1 Early childhood intervention: 
The evolution of a concept

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The field of early childhood intervention is a model of remarkable accomplishment and unfulfilled opportunity. Its agenda ranges from scholarly reflection to service delivery. Its successes include specialization as well as enhanced cross-disciplinary collaboration. Its unmet challenges are both theoretical and pragmatic. And it draws upon a wide range of intellectual resources in child and family development, education, health, economics, social policy, and philosophy.

In recent testimony before the Senate Committee on Labor and Human Resources and the House Committee on Education and Labor, David Hamburg, president of the Carnegie Corporation of New York, closed with the following remarks:

What we do early in life lays the foundation for all the rest. The early years can provide the basis for a long, healthy life-span. Early preventive intervention can be exceptionally valuable. Health and education are closely linked in the development of vigorous, skillful, adaptable young people. Investments in health and education can be guided by research in biomedical and behavioral sciences in ways likely to prevent much of the damage now being done to children. We have learned a lot in recent years about ways of preventing damage to children – prenatal and perinatal care, early education, immunization, nutrition, and much more. The great challenge now is to be sufficiently resourceful and persistent to find ways of putting that knowledge to use for healthy child development in a rapidly changing socio-technical context. If there is a more fundamental task for human beings, I wonder what it could be (Hamburg, 1987, pp. 49–50).

That task – to merge the knowledge and insights of scholars and practitioners with the creative talents of those who design and implement social policy initiatives, and to invest the products of such an alliance in the future of our children – reflects the fundamental purpose of early childhood intervention.

The concept of support for infants and young children would seem, at first glance, to generate little controversy. One would think that a child with a disability, or one whose early life experiences are dominated by the material deprivations of poverty, or by the caregiving of a disorganized, isolated, or abusive parent, would be the uncontested beneficiary of adequately funded public services. Indeed, many have proposed that the allocation of resources for this most vulnerable and most disenfranchised group within our population should be based on its moral imperative alone (e.g., Caldwell, 1986; Edelman, 1987; Schorr, 1988; Turnbull & Turnbull, 1985). Nevertheless, evidence is emerging that an “investment” in young children will also return monetary dividends in the form of decreased subsequent need for such costly services as special education,
custodial care, welfare support, and incarceration for delinquent behavior (Barnett, 1985; Barnett & Escobar, this volume).

Despite its intrinsic appeal, however, the field of early childhood intervention has not been embraced uniformly or supported consistently. It has endured battles over the delineation of its goals and objectives (Clarke & Clarke, 1976; Ferry, 1981), the specification of program models and methods (Anastasiow & Mansergh, 1975), and the selection of service providers and recipients (Bricker & Slentz, 1988). It has tried to respond to the challenge to document its effectiveness while struggling with the methodological and logistical constraints of inadequate outcome measures, unavoidable sample attrition, limited funds to sustain long-term longitudinal studies, and ethical barriers to the maintenance of untreated control groups of children with documented problems (Meisels, 1985; Shonkoff, Hauser-Cram, Krauss, & Upshur, 1988).

This chapter is divided into three sections. The first explores the diverse origins of the field of early childhood intervention prior to the 1960s. The second section provides an overview of the dramatic advances of the past three decades. Finally, the chapter closes with an examination of the conceptual and programmatic challenges of the future.

The history of early childhood intervention in the United States illustrates the power of an idea that has evolved over time. Whereas its early roots were established in a variety of fields that have converged in recent years, its theoretical foundation continues to mature as it gains from both the successes and the disappointments of its pioneers. Standing on the threshold of the final decade of the twentieth century, the concept of early childhood intervention faces a formidable array of political, bureaucratic, and theoretical challenges and opportunities. Its antecedent pathways and their links to the tasks of the present and the future are the focus of this chapter.

HISTORICAL ROOTS AND EARLY FOUNDATIONS

The overall framework of contemporary early childhood intervention has evolved from multiple perspectives. The first part of this chapter will focus on the historical contributions of four discrete fields: early childhood education, maternal and child health services, special education, and child development research.

Early childhood education

The intellectual roots of early childhood education are often traced to the relatively recent historical recognition of childhood as a unique period in life and to the writings of the European philosophers of the seventeenth and eighteenth centuries (Aries, 1962). Comenius (1592–1670) characterized the “School of the Mother” as the most appropriate vehicle for education in the first six years of life and advocated that the child learn “spontaneously...in play whatever may be learned at home” (Eller, 1956, p. 116, cited by Clarke-Stewart & Fein, 1983). Locke (1632–1704) popularized the notion of the tabula rasa, suggesting that children from birth are a blank slate, thereby challenging the commonly held concept of genetically predetermined behavior and competence. Rousseau (1712–1778), an even stronger advocate of the unspoiled nature of the child, urged a laissez-faire approach to the early childhood years in order to allow for the natural unfolding of individual talents. These views were largely echoed by the nineteenth century educational experiments of Tolstoy (1967) and by those of A. S. Neill (1960) in more recent years. In contrast to the humanistic attitudes toward child
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development that emerged in Europe, however, child-rearing practices in the American colonies during the seventeenth and eighteenth centuries were dominated by a harsh puritan influence that focused on the central goal of spiritual salvation and advocated rigid discipline in early education to counteract the inborn "sinful" tendencies of young children (Greven, 1973; Wishy, 1968).

KINDERGARTEN. The first formal kindergarten classes, which were based on a philosophy grounded in traditional religious values and in a belief in the importance of learning through supervised play, were established in Germany by Friedrich Froebel in the early 1800s. During the latter half of the nineteenth century, these ideas were transported across the Atlantic and stimulated the proliferation of experimental programs throughout the United States. Shortly after the first public school kindergarten was established in St. Louis in 1872, the National Educational Association made an official recommendation that kindergarten become a regular part of the public school system (Peterson, 1987).

The social context in which the kindergarten movement began in the United States was molded by the interactive influences of industrialization, urbanization, and secularization. With much early support coming from private agencies and philanthropic groups, advocates of formal kindergarten programs emphasized the potential benefits for poor children and focused particularly on those who had recently immigrated to the United States and were living in urban slums (Braun & Edwards, 1972).

Within a few decades of its early popularization in the United States, however, the kindergarten movement was beset with a series of battles over goals and curricula. Traditionalists remained loyal to the philosophy of Froebel and defended their value-driven educational practices. In contrast, reformists worked to liberalize the kindergarten experience and looked beyond its moralistic foundation to the emerging discipline of child psychology for more empirically derived principles based on the systematic observations, data collection, and analyses of early child development researchers (Hill, cited in Braun & Edwards, 1972). During the early 1900s, the developmental approach to early childhood curriculum advocated by G. Stanley Hall and the pragmatic emphasis on the functional purposes of education promoted by John Dewey were particularly influential.

