely to middle-class, White adolescents.

Lest this exegesis be read only as a lament that some subpopulation of adolescents has been ignored, it is important to stress that research on adolescents growing up in poverty can yield knowledge unlikely to be gained from more traditional samples—knowledge about psychosocial development under conditions of concentrated and chronic adversity, knowledge about the factors that influence whether adversity will or will not be overcome, and finally, knowledge that is not only important for developmental theory but essential for the formulation of social policy.

Another arena of research that has received the same kind of neglect is research on the role of race and ethnicity, racial and ethnic discrimination, and minority status in adolescent behavior and development. Race and ethnicity are central issues that reverberate throughout contemporary American society. They are linked to major differentials in socially organized access to opportunity, are institutionalized in stereotypical social definitions, and are inescapably implicated in adolescent self-definitions. Given that, it is remarkable how little attention race and ethnicity have received in research and how little they have figured in theoretical formulations about adolescent development. The interaction of poverty with race and ethnicity also begs for attention. The limited interest of traditional adolescent research in social problems has, unfortunately, allowed issues of race and ethnicity and racial discrimination to lie fallow.

Researchers on adolescence in psychology have traditionally concentrated on the organism, giving markedly less attention to the role of context in behavior and development. Dannefer (1984) referred to this tradition as a reflection of the "ontogenetic fallacy" in developmental psychology: "the conception of human development as a process of maturational unfolding" (p. 103), rather than an outcome of person–context interaction. Another kind of encapsulation is evident even when context is engaged in psychological research, namely, encapsulation within that particular context alone, as if it existed in isolation from other contexts or from the larger social environment. In an illuminating and influential article on the ecology of the family, Bronfenbrenner (1986) noted in this regard that "most studies of the family as a context of human development . . . have concentrated on intrafamilial processes of parent–child interaction" (p. 723); "the impact of the external environment on particular family processes . . . represent[s] a fairly recent scientific development" (p. 724). The traditional preoccupation with socialization and patterns of interaction within the family has usually meant that extrafamilial transactions—those with other institutions and other contexts, such as church, and school, and neighborhood, all of which can have important consequences for an adolescent's development— would largely be ignored.

Cronbach (1982) has made the same point with regard to another developmental context, the school:

Understanding an adolescent's experience. . . seems to require a community-wide ecological perspective. Even though an educational study, for example, may have to concentrate on classrooms, classroom events are influenced by the community, the school structure, and events in the home, and the investigator will enrich his interpretation by acquainting himself with the context in which his limited unit is embedded. (p. 74)

Encapsulation of mainstream adolescent research within the organism, within a particular segment of the population, or within a selected context has limited the scope and the texture of our understanding of adolescent behavior and development. The multidisciplinary orientation of developmental behavioral science, its interest in research on social problems, and its appreciation of both proximal and distal context should help overcome those limitations and enrich the yield of developmental research on adolescents.

The Emerging Paradigm and the Issue of Complexity

The various considerations discussed above suggest that developmental psychology has evolved to a stage in the ontogeny of inquiry that is vastly more complex now than earlier in its history. Overcoming the encapsulations inherent in earlier research traditions can best be accomplished, it now seems clear, by larger and more complex research endeavors that involve teams of collaborators from multiple disciplines; are guided by larger, more complex, interdisciplinary conceptual frameworks; are capable of mapping the various and changing settings in which adolescence is played out; and can capture the various and changing characteristics of adolescents as they grow from childhood to young adulthood. It is the complexity of this kind of inquiry that presents the daunting challenge noted at the outset of this article.

An illustration of the evolution of developmental psychology toward greater complexity can be drawn from the domain of adolescent risk behavior. The rapid accumulation of knowledge about adolescent risk behavior over the past two decades has revealed its intractability to simple explanation—whether focused on a single variable, such as self-esteem, a single setting, such as the inner-city neighborhood, or a single explanatory domain, such as personality, the environment, or genetic disposition. Research in this field has evolved from early descriptive accounts and epidemiological surveys to more and more complex explanations implicating multiple interacting domains that now range from biology to the social environment. This "web of causation" (MacMahon, Pugh, & Ipsen, 1960, p. 18), that is, the explanatory schema for adolescent risk behavior that has achieved some degree of consensus over recent years, is illustrated in Figure 1.