As research about the developmental process progressed, and as social and political forces shifted, sharp disagreements over the goals of kindergarten have persisted throughout the twentieth century. Its primary objectives continue to alternate between an emphasis on early academic achievement and the nurturing of noncompetitive social and emotional development. Although publicly supported programs are not yet available in all parts of the country, kindergarten is considered a standard component of the American educational system, and it has become an important vehicle for introducing ideas about childhood development into the educational mainstream.

NURSERY SCHOOLS. Nursery schools, like kindergarten, originated in Europe. The first nursery school in London was established by Rachel and Margaret MacMillan, who began in 1910 with a health clinic that was later expanded into an open-air school. The mission of this experimental program was to provide comprehensive, prevention-oriented services to meet the social, physical, emotional, and intellectual needs of young children. Unlike the religious orientation of Froebel's kindergarten, the MacMillan's' curriculum was based on secular social values and focused on the development of self-care, individual responsibility, and educational readiness skills (Peterson, 1987).
While the MacMillans were developing their model of early medical-educational intervention in England, Maria Montessori was opening the first nursery school in the slums of Rome. A physician and former director of an institution for mentally retarded children, Montessori applied the methods she had developed for training children with retardation to the preschool education of nondisabled, urban, poor children. The Montessori method departed significantly from traditional early childhood curricula in its emphasis on individualized self-teaching by children within a carefully prepared classroom environment.

The initial introduction of the Montessori approach to preschool education in the United States had minimal impact, as it was lost amidst the battles then being waged among the Froebelian conservatives, the liberal-progressive adherents of the philosophy of Dewey, and the newly emerging “American” positivism championed by such prominent psychologists as Thorndike and Kilpatrick (Braun & Edwards, 1972). Consequently, interest in the Montessori method remained essentially dormant in the United States until the 1960s. The relatively recent rise in its popularity has, however, been greatest among the middle classes, rather than among those who work with poor or disabled children — the populations for whom the method was originally designed (Peterson, 1987).

The nursery school movement first began to gain popularity in the United States in the 1920s based upon an adaptation of the MacMillans' model, an adaptation that attached a great deal of importance to parent involvement within the school program. In contrast to the kindergarten focus on school readiness, early nursery school programs were designed to nurture exploration and to facilitate the social-emotional development of children. By the early 1930s, approximately 200 nursery schools existed in the United States, half of which were associated with colleges and universities, including some of the most productive child development laboratories in the country. The remainder of the programs were operated as private schools or were sponsored by child welfare agencies (Peterson, 1987).

During the depression (1930s), the number of nursery schools increased dramatically as federal relief programs were developed to subsidize unemployed teachers. With the onset of World War II, the need for women to work in defense plants led to further expansion of the schools and to the establishment of federally supported day-care centers under the Lanham Act of 1940 (Morgan, 1972). Prior to this period, day-care services were utilized primarily by the working poor. The employment of large numbers of middle-class women to support the war effort blurred the distinctions between day-care programs and nursery schools. After the war ended, however, federal support for child care terminated, large numbers of women left the work force to raise families, and many programs closed. Without public resources, nursery schools drifted from their early mission of serving poor children and became increasingly available only to those who could afford private tuition.

In recent years, as women have chosen or been compelled by circumstances to combine both child rearing and employment outside the home, the distinctions between child-care programs and nursery schools have become blurred once again. In this social context, the debate about the balance between “care” and “education” in the early preschool years has resumed (see Kahn & Kamerman, 1967; Provence, Naylor, & Patterson, 1977).

**Summary.** An examination of the historical roots of early childhood education in the United States tells us much about our enduring traditions and changing values. First, it
Early childhood intervention: The evolution of a concept reveals a willingness to explore ideas that were developed in other societies and a determination to adapt them to our own perceived needs. Second, it emphasizes the extent to which the interests of young children and their families are always addressed within the constraints of concurrent political and social demands. Third, it highlights the degree to which early childhood programs have alternatively been developed to meet the particular needs of poor children or middle-class children and their families. Finally, it underlines the extent of inevitable overlap that exists among the generic health, educational, and social needs of all young children regardless of socioeconomic status.

Early childhood intervention services have been influenced significantly by our history of education for young children prior to traditional school entry. The central features of these early programs that have become firmly embedded in current intervention efforts include a child-centered curriculum focus; an emphasis on early socialization of the child outside of the family; an enhanced understanding of child development and the practical applications of developmental theory; and a belief in the importance of the early years as a foundation for later social, emotional, and intellectual competence. This conceptual legacy, in conjunction with the wealth of materials, resources, and techniques that have been refined over the years, is woven throughout the day-to-day activities of contemporary early intervention programs.

Maternal and child health services

In much the same way that the industrialization and secularization of the nineteenth century provided fertile ground for the development of new concepts in early childhood education, persistently high mortality rates among young children promoted greater concern for their physical health. In fact, many pediatric authorities in the late 1800s urged a de-emphasis on educational stimulation before 5 years of age to prevent the diversion of "vital forces" from activities that promoted physical well-being (Griffith, 1895; Holmes, 1857). In a classic textbook, one of the most prominent pediatricians at the turn of the century wrote,

Great injury is done to the nervous system of children by the influences with which they are surrounded during infancy, especially during the first year... Playing with young children, stimulating to laughter and exciting them by sights, sounds, or movements until they shriek with apparent delight may be a source of amusement to fond parents and admiring spectators, but it is almost invariably an injury to the child... It is the plain duty of the physician to enlighten parents upon this point, and insist that the infant shall be kept quiet, and that all such playing and romping as has been referred to shall, during the first year at least, be absolutely prohibited (Holt, 1897, p. 9).

The Children's Bureau. In 1912, in an attempt to address the widespread problems of high infant mortality, poor physical health, and exploitation of working children, Congress established a Children's Bureau in the Department of Labor "to investigate and report... upon all matters pertaining to the welfare of children and child life among all classes of our people" (quoted in Lesser, 1985, p. 591). In its first annual report, the Bureau acknowledged its responsibility to serve all children, but noted that particular attention would be focused on "those who were abnormal or subnormal or suffering from physical or mental ills" (Bradbury, 1962, cited in Lesser, 1985, p. 591). Based on a decision to emphasize the concept of prevention, and having addressed the issue of infant mortality as the object of its first investigation, the
Children’s Bureau proceeded to conduct early studies in such subject areas as day care, institutional care, mental retardation, the health of preschool children in selected cities, and the care of “crippled children” (Lesser, 1985).

As the first official acknowledgment of a federal responsibility for children’s welfare, the establishment of the Children’s Bureau provided a foundation for governmental data collection and federal grants to promote the health and development of the nation’s most vulnerable children. In its earliest studies, the bureau highlighted striking correlations between socioeconomic factors and infant and maternal deaths. These data established a firm justification for programs supported by the Sheppard-Towner Act during the 1920s that increased public health nursing services and stimulated the creation of state child hygiene divisions and permanent maternal and child health centers throughout the country (Steiner, 1976).

Although the development of programs for children with disabilities progressed more slowly than services for those who were poor, data collected by the Children’s Bureau through its state surveys served to highlight marked unmet needs in this area as well. Consequently, the 1930 White House Conference on Child Health and Protection recommended that federal funds be made available to each of the states to establish programs for “crippled children” that reflected cooperation among medical, educational, social welfare, and vocational rehabilitation agencies to provide a comprehensive array of diagnostic and treatment services (Lesser, 1985).

**Title V.** When the Social Security Act was enacted in 1935, the importance of a federal responsibility for the well-being of children and their mothers was reinforced explicitly. Title V of that landmark legislation contained three major components that established the framework for resource allocation and program development that has influenced national health policy for children over the succeeding half century (see Magee & Pratt, 1985).

Part I (Maternal and Child Health Services) authorized financial assistance to states to develop services designed to promote the general health of mothers and children, with special emphasis on program initiatives for rural and economically depressed areas. The most common activities supported by such funds included prenatal care, well baby clinics, school health services, immunization programs, public health nursing and nutrition services, and health education.

Part II (Services for Crippled Children) created the first federal program to provide matching funds for states to deliver medical services to a targeted patient group. The law was clear in its intent to develop a comprehensive service system, including case finding, diagnosis, treatment, and follow-up care. The prevention of “crippling” diseases and the amelioration of secondary handicaps were highlighted as central goals, and each state was required to promote cooperative efforts between health and welfare groups in order to achieve such ends. The definition of crippled children was left to the states, and although more than three-quarters of those who received services in the 1920s and 1940s had orthopedic problems, by the mid 1950s that proportion had dropped to less than 50% as increasing numbers of children with other chronic disabilities (e.g., heart disease, seizure disorders, etc.) were identified.

Part III (Child Welfare Services) of the Title V program authorized funding to state welfare agencies to develop programs (especially in rural areas) for the care and protection of homeless, dependent, and neglected children, and children considered to be in danger of becoming delinquents (Lesser, 1985).

In 1939, nonmatching Title V funds were appropriated for “special projects of
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Regional and national significance (SPRANS grants) to enable states to develop innovative programs beyond the core of mandated services. Subsequently, these grants provided support for such wide-ranging initiatives as improved care of premature infants, training of professionals, and applied research on children with a wide variety of chronic illnesses and disabling conditions, including sensory impairments, seizure disorders, and congenital heart disease.

EPSDT. In 1965, the Medicaid provisions of the Social Security Act were signed into law in order to improve the quality and accessibility of medical services for all those living in poverty. Although designed primarily as a medical reimbursement program to be administered by the states and jointly financed by state and federal funds, Medicaid does include mandated programs that reflect specific federal interest in early childhood intervention for poor children. One of the best known of these efforts is the Early and Periodic Screening Diagnosis and Treatment Program (EPSDT).

EPSDT was initiated in the late 1960s as part of a national effort to improve the health and welfare of poor children. It mandated the early and periodic medical, dental, vision, and developmental screening, diagnosis, and treatment of all children and youth under 21 years of age whose families qualified for Medicaid eligibility. One of the incentives for formulating and enacting this new program was a recognition of the prevalence of a range of apparently preventable problems among the nation's youth (Foltz, 1982). Thus, EPSDT was designed to assure early identification of such problems and to provide funds for subsequent intervention. Indeed, this program was conceived as an attempt to break the cycle of poverty, to remedy the health consequences of uneven economic circumstances, and to improve poor children's health by providing services designed to have a high payoff in later health and welfare (Meisels, 1984). Unfortunately, however, EPSDT's record of success has been very uneven, and recent analyses of its effectiveness suggest that major changes should take place in its formulation and organization (Foltz, 1982; Margolis & Meisels, 1987; Meisels & Margolis, 1988).

Summary. Unlike education, which is accepted as a traditional responsibility of state and federal government, health care services in the United States are provided by a complex amalgamation of public and private resources and delivery systems. Thus, any attempts on the part of the federal government to regulate or otherwise influence the organization or delivery of medical services are always met with some degree of organized opposition and/or noncompliance in the private sector. In this context, the early history and subsequent growth of publicly supported maternal and child health and crippled children's services is striking. Indeed, it reflects a powerful and persistent underlying consensus within the American political system that the care and protection of the health of children is too important to be left to the "wisdom" of the free market, particularly for those who are poor or those who have a chronic disabling condition.

Special education

The history of special education services for children with disabilities provides a third lens through which we can examine the evolution of early childhood intervention services. In ancient times, young children with physical anomalies or obvious disabilities were often the victims of active or passive euthanasia. During the Middle Ages and succeeding centuries, retarded individuals were either tolerated as court jesters or street...
beggars (see Aries, 1962), or were imprisoned or otherwise institutionalized (see Chase, 1980).

Most historical overviews of the field of special education begin with the attempts by Itard, in the late eighteenth century, to teach the “wild boy of Aveyron,” using a set of sensory training techniques and what is currently characterized as behavior modification. However, Itard’s student, Edouard Seguin, is generally acknowledged as the most important pioneer in this field. As director of the Hospice des Incurables in Paris, Seguin developed a “physiological method of education” for disabled children. This method was based on a detailed assessment of individual strengths and weaknesses and a specific plan of sensorimotor activities designed to correct specific difficulties. Through painstaking observations Seguin described the early signs of developmental delay and emphasized the importance of early education (Crissey, 1975). As noted earlier, his methods were later adapted by Montessori for the education of poor preschool children in Rome.

Seguin’s pessimism about the benefits of special education initiated later in life was complemented by his belief in the critical importance of early intervention. He stated, “If the idiot cannot be reached by the first lessons of infancy, by what mysterious process will years open for him the golden doors of intelligence” (quoted in Talbot, 1964, p. 62). Seguin was, indeed, one of the first “early interventionists.”