Because its purpose here is only to be illustrative, it is not necessary to review Figure 1 in detail (see Jessor, 1992). Rather, what is most important to note about the schema is its complexity—the multiple explanatory do-

Figure 1
A Conceptual Framework for Adolescent Risk Behavior: Risk and Protective Factors, Risk Behaviors, and Risk Outcomes

Interrelated Conceptual Domains of Risk Factors and Protective Factors
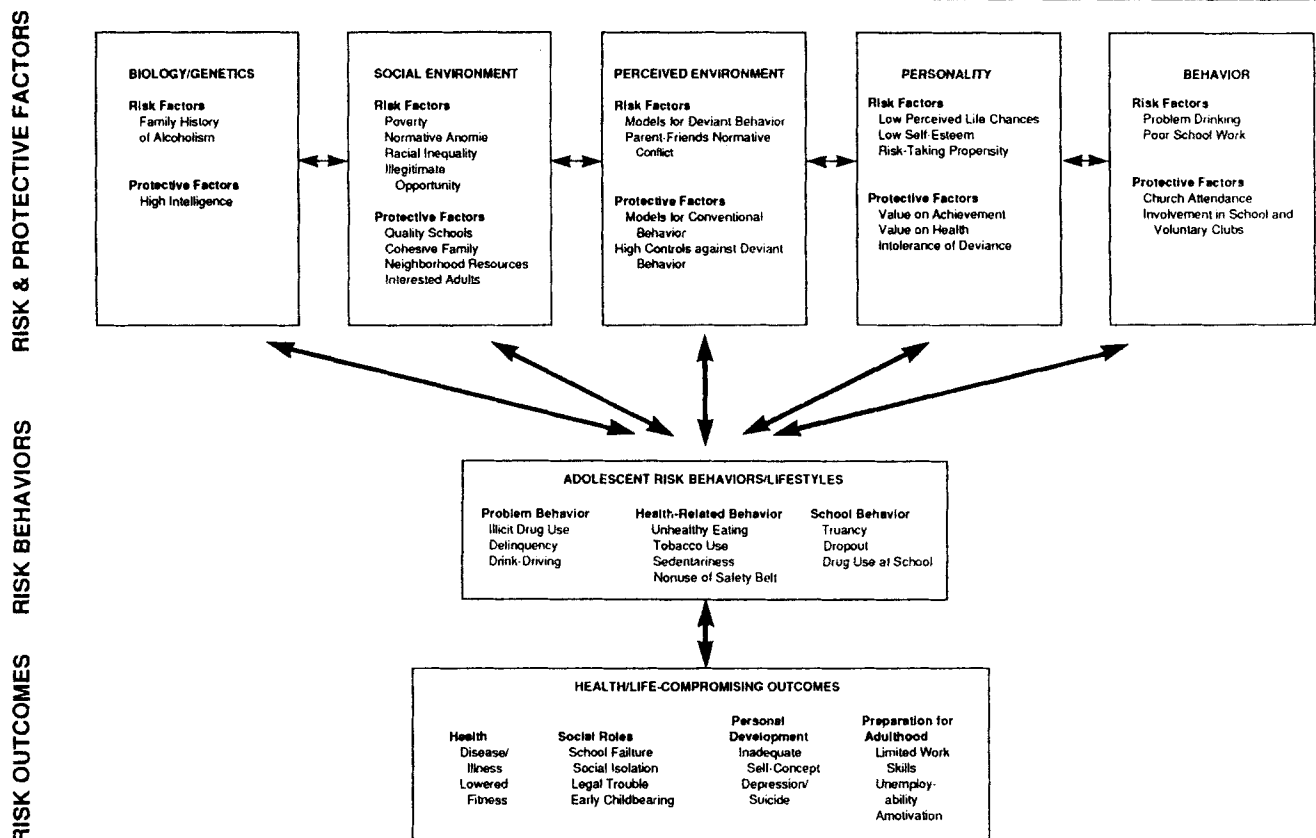
Note. From "Risk Behavior in Adolescence: A Psychosocial Framework for Understanding and Action" (p. 27) by Richard Jessor, 1992, in *Adolescents at Risk: Medical and Social Perspectives,* edited by D. E. Rogers and E. Ginzburg, Boulder, CO: Westview Press. Copyright 1992 by Westview Press. Reprinted by permission.

mains involved; the reciprocal or bidirectional causality represented by the two-headed arrows; the differentiation of constructs within domains and their further segregation into categories of risk and protective factors; the emphasis on perceived and interpreted as well as objective factors; the direct and indirect paths that link the various explanatory domains with the risk behaviors and the risk outcomes; the potential for risk behaviors to covary and to be organized into broader life-styles; and the contingent linkage of risk behaviors to longer term life outcomes. Difficult to represent in a two-dimensional schema, but intrinsic to its complexity, is the fact that the outcomes of engaging in risk behavior, shown at the bottom of the figure, depend on the nature of the social context and the other explanatory domains shown at the top of the figure. Furthermore, the entire explanatory schema has to be seen as time extended and undergoing dynamic change with aging and with history (see Jessor, Donovan, & Costa, 1992). Understanding contextual change becomes as important as understanding individual change. Figure 1 il-

lustrates that a research enterprise seeking to capture the bulk of the variance in adolescent risk behavior and trying to understand the role of risk behavior in development requires a model of inquiry such as that sketched out in the preceding sections of this article.

Full implementation of the paradigm of developmental behavioral science will always remain problematic and conditional on the resources available. However, recognition of the inherent complexity of adolescent behavior and development, even in a domain as circumscribed as adolescent risk behavior, puts the limitations of traditional, disciplinary inquiry in sharp relief.

The MacArthur Foundation Research Network

Rationale for the Network

The Research Network on Successful Adolescent Development Among Youth in High-Risk Settings was orga-

nized to advance knowledge about development among youth growing up in social contexts that place them at risk—contexts of disadvantage and poverty, limited access to opportunity, and racial and ethnic marginality. Because the current store of developmental knowledge was not accumulated from such youth, the network's focus on them is a deliberate effort to help right the balance. Also deliberate was the decision to focus on those factors and processes that safeguard and promote success in such contexts and are responsible for adolescents "making it" despite the adversity, malignancy, risk, and even dangers that characterize the transactions of their daily lives.

This perspective is important because it orients inquiry toward the elucidation of strengths and potentials and supports and resources at all levels—personal, social, and institutional—and it serves as counterpoint to an excessive and often univocal preoccupation with risk that tends to homogenize and caricature those who are poor. In concluding a review of the experiences of adolescent Black males growing up poor, Taylor (1991) made a profound observation: "Given these cumulative disadvantages, it is remarkable that the proportion of black male adolescents who survive to become well-adjusted individuals and responsible husbands and fathers is so high, or that the percentage who drop out of school, become addicted to drugs, involved in crime, and end up in jail is not considerably greater" (p. 156). That observation resists illumination by a focus on risk alone. It is consonant, however, with the emphasis that some investigators (Garmezy, 1985; Rutter, 1990) have placed on *protective factors*—those personal, social, and institutional resources that can promote successful adolescent development or buffer the risk factors that might otherwise compromise development. That emphasis is salutary in another way: It suggests that a social policy agenda should be concerned not only with the reduction of risk but with the strengthening of protection as well.

The network on successful adolescent development has been guided by several of the research imperatives mentioned earlier: first, that research has to be longitudinal or extended in time in order to provide developmental understanding of young lives as they grow and change and are transformed between childhood and young adulthood; second, that research has to achieve a thorough grasp of the content and the dynamics of the social context, and a textured sense of the settings—both proximal and distal—in which behavior and development take place; third, that research has to capture the individual differences that are ubiquitous in any population of youth, whatever the setting; and fourth, that the knowledge sought has to encompass subjective experience and personal meanings as well as overt action and social behavior. These are all central concerns of the paradigm of developmental behavioral science.