RESIDENTIAL PLACEMENTS. Inspired by Seguin’s work in Paris, educational programs for persons with mental retardation proliferated throughout the world during the early 1800s. In the latter half of the nineteenth century residential institutions were built in the United States and, stimulated by Seguin’s immigration to this country, his teaching techniques were incorporated into many of these newly opened facilities. In 1876, the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons was formed, with Seguin as its first president, to provide a mechanism for communication among those interested in the education of mentally retarded persons. (In 1906, the name of the organization was changed to the American Association for the Study of the Feeble-Minded; in 1933, it was changed again to the American Association on Mental Deficiency; and in 1987, the name was changed for the third time – reflecting contemporary changes in attitude – to the American Association on Mental Retardation.) By the end of the nineteenth century, residential institutions in the United States were well established, highly invested in the development of teaching strategies, and firmly committed to the integration, albeit in limited form, of disabled persons into community life (Crissey, 1975).

In the early decades of the twentieth century, however, residential institutions changed their mission from training and planned social integration to custodial supervision and isolation. Among the forces that influenced this dramatic shift were the activities of such prominent psychologists as Henry Goddard and Louis Terman, who embraced the prejudices of the eugenics movement and employed the newly developed technology of individual intelligence testing to identify target groups for discrimination, if not systematic exclusion, from American society (Chase, 1980). Data providing “scientific validation” of the link between mental retardation and criminal behavior were disseminated, and intelligence test scores were used to justify the legislation of racist immigration restrictions and compulsory sterilization procedures for the “mentally defective” (Kamin, 1974). Harsh rhetoric from the psychology community challenged the early optimism of special education, and residential institutions were transformed into dreary warehouses for neglected and forgotten individuals.
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PUBLIC SCHOOL PROGRAMS. In the public schools, the development of special education programs began slowly and served relatively small numbers of children. Youngsters with moderate to severe disabilities were either sent to institutions or were kept at home, while most children with mild disabilities were simply enrolled in regular classes from which they ultimately dropped out at very high rates. During the depression and the war that followed, special education resources for the public schools were curtailed, and greater reliance was placed on already overcrowded and educationally limited residential institutions.

During the postwar period, children with disabilities began to receive more benevolent attention. This renewed interest in the needs of developmentally vulnerable youngsters was stimulated in part by the results of massive testing of military personnel during World War II, which revealed the striking prevalence of young men and women with physical, mental, or behavioral disabilities. It was also stimulated by changes in societal attitudes toward disabled persons, in general, brought about by the large numbers of war veterans who returned with physical disabilities. In 1946, a Section for Exceptional Children was established within the United States Office of Education, which later (in 1966) became the Bureau of Education for the Handicapped and then (in 1980) the Office of Special Education and Rehabilitation Services. By the late 1950s, legislation at both the state and federal levels was beginning to promote greater access to special education for wider segments of the population.

SUMMARY. Shifts in attitudes and practices regarding the education of children with disabilities have been described in evolutionary terms by Caldwell (1973), who identified three major historical periods. The first, labeled “Forget and Hide,” refers to the practice in the first half of this century through which handicapped children were kept out of public view presumably to avoid embarrassing their families. The second period corresponds to the prevailing attitudes of the 1950s and 1960s, and is called “Screen and Segregate.” In this period, children with disabilities were tested, labeled, and then isolated once again in special facilities, based on the assumption that they needed protection and could not function independently in the mainstream. Caldwell named the third period “Identify and Help.” Beginning in the mid-1970s, with the passage of landmark special education legislation and continuing to the present day, this stage has been marked by efforts to screen for special needs in the early years of life in the hopes of providing appropriate intervention services at as young an age as possible. The goals of this era are to contain the consequences of disabling conditions, prevent the occurrence of more severe disorders, assist the families of children with disabilities, and increase the opportunities for all children to grow to their full potential.

Child development research

Although fundamental decisions regarding program design and resource allocation are typically motivated by sociopolitical considerations, the evolving conceptual context of early childhood services has been influenced substantially by the scholarly study of the development of young children. Thus, a fourth lens through which the history of early childhood intervention can be examined focuses on the contributions of the academic child development community. Despite the fact that a comprehensive overview of the history of child development research is beyond the scope of this chapter, a brief mention of several influential theoretical and empirical contributions is essential. In this
regard, two critical research themes will be addressed: the nature-nurture controversy and the importance of the caregiver-child relationship.

The Nature-Nurture Debate. Interest in the determinants of competence in young children is a relatively recent phenomenon. Although systematic evaluations of the emerging abilities of infants were conducted by a New Orleans physician in the late nineteenth century (Chaille, 1887), the cataloging of early achievements and the methods of childhood assessment were not well developed until the early decades of the twentieth century.

The dominant figure in the emerging field of child developmental evaluation was Arnold Gesell, a pediatrician and psychologist. As the director of one of several child study centers supported by the Laura Spelman Rockefeller Memorial Fund, Gesell conducted extensive studies of the skills of normally developing children, the abilities of youngsters with Down syndrome, and the developmental accomplishments of those who were born prematurely or who sustained perinatal injuries (Gesell, 1925, 1929). His observational methods produced a wealth of data that continue to influence the construction of developmental assessment instruments to this day.

Gesell's theoretical orientation was clear, and his impact on the clinical study of children was enormous. He was a staunch believer in the primacy of biologically determined maturation. His disdain for the relative impact of experience on the developmental process was striking, and the possibility of altering that process through early intervention was viewed as futile. The conceptual legacy of Gesell's maturational perspective was a linear model of human development that was used by clinicians to predict long-term outcomes based on the rate of acquisition of specific developmental milestones in early infancy. During the 1950s, this model was linked to the growing recognition of a correlation between adverse perinatal events and later neurodevelopmental disorders, which resulted in the popularization of an influential paradigm of biological determinism known as the "continuum of reproductive casualty" (Lilienfeld & Parkhurst, 1951; Lilienfeld & Pasamanick, 1954).

As the maturational view of development attracted support during the first half of the twentieth century, its influence was countered by the comparably powerful concepts of behaviorism. The behaviorists believed that in the absence of significant brain damage, developmental outcomes in children are controlled largely by environmental forces. One of the most eloquent early spokespersons for this interventionist approach to human development was John B. Watson, a prominent psychologist, who wrote, "Since the behaviorists find little that corresponds to instincts in children, since children are made not born, failure to bring up a happy child, a well adjusted child - assuming bodily health - falls upon the parents' shoulders. The acceptance of this view makes child rearing the most important of all social obligations" (Watson, 1928, p. 8).

The controversy over the relative impact of nature and nurture on the developmental process in early childhood has been an enduring one. While the maturationalists championed the belief in biological determination, the behaviorists advocated the tenets of operant conditioning and environmental manipulation. Each position has had strong support. Yet, when examined in isolation, both perspectives have been found to be quite limited.