The Collaborative Process in the Network

Before summarizing the studies that the network has initiated, I should say something about how the program works and about the process by which the research is

formulated and carried out. In describing the larger Program on Mental Health and Human Development at the MacArthur Foundation, Bevan (1989) characterized it as a "research institute without walls," (p. 5) that fostered an "alternative scientific lifestyle" (p. 4) committed to "interdisciplinary and problem-oriented" (p. 7) research collaboration. Although the network on successful adolescent development is only one component of the larger program Bevan was describing, his description applies to it as well. A recently completed study of all of the networks in the Program on Mental Health and Human Development referred to them as "an experiment in scientific organization" (see Kahn, 1992, p. iv).
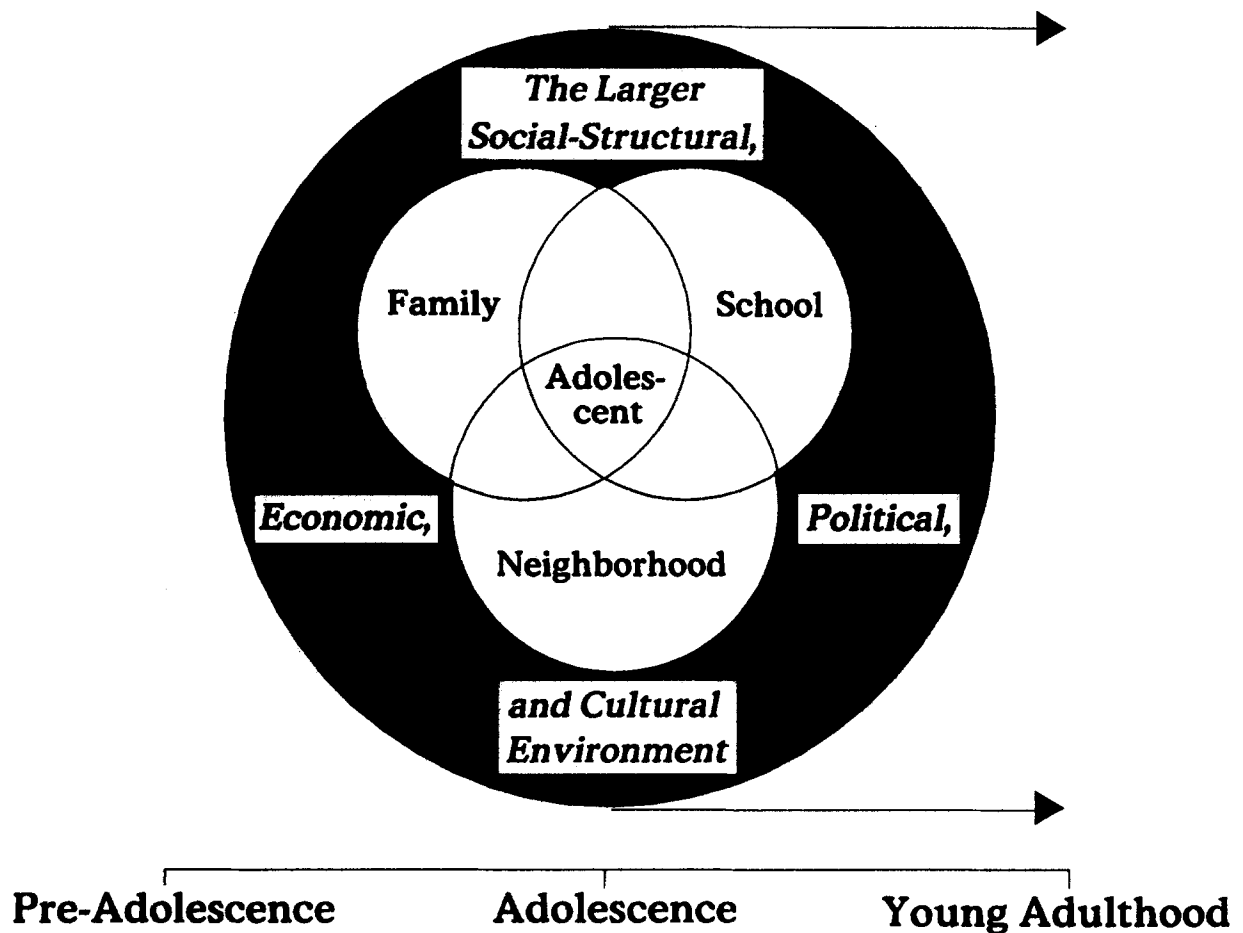
The collaborators in our "research institute without walls" are 14 senior scholars[1] representing a multiplicity of disciplines or subdisciplines, including psychology, sociology, child psychiatry, pediatrics, criminology, demography, life course development, child psychopathology, and education. Four or five times a year, the collaborators come together for two- or three-day meetings that constitute a kind of ongoing seminar. At these meetings, members discuss ideas, present reports, review progress, set goals, and make plans. More subtle, but in the long run perhaps more important, disciplinary traditions are transcended during the meetings, disciplinary boundaries are freely crossed, and a climate of interdisciplinary communication prevails. As ideas come to focus on possible research endeavors, a structure of intellectual collaboration emerges, one or another network member assumes the role of lead investigator, and resources are allocated to provide the needed support. As a result, the network's projects are collaborative and multidisciplinary and reflect the contributions of the entire network. There is also considerable and growing convergence of theoretical concepts and empirical measures across the separate projects. Although difficult and somewhat artificial at first, interdisciplinary, intellectual collaboration has become the normative style of inquiry by this stage of the network's development.