With the advent of Piaget's "cognitive revolution" in the fifties and sixties (Cairns, 1983), the stage was set for a rapprochement between the polarities nature and nurture. This was facilitated by a recognition that biological and social factors in development mutually influence one another, thereby creating a need to go beyond the traditional
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nature-nurture debate. In fact, research findings even led some scholars to adopt the paradoxical position that all behavior is completely inherited as well as completely determined by experience. As Goldberg (1982) noted, "Unless capacities for behavior are inherited, a behavior can never occur (e.g., chimpanzees will never talk regardless of what experiences are provided). But... the actual occurrence of behavior depends on appropriate experience (e.g., a human infant will not learn to speak without hearing the speech of others)" (pp. 35–36). In other words, many researchers began to acknowledge that the distinctions between biological and social explanations for developmental outcomes are, if not arbitrary and incomplete, at least ambiguous.

One of the most influential conceptualizations of the reciprocal relationship that exists between nature and nurture was articulated by Sameroff and Chandler (1975). In a challenge to the previously popular paradigm of a "continuum of reproductive casualty," they formulated the notion of a "continuum of caretaking casualty" to describe the transactional effects of familial, social, and environmental factors on human development. In Sameroff's (1975) terms, "Although reproductive casualties may play an initiating role in the production of later problems, it is the caretaking environment that will determine the ultimate outcome" (p. 274). For the field of early childhood intervention, acceptance of the transactional model of development meant that biological insults could be modified by environmental factors, and that developmental vulnerabilities could have social and environmental etiologies. This focus on the bidirectionality of social and biological factors proved to have a major impact on both research and service delivery.

The Importance of Early Relationships. As the child development community first began to explore the process through which developmental outcomes could be affected by the child-rearing environment, a number of investigations were launched to study the adverse consequences of deprivation in early human relationships. Guided by a psychoanalytic framework, these ground-breaking "natural experiments" first focused attention on the effects of institutionalization on the cognitive and socioemotional development of infants (Provenoe & Lipton, 1962; Spitz, 1945). Such studies documented the developmentally destructive impact of the sustained isolation and understimulation typical of life in many orphanages, poorly staffed hospital wards, and other institutional settings. The features of this syndrome, which Spitz (1945) characterized as "hospitalism," included growth retardation, maladaptive social relationships, and health-related problems in young, otherwise normal children.

A complementary set of seminal studies in this area focused on the degree to which the developmental sequelae of early deprivation are modifiable. Beginning with a classic experiment on children who were institutionalized for mental retardation (Skeels & Dye, 1939), investigators manipulated living arrangements and levels of stimulation for a range of institutionalized populations and demonstrated that a responsive and stimulating environment could reverse the effects of negative, isolated, and otherwise deleterious experiences in early infancy (Dennis, 1960, 1973; Skeels, 1966). The growing empirical literature generated by such studies highlighted the malleability of early human development, thereby establishing a rationale for intervention within the early years of life (also see Kirk, 1958).

On a conceptual level, the work of John Bowlby provided a theoretical framework for the empirical findings of the early deprivation studies. With support in the 1950s from the World Health Organization, Bowlby investigated the problems of homelessness and maternal deprivation, and examined their consequences for mental health in children.
In his classic monograph on maternal and child health, Bowlby (1951) called attention to the critical importance of the mother-child relationship for healthy child development. His subsequent formulation of the construct of attachment provided a theoretical foundation for the development over the ensuing decades of critically important studies of the socioemotional adaptation of young children (Ainsworth, 1969; Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969; Bretherton & Waters, 1985; Sroufe, 1982).

Much of the empirical research that demonstrated the marked influence of the caretaking environment and thereby supported the validity of the transactional model of development emerged from a number of landmark longitudinal studies that were initiated in the 1950s and 1960s. Two of these investigations focused on the growth and development of large birth cohorts; the others delineated the emerging abilities of young children with specifically defined risk factors.

The most extensive longitudinal data on the developmental impact of biological and social risk factors in a birth cohort were generated by the Collaborative Perinatal Project of the National Institute of Neurological Diseases and Blindness, which enrolled a national sample of more than 53,000 pregnant women and followed their children through the early school years (Broman, Nichols, & Kennedy, 1975). A second, remarkably rich investigation, known as the Kauai Studies, collected longitudinal data from the neonatal period through adulthood on more than 1,000 children born on the Hawaiian island of Kauai (Werner, Bierman, & French, 1971; Werner & Smith, 1977, 1982). The major findings of both studies documented the significant influence on developmental outcomes of maternal education and the quality of the caregiving environment, except in cases of severe brain damage.

A number of pioneering prospective studies of the development of infants with documented risk factors or diagnosed disabilities were similarly enlightening. Investigations of young children with histories of perinatal anoxia, for example, revealed the extent to which adverse neurological sequelae were often found to be transient, as many at-risk children displayed normal development over the ensuing preschool years (Graham, Ernhart, Thurston, & Craft, 1962; Graham, Pennoyer, Caldwell, Greenman, & Hartmann, 1957). Similarly, detailed longitudinal assessments of young children with such diagnosed developmental disorders as Down syndrome and phenylketonuria (PKU) provided reliable databases for assessing individual outcomes, highlighted the extent to which levels of disability varied within diagnostic categories, and demonstrated the limitations of early developmental predictions (Fishler, Graliker, & Koch, 1964; Share, Webb, & Koch, 1961).

The data generated by these diverse studies contributed important insights to the growing interest in early intervention services for vulnerable children. The process of development was found to be complex and transactional, and it was becoming increasingly clear that outcomes are mediated by the mutual effects of both nature and nurture (see Beckwith, this volume; Garbarino, this volume; Shonkoff & Marshall, this volume; Werner, this volume).

SUMMARY. During the early decades of the twentieth century, questions regarding child development were framed within relatively simple paradigms that reflected the competing influences of organic endowment and individual experience. Subsequent research on the development of young children extended our knowledge of the essential transactional nature of the developmental process and of the potential benefits of early intervention services. The degree to which the quality of the caregiving environment
Early childhood intervention: The evolution of a concept was demonstrated to influence the effects of biological risk factors provided substantial support for the development of intervention strategies to modify that environment. The design of such interventions has reflected a range of conceptual perspectives and has been based on a wide variety of empirically and theoretically based practices (see Anastasiow, this volume; Greenspan, this volume; Sameroff & Fiese, this volume; Vincent, Salisbury, Strain, McCormick, & Tessier, this volume).

THREE DECADES OF GROWTH AND DEVELOPMENT

The philosophical and pragmatic roots of early childhood intervention prior to the 1960s emerged from a variety of sources. In each domain – early childhood education, maternal and child health, special education, and child development research – interactions between professional expertise and sociopolitical exigencies helped to lay a foundation for the educational, psychological, public health, and public policy developments of the last thirty years. Among the themes that persisted through the early years, despite the occasional opposition they encountered, are a belief in the responsibility of society to provide care and protection for young children; a commitment to the special needs of children who are particularly vulnerable as a result of a chronic disabling condition or as a consequence of growing up under conditions of poverty; and a sense that prevention is better than treatment and that earlier intervention is better than later remediation. These three themes reflect the spiritual origins of early childhood intervention. They provide an organizing framework for examining the major initiatives that have unfolded during the last three decades and that are likely to influence the field in years to come.

The sixties: a broad agenda with an ambitious promise

The decade of the 1960s marks the beginning of the modern era in early childhood intervention. It was a time of optimism and creative program development. Public support for investing in human services was broad based, and resources flowed from the federal government to promote the achievement of ambitious social goals. Within this context the convergence of several critical social issues served to frame the agenda for early childhood services. These included President Kennedy’s interest in mental retardation, the political impact of the civil rights movement, and President Johnson’s commitment to wage war on the sources and consequences of poverty.

Due in part to his family’s personal experience with mental retardation, John F. Kennedy in 1961 appointed a presidential commission to explore current knowledge in this area and to develop a national strategy of prevention. In 1963, the enactment of Public Law 88-156 provided new federal funding under Title V of the Social Security Act for special projects for children with mental retardation. Screening programs for inborn errors of metabolism, such as PKU, and Maternity and Infant Care Projects to help reduce the incidence of mental retardation caused by complications of childbirth, are examples of such projects.

As the decade opened with President Kennedy’s interest in the prevention of mental retardation, it closed with President Johnson’s commitment to the educational needs of young children with disabilities. In 1968, the enactment of Public Law 90-538, the Handicapped Children’s Early Education Assistance Act, authorized funds to stimulate the development, evaluation, refinement, and dissemination of model demonstration programs for the education of disabled infants, preschoolers, and their parents.
Through grants to demonstration programs, and with the initiation of federal support to specialized university teacher-training programs, a new field of study was born.

Closely related to this new discipline of early childhood special education in many of its underlying principles, but distinct and separate in its political beginnings, the concept of early childhood intervention also received considerable support in the 1960s as a potential weapon in the war on poverty. As a result of the efforts of civil rights activists, progressive politicians, and social scientists, Americans became painfully aware of the extent of poverty in the United States and the degree to which the consequences of marked socioeconomic inequalities threatened the well-being of the nation (deLone, 1979). In its own analysis of the “poverty cycle” the President’s Panel on Mental Retardation echoed the prevailing stereotype of “cultural deprivation” as a major cause of recurrent, multigenerational retardation (Albee, 1968). Based on its belief that education was the key to breaking this cycle, the panel recommended the widespread establishment in economically disadvantaged communities of preschool programs designed to foster “the specific development of the attitudes and aptitudes which middle-class culture characteristically develops in children, and which contributes in large measure to the academic and vocational success of such children” (The President’s Panel on Mental Retardation, 1963, quoted in Zigler & Valentine, 1979, p. 12).

The theoretical rationale for proposals to intervene in the lives of disadvantaged children emerged from a growing body of evidence that questioned previous, widely accepted assumptions regarding the immutable, genetic determination of intelligence. Supported by the recently published scholarly work of J. McVicker Hunt (1961) and Benjamin Bloom (1964), social activists emphasized the powerful influence of experience on the development of competence in young children, and focused on the particular vulnerability and malleability of the first years of life. In the decade of social experimentation that followed, interactions between academic researchers and program developers flourished. “Experimental preschool programs were created in the laboratories of child development researchers and tested in communities across the country . . . Developmental psychologists were ready to change the world; their proposals to structure children’s experiences in ways different from those traditionally accomplished by untutored parents at home were made with enthusiasm and optimism” (Clarke-Stewart & Fein, 1983, p. 918).

In 1965, the most far-reaching experiment of the decade, Head Start, began as an 8-week pilot program for children in more than 2,500 communities around the country. Originally developed under the auspices of the Office of Economic Opportunity, it was elaborated under the leadership of Edward F. Zigler, a prominent academic psychologist who was appointed as the first director of the Office of Child Development. Head Start was based on a belief in the crucial impact of early childhood experiences on later development. Its founders assumed that socioeconomically impoverished environments contain biological (e.g., poor health and nutritional status) and experiential (e.g., understimulation and reduced motivation) risk factors that can affect early childhood adversely. They were convinced that compensatory programs in the preschool period could facilitate better school adjustment and performance for children who were disadvantaged by the consequences of poverty and social disorganization (Zigler & Valentine, 1979).

Head Start was conceived as a multidimensional, comprehensive service system designed to strike at the roots of disadvantage for poor families with young children (Zigler & Valentine, 1979). It harnessed the expertise of a broad array of professionals
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to provide educational, medical, dental, nutritional, psychological, and social services. It invested a great deal of energy in parent involvement at both the volunteer and decision-making levels and included training programs for low-income adults from the community to facilitate employment mobility. Head Start provided a bold and dramatic model for the field of early childhood intervention that continues to the present day (Peters & Kontos, 1987; Reese, 1985). Its insistence on combining health, education, and social services was critical. Its provisions for parent participation in both the classroom and on administrative policy committees was unprecedented in American education policy. Its approach to the client–professional relationship as a vehicle for shared decision making was revolutionary.

The achievements and political resilience of Head Start have been well documented (Hubbell, 1983; Zigler & Valentine, 1979). In its triumphs and in its disappointments it provides a microcosm of the sixties. The beneficial effects on children, families, and their communities have been extolled frequently (Lazar & Darlington, 1982). The program has not, however, resulted in the complete elimination of school failure, welfare dependency, delinquent behavior, or any of the other social consequences of poverty. Perhaps one of the greatest lessons that Head Start has to teach the field of early childhood intervention is that programs should establish explicit and realistic goals and objectives. The legacy of the sixties teaches us to be cautious about the promises we make, and it reminds us that there are no magic solutions to complex social problems.

The seventies: The political ascension of developmental disabilities

While much of the creative intervention energies of the sixties were channeled into the War on Poverty, the seventies witnessed a greater investment in the needs of children with disabilities. As the social and political upheavals of the previous decade subsided and the nation worried more about the effects of inflation on the middle class than about the effects of poverty on the development of young children, increased attention was focused on the social status and legal rights of persons with handicapping conditions (Gliedman & Roth, 1980).