The network sponsors other activities in addition to its research program: It organizes conferences to enlarge its understanding in particular areas, it seeks to stimulate thinking in the field about theoretical issues or methods,[2]

Figure 2
Context and Development Over Time

The Larger Social-Structural, Economic, Political, and Cultural Environment

Family · School · Adolescent · Neighborhood

Pre-Adolescence   Adolescence   Young Adulthood

it provides opportunities for interdisciplinary training for graduate students, and it tries to draw out and communicate the implications of its research for social policy. The network's primary task, however, is to advance understanding of the process by which young people growing up in contexts of limited opportunity and pervasive disadvantage nevertheless manage to make it—to avoid life-compromising experiences, such as school dropout or trouble with the law; to fulfill expected roles at home and school; to develop the necessary human capital of skills, knowledge, and interests; to achieve a sense of personal adequacy and competence; to pursue second chances if they have gotten off track; and to prepare themselves to enter the roles that characterize young adulthood.

The Commitment to Context in the Network

The challenge for the network, at the outset, was how to organize the initial studies for this endeavor. After much

discussion, the members decided to organize the studies around the key settings of adolescent life—the family, the school, and the neighborhood. From the very outset, salience was given to the social context.[3] As shown in Figure 2, an adolescent can be represented as occupying the space at the intersection of the major contexts usually traversed during the course of daily life. The diagram shows that the adolescent is embedded simultaneously in all three contexts, although traditional research on adolescents has tended to be restricted to only one or another of them. Additional properties of Figure 2 bear mention besides the concurrent linkage of the adolescent to all of the contexts. First, each context has interactions with both of the other two contexts; such connections, as Bronfenbrenner (1986) noted for the family, are generally overlooked in traditional studies. Second, all three of the contexts and the adolescent are embedded in a larger, distal

[3] Although it is possible to consider the media and the peer group or friendship network as additional contexts, they are treated here as aspects of the contexts already mentioned.

environment with which there are ongoing transactions. This larger environment is rarely engaged in developmental research (but see Elder, 1974). Finally, the entire representation is pictured as dynamic and moving through time, allowing for development and change in the adolescent and in the contextual envelope in which the adolescent is located and with which the adolescent interacts. The relative importance of the different contexts would be expected to vary with different stages of development.

It is obvious from the topological relations among the various regions represented in Figure 2 that what happens in any region can affect the developing adolescent. Because the family, school, and neighborhood contexts are proximal to the adolescent, their influence can be direct, whereas the larger environment, being distal from the adolescent, usually has an indirect influence, mediated through one or more of the proximal contexts. The reverberating consequences of distal environment changes (e.g., in access to jobs and employment, child support and health care, or funding for education; in patterns of immigration; or in subsidies for low-income housing) are transmitted ultimately to the adolescent's life space by their impact on the proximal contexts of daily life experience.

Ideally, understanding the transactions between adolescents and their family, school, and neighborhood contexts and the transactions among those contexts would require mapping all three contexts and samples of the young people in them in the very same study, and then monitoring both contextual and individual change over time. Although that somewhat Olympian aspiration still animates the network collaborators, its implementation was set aside for a later stage in the network's development. Instead, separate but converging studies were undertaken; each is focused on one or more contexts, and all are concerned with assessment of the adolescents in those contexts and with change over time. The plan has been for this initial series of studies to serve as preparation for the more ambitious effort that was deferred: The studies underway should enable us to achieve a conceptualization of both person and context that illuminates the process of "making it"; they should permit the development of systematic measures that reflect the requirements of the conceptual framework; and they should provide the experience in interdisciplinary collaboration in field research that will be essential for launching that next phase of work.