Federally supported demonstration and outreach projects proliferated at a rapid rate (DeWeerd, 1981). Funds from both the Bureau of Education for the Handicapped and the Division of Maternal and Child Health supported multidisciplinary training programs at university-affiliated facilities across the country and produced new cadres of professionals to work with handicapped children. Early childhood special education became a higher priority as the demand increased for teachers of preschool children with special needs and as state departments of education began to develop guidelines for certification in this new area of specialization (Stile, Abernathy, Pettibone, & Wachtel, 1984).

In 1972, Public Law 92-424 (the Economic Opportunity amendments) mandated that all Head Start centers reserve at least 10% of their enrollment for children with identified disabilities. In 1973, the Division for Early Childhood (DEC) was established as a new entity within the Council for Exceptional Children (CEC), thereby reflecting the sense of a distinct professional identity felt by early childhood special educators. In 1974, the federal government earmarked separate funding for state implementation grants to assist states in the planning and development of services for infants and preschoolers with disabilities.

In 1975, with the passage of Public Law 94-142 (the Education for All Handicapped
Children Act), the right to a free and appropriate public education was established for all children of school age, regardless of the presence of a disability. This landmark legislation mandated the development of individualized education plans (IEPs) based on the results of a nondiscriminatory assessment, specified requirements for parent involvement in the construction of such plans, spelled out principles of due process for both children and parents in the planning and implementation of educational services, and articulated requirements that IEPs be carried out in the least restrictive environment (Singer & Butler, 1987). Although the provisions of P.L. 94-142 did not require states to offer services for infants, toddlers, or preschoolers with disabilities, the new federal law endorsed the importance of such services and provided financial incentives for states to serve children as young as 3 years of age. During this period of cautious interest in infant intervention, the National Center for Clinical Infant Programs (NCCIP) was founded in 1977 in an effort to focus the nation's attention on the needs of the very youngest children and their families.

Complementing their achievements in the area of public education, advocates for disabled persons borrowed some of the strategies used so successfully by civil rights groups during the sixties and brought their message to both the Congress and the court system in a battle to end discrimination on the basis of disability in all aspects of society (Gliedman & Roth, 1980). The first federal civil rights law specifically directed toward the rights of persons with disabilities (Public Law 93-112, the Vocational Rehabilitation Act, Sec. 504), which focused primarily on employment, was passed in 1973. The following year it was amended under Public Law 93-516 to establish rights for nondiscrimination in employment, admission into institutions of higher learning, and access to public facilities. Supportive legislation, multiple successful class-action suits, and a rising public consciousness about the injustice of discrimination against people with disabilities characterized much of the legacy of the 1970s.

The eighties: Governmental retrenchment and the formation of new alliances

The decade of the eighties began with a new national mandate based on a different set of values about the role of government. In 1981, the Omnibus Budget Reconciliation Act was passed by a coalition of politically conservative forces bent on reducing the investment of federal resources in social programs and shifting the responsibility for such efforts (and the concomitant financial burden) to the states. Thus, while Congress endorsed substantial reductions in federal taxes (in conjunction with the sharpest increases in military expenditures ever recorded during peacetime) many domestic programs began to be dismantled and others suffered significant decreases in funding (Edelman, 1987; Schorr, 1988). Formula grants to the states were consolidated into block grants, and overall appropriations for social programs were reduced. The newly conceived Maternal and Child Health Block Grant, for example, incorporated funding for eight categorical programs that previously received separate grants, with an overall budget reduction of 18% in the first 2 years (Lesser, 1985). The eight programs whose previous support was combined into a single block grant included crippled children's, maternal and child health, and genetic disease testing and counseling services; prevention programs for lead paint poisoning, sudden infant death syndrome, and adolescent pregnancy; hemophilia diagnostic and treatment centers; and Supplemental Security Income for disabled children. The immediate result of their consolidation in a block grant was the pitting of categorical programs against each other in a fight for a fair share of the smaller amount of government social spending.
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The fact that early childhood intervention programs survived the federal policies of the eighties attests to the depth of their political and social strength and to the breadth of their constituency groups. At a time when the war on poverty was all but eliminated from federal policy making, Head Start was included in the Reagan administration’s so-called safety net and continued to receive federal funds. In an era when presidential advisers talked about the advisability of abolishing the United States Department of Education, federal expenditures for the education of young children with disabilities continued to grow; and the most sweeping piece of legislation for disabled children since P.L. 94-142 was enacted, despite the opposition of the Secretary of Education and the threat of a presidential veto. The explanation for the survival of Head Start and for the continued progress of early intervention services for young children with disabilities is clear. Each developed and nurtured a powerful array of advocates and constituency groups both within and outside government. Moreover, the basic principles of early intervention for vulnerable children and their families had gained wide national support (Schorr, 1988).

As the 1980s come to a close and we enter the last decade of the twentieth century, our evolving conceptualization of early childhood intervention is best represented in both the spirit and the provisions of the Education for the Handicapped Act Amendments of 1986 (P.L. 99-457). The philosophy of service delivery that the new law prescribes, and the political energy that secured its enactment, reflect both a culmination of the work of the past and a blueprint for the tasks of the future.

Public Law 99-457

The Education for All Handicapped Children Act Amendments of 1986 is the most important legislation ever enacted for developmentally vulnerable young children. Proposed, passed, and signed into law within a 6-month period in 1986, the statute calls for “a statewide, comprehensive, coordinated, multidisciplinary, interagency program of early intervention services for all handicapped infants and their families” (P.L. 99-457, Sec. 671). Although the bill does not mandate universal services for all children younger than 6 years old, it strengthens incentives for states to serve 3–6 year-olds, and it establishes a discretionary program (Part H of the statute) that provides services for children from birth to 3 years.

Specifically, the bill contains three main provisions. The first part (Part H of the existing Education of the Handicapped Act) establishes the new discretionary program for states to facilitate the development of comprehensive systems of early intervention services for infants and toddlers with developmental delays or disabilities. Although such services are not required by the law, all states elected to begin planning activities, as prescribed in Part H (Campbell, Bellamy, & Bishop, 1988). The second part requires states, by the early 1990s, to provide free and appropriate public education and related services for all eligible children with disabilities from the age of 3 to the age of 5 in order to receive any federal preschool funds. The last part of the law reauthorizes a number of discretionary programs under the Education of the Handicapped Act, such as services for deaf-blind children, early childhood research institutes, and grants for personnel training.