Initial Studies of Successful Adolescent Development

In the remainder of this article, I present brief descriptions of four of the studies currently underway in the network. Details of design, sample, measures, and procedures for data collection may be obtained directly from the lead investigator in each case. My aim is simply to convey a sense of the concerns of each study and to suggest the degree to which, although separate endeavors, they seek to converge on the same set of inferences.

Family Management Study

The focus of the Family Management Study is on the strategies that families use to protect adolescents from the risks and dangers and illegitimate opportunities characteristic of disadvantaged neighborhoods and to promote adolescents' development despite limited family resources, the failure of local institutions, and the disorganization of the immediate social context. This longitudinal study is being carried out in inner-city neighborhoods in Philadelphia by a multidisciplinary team with Frank F. Furstenberg, Jr., as lead investigator and Jacquelynne S. Eccles, Thomas D. Cook, Glen H. Elder, Jr., and Arnold Sameroff as key collaborators.

Perhaps the most important contribution of this study is its effort to move inquiry about child rearing and socialization beyond the traditional preoccupation with intrafamilial interactions and to bring scientific attention to the importance of extrafamilial transactions for safeguarding successful adolescent development, especially in settings of poverty and disadvantage. The problematic nature of the extrafamilial environment was not likely to capture the attention of developmental investigators as long as the usual populations studied were White, middle-class families with adequate resources. For families trying to rear their children under disadvantaged circumstances, however, the extrafamilial environment may well be profoundly problematic: Health care is often beyond reach, educational systems are inadequate, prosocial role models may be less available, access to welfare and support agencies can be difficult, and children are frequently exposed to organized antisocial peer groups and to the attractions of illegitimate opportunity.

The strategies that families use to manage such problematic environments—to negotiate with local institutions, such as the school or the police, when a child is having difficulties; to seek out resources for their children that, despite their paucity, may nevertheless still be available in the ecology; to provide monitoring and support as insulation against the drug use and other problem behaviors modeled by their children's peers; or to locate a safer niche, such as a parochial school, for their children when the regular school and neighborhood contexts become too dangerous—can have consequences that enhance successful development. Variation in the use of such strategies by inner-city families may help explain why the impact of poverty is never monolithic, as the earlier quote from Taylor (1991) pointed out.

A year-long qualitative study of a small number of families in different areas of the city was preliminary to the larger Philadelphia endeavor. The information gleaned by the fieldworkers was influential in the design of the household interview survey, and it also yielded initial impressions about the linkage between variation in neighborhood characteristics and variation in family management strategies (see Furstenberg, in press). Data for the main study were collected in five poor or less well-to-do areas of the city in 1991, each with predominant representation of Black or White families. Close to 500

families with an adolescent between 11 and 15 years of age participated in the survey. Interviews and self-administered questionnaires were obtained from the adolescent and a parent.

The extensive data set includes measures of neighborhood characteristics, family management strategies, intrafamilial process, individual difference attributes, and adolescent behavior. Current analyses are focusing on the linkage between neighborhood characteristics and family strategies (Furstenberg, 1992); on the relative efficacy of preventive and promotive family management strategies (Eccles, McCarthy, & Lord, 1992); and on the ways that disadvantaged families cope with increasing economic pressure (Elder & Ardelt, 1992). In addition, Thomas D. Cook is analyzing the relation of various forms of capital (social, cultural, and psychological, as well as financial) to neighborhood characteristics and to strategies of family management. When the second wave of data collection is completed, the study should advance understanding of the role that family management strategies play in promoting successful development among youth growing up in high-risk settings.

Middle School Intervention Study

The focus of the Middle School Intervention Study is, of course, on the school context, more particularly on those aspects of the school context that may influence the life paths of the students. Unlike the other studies in the network, this one seeks to illuminate the processes that contribute to successful adolescent development by intervening to change a key context—the school—and by examining the effects of that change on adolescent psychosocial and behavioral outcomes over time. The research is being carried out in a large Maryland school district outside of Washington, DC. The lead investigators are James P. Comer and Thomas D. Cook; collaboration has come from Albert Bandura and Norman Garmezy.

The Comer School Development Program was chosen as the intervention modality because of its rationale and its demonstrated success in two largely Black New Haven, Connecticut, elementary schools (Comer, 1988). Key components of the program include the establishment of a school governance committee sharing authority and decision making between school officials and parents, the installation of a mental health team to help teachers understand issues of growth and development, and the involvement of parents and family members in a broad range of school activities. The aim of the Comer program is to create an open and democratic school climate with sensitivity to developmental issues and a strong tie between school and home—an educational environment conducive to learning and positive development that enhances a sense of consonance, rather than contrast, between home life and school life. The theory of the Comer program has been articulated recently by Anson et al. (1991).

After pilot implementation of the program in two largely Black middle schools, the full-scale intervention was mounted in the fall of 1990 in 11 additional, randomly selected middle schools in the school district. There are 10 no-treatment control schools, although most of these do have some kind of ongoing enrichment program. The research has involved the development of measures to monitor the adequacy of implementation of the Comer program, to assess changes in school climate, and to evaluate change in psychosocial attributes, school performance, and behavior of the adolescents as they experience the effects of the intervention. The seventh-grade cohort was assessed at baseline in the fall of 1990, and then again in the spring of 1991 and 1992. Assessment of a new seventh-grade cohort was carried out in the fall of 1991 and again in spring of 1992; it will be assessed once again in spring of 1993. Thus, two successive cohorts will have been followed over time, the later one entering seventh grade when the implementation of the Comer program was more fully established than it had been for the earlier cohort.

Because an adolescent's family is theoretically a crucial link in mediating between the changes deliberately brought about in the school context and the changes assessed in the adolescent, the family was also included in the research. The study of parent involvement enables the capture of an additional context and also yields direct measures of parental engagement with the school and of the factors that influence parental participation in their children's education. The parent involvement study, led by Jacquelynne S. Eccles, has involved home interviews with more than 1,500 parents of adolescents in the middle schools and home interviews with the target adolescents themselves. Many of the measures are the same as those used in the Philadelphia study. Together, the Middle School Intervention Study and its component, the Parent Involvement Study, promise to illuminate the role that school and family play in successful development among minority and disadvantaged adolescents.

Rural Youth Study

The distinctive features of the Rural Youth Study are, first, its focus on adolescents growing up outside of urban settings who are not from ethnic and racial minority families, and, second, its concern for tracing the consequences of distal environmental change—the severe economic decline of the 1980s farm crisis, the most severe since the Great Depression—for adolescents whose parents have had to cope with persistent economic hardship. The study, longitudinal in design, is being carried out in eight agriculture-dependent counties of north-central Iowa with farm, displaced farm, and nonfarm families. The lead investigator is Glen H. Elder, Jr., and primary collaboration involves team members from the Philadelphia study. (This study was built onto and has benefited greatly from a larger endeavor, supported by the National Institute of Mental Health, of which the principal investigator is Rand Conger at Iowa State University.)

The general orientation of the Rural Youth Study is modeled after Elder's classic inquiry, "Children of the Great Depression: Social Change in Life Experience" (1974), with the family's adaptation to economic hardship

mediating between the macroenvironmental change and its consequential impact on the adolescent. Two-parent households with a seventh grader and a near sibling were sampled, and more than 450 families participated in the first wave of data collection in the spring of 1989. The fourth data wave was completed in 1992. Assessment procedures are unusually comprehensive and elaborate, including parent and adolescent interviews, self-administered questionnaires, and videotaped interactions of family, siblings alone, and parents alone dealing with problem-solving and interaction tasks. Key measures of economic hardship, family distress, and parenting strategies have been developed to represent the pathways eventuating in successful and unsuccessful child outcomes (Elder, 1992). Some of the measures of strategies parallel those in the Philadelphia study.

The comparative perspective that the Rural Youth Study provides in relation to the other studies, which involve urban minority youth, is an especially valuable aspect of its contribution. Overall, its linkage of the macroeconomic environment to the family context and, in turn, to the adolescent, promises to illuminate the processes that compromise or promote successful adolescent development in circumstances of disadvantage.

Neighborhood Study

Unlike the studies described above, with their primary focus on the family or the school, the salient concern of the Neighborhood Study is with the immediate social ecology in which the other two institutions are located and with which they engage in important transactions. Despite a long tradition of attention to the neighborhood context, especially in sociology, the empirical yield has been disappointing (see Jencks & Mayer, 1990). In psychology, there has been almost no systematic articulation of ecological constructs, and social variation has been represented for the most part by "social address" measures such as socioeconomic status or father's education. In sociology, reliance has generally been placed on census tract information, which may not capture well the characteristics of the more immediate neighborhood and which is often very distal from adolescent behavior and development. The major aims of the Neighborhood Study were to advance the conceptualization of neighborhood beyond the census tract approach; to consider alternative neighborhood units, including block groups and perceived neighborhoods; and to identify neighborhood characteristics that may constitute risks for the developing adolescent or may insulate the adolescent from those ecological risks.

The Neighborhood Study is being replicated in two different urban sites: one is Denver, Colorado, where the lead investigator is Delbert S. Elliott, and the other is Chicago, Illinois, where the lead investigator is William J. Wilson. Collaboration has involved Albert Bandura, Thomas D. Cook, and Frank F. Furstenberg, Jr. Both sites include inner-city areas of concentrated poverty as well as more middle-class areas in order to achieve a range of variation in neighborhood characteristics. In Chicago, the areas are predominantly Black in residential population, whereas in Denver there are samples of Hispanic and White residents as well. Measures have been developed for neighborhood characteristics that have theoretical relevance for adolescent development—resources, social networks and social integration, informal social controls, normative consensus, legitimate and illegitimate structures of opportunity—as well as measures of psychosocial orientations and of behavior of both the parents and the adolescents in the neighborhoods.

In both studies, data were collected from probability samples of households in the designated urban areas. The first data wave in Denver was collected in 1989, and additional data waves took place in 1990 and 1991, providing measures of neighborhoods over time that enable examination of neighborhood development or change. In the Chicago site, a single data wave was carried out in 1991.

The study's conceptual and methodological contributions to an understanding of the neighborhood context and of the most appropriate ecological unit to represent it should help move this topic beyond the impasse it has been facing in behavioral science. In addition, the research on neighborhood context should add to understanding of how high-risk settings affect adolescent development and what neighborhood factors can enhance or compromise success.

Other Studies

Limitations of space preclude more than mention of other studies that have been carried out or are in the planning stage. A qualitative, ethnographic study of low-income housing projects in New York City's Harlem section was undertaken for the network by two colleagues at the City University of New York, Terry Williams and William Kornblum, and work on the role of racial and ethnic status and identity in adolescent development is currently being formulated by Marta Tienda and Jacquelynne S. Eccles in association with others. Finally, mapping the transition to young adulthood is the major item on the network's agenda for its next phase of research activity.

Conclusion

The emerging paradigm of developmental behavioral science reflects profound and pervasive changes in the way psychologists are addressing research on adolescence. Increasingly, research questions are being drawn from the concrete reality of social life rather than from the abstract preoccupations of disciplinary tradition. Interdisciplinary collaboration is more readily being sought to provide a firmer grasp on the complexity of adolescent development. Such collaboration is helping psychologists to incorporate contextual variation in their formulations, sociologists to gain a deeper appreciation of individuality, and both to grasp the dynamic linkages between society and persons.

The question that has animated the Research Network on Successful Adolescent Development Among Youth in High-Risk Settings is indeed concrete: How can we understand the process by which young people make

it despite the adversity they face in terms of poverty, limited opportunity, and racial and ethnic discrimination? In trying to answer that question, the network has begun to implement the research imperatives of developmental behavioral science. The diverse studies described in this article all seek to converge on illuminating the process of making it. They represent what has been accomplished thus far, but they remain preliminary to the more systematic and comprehensive endeavor that lies ahead. The hope is that the knowledge ultimately gained will advance understanding about adolescent development and suggest to policymakers the social interventions that would enable more disadvantaged youth to traverse adolescence successfully.

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