Early intervention is defined narrowly under the new law as “developmental services which . . . are designed to meet a handicapped infant’s or toddler’s developmental needs in any one or more of the following areas: physical development; cognitive development; language and speech development; psychosocial development; or self-help skills”
(Sec. 672). Although the language in Part H (which refers to the “development” rather than the “education” of the infant or toddler with disabilities) reinforces a spirit of comprehensiveness, health services are included only to the extent that they are “necessary to enable the infant or toddler to benefit from the other early intervention services” (Sec. 672). Nevertheless, the statute clearly recognizes that effective early intervention services will require the contributions of professionals from many different disciplines and orientations. Thus, multiple perspectives are woven throughout the planning and implementation of the law, and the activities prescribed under Part H must be guided by an Interagency Coordinating Council.

**An Analysis of P.L. 99-457**

As a federal initiative, P.L. 99-457 provides for states to exercise considerable discretion regarding organizational and programmatic decision making. In fact, the range of implementation options is sufficiently broad that there could eventually be as many different service systems in place as there are states. Nevertheless, the law prescribes a number of critical components that each state must plan for and make operational (see Hauser-Cram, Upshur, Krauss, & Shonkoff, 1988).

**Lead Agencies.** In order to receive Part H funds, each state is required to select a lead agency to administer its service system and must appoint an Interagency Coordinating Council to assist in its planning, development, and implementation. The intent of this requirement is to overcome the typically fragmented systems of services currently found within most states (Meisels, 1985; Meisels, Harbin, Modigliani, & Olson, 1988). At the time of the passage of P.L. 99-457, services for infants and toddlers with disabilities were delivered through a wide variety of programs supported by local and state taxes, Medicaid, and by the U.S. Department of Health and Human Services, (e.g., Developmental Disabilities programs, or the Maternal and Child Health Block Grant) and through a similar diversity of programs supported by the U.S. Department of Education (e.g., demonstration projects funded through the Handicapped Children’s Early Education Program) (Meisels, Harbin, Modigliani, & Olson, 1988). Although Part H is administered by the federal Department of Education, each state is given full authority to designate its own lead agency. In the first year, about one-third of the states chose departments of education as their lead agency, slightly fewer selected departments of health, and the remainder designated other agencies, such as departments of mental health or human services (Garwood, Fewell, & Neisworth, 1988).

**Health and Education Collaboration.** Traditional relationships between the health care (public and private) and education communities concerning the care of infants and toddlers with disabilities have been uneven and complex. Thus, coordination between health care and education agencies at both the state and federal levels is viewed as particularly critical to the successful implementation of Part H (Smith & Strain, 1988). Although physicians are usually the professionals best situated to identify very young children with disabling conditions (as well as those who are at risk for developmental problems), attitudes toward early intervention services within the pediatric community are variable (Green, Ferry, Russman, Shonkoff, & Taft, 1987; Guralnick, Heiser, Eaton, Bennett, Richardson, & Groom, 1988). Furthermore, despite the fact that many infants with disabilities have associated health problems (e.g., seizures, sensory impairments, growth disorders) that require sophisticated medical
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management to assure optimal early intervention efficacy, successful medical-educational collaboration has evolved slowly and inconsistently across the country (Gartner & Lipsky, 1987).

To counteract jurisdictional boundaries and disputes over funding responsibilities between health and education agencies, P.L. 99-457 urges collaborative efforts, and formal interagency agreements have been negotiated at the federal level between the Bureau of Maternal and Child Health and Resources Development, Department of Health and Human Services, and the Office of Special Education Programs, Department of Education. The need to develop local service systems based on functional medical-educational cooperation in the context of the bureaucratic division of medical and educational resources, however, remains a perplexing policy challenge for the 1990s (Butler, Starfield, & Stenmark, 1984).

Programmatic Decisions. Beyond their influence on bureaucratic organization, the provisions of Part H create a framework within which a number of crucial programmatic decisions must be made about the evolving nature of early childhood intervention services. Each state, for example, is required to develop its own definition of developmental delay, which must be based on appropriate diagnostic procedures that cover five areas of performance (cognitive, physical, language and speech, self-help, and psychosocial development). However, although all states indicated an interest in developing an early intervention service system, only half had reached agreement on a definition of developmental delay to determine their target population within one year of the passage of the law (Gallagher, Harbin, Thomas, Wenger, & Clifford, 1988).

A second issue related to service eligibility involves the problem of developmental “risk.” The law requires that early intervention services be made available for two major target groups: those experiencing developmental delay at the time of referral and assessment and those who have a diagnosed condition that has a high probability of resulting in subsequent delay. Each state has the additional option of including children who are “at risk of having substantial developmental delays if early intervention services are not provided” (Sec. 672). Children in this discretionary third category have traditionally been characterized as “biologically at risk” and/or “environmentally at risk” (Tossem, 1976). Difficulties in identifying such children, however, have been monumental, and will present a significant challenge to states (Meisels & Wasik, this volume). The financial implications related to definitions that increase the potential size of the service population are likely to be a particular focus of contention (see Upshur, this volume).

A third major task presented by the new law is the requirement that an individualized family service plan (IFSP) be developed by a multidisciplinary team (which must include a parent or guardian) for each child and family enrolled in an early intervention program (Sec. 677). Based on an assessment of the needs of the entire family, the IFSP must articulate specific child and family goals, describe the criteria, methods, and timing to be used to evaluate goal attainment, specify the services needed to meet each goal, and identify a case manager who is responsible for insuring the implementation of the plan.

The Role of the Family. In explicitly acknowledging the family (rather than the child in isolation) as the central focus of the service, the concept of an IFSP reflects contemporary theoretical perspectives about child development (Beckwith, this volume; Sameroff & Fiese, this volume), current practices in many early intervention programs
(Simeonsson & Bailey, this volume), and empirically based findings regarding enhanced outcomes for children whose parents are involved actively in their early intervention program experiences (Gallagher, this volume; Shonkoff & Hauser-Cram, 1987). The IFSP provision of Part H, however, has generated considerable controversy as a matter of public policy. On the one hand, it is both a logical extension of the mandated parental involvement for school-age children embedded within P.L. 94-142 and a formal endorsement of the family oriented approach that characterizes the current state of the art for services in the early years of life (Healy, Keesee, & Smith, 1985). On the other hand, the IFSP can also be viewed as a catalyst for radical change in early childhood programs that imposes a significant intrusion into family life (Krauss, 1988). The selection of sensitive evaluation strategies to identify family needs (see Krauss & Jacobs, this volume), and the development of appropriate new training experiences to enable existing and future service providers to conduct, interpret, and utilize such assessment protocols constructively (see Klein & Campbell, this volume), will determine the extent to which the concept of an IFSP will be a major step forward or an unworkable federal requirement.

TRANSITIONS. The transition across service systems at 3 years of age presents another potential dilemma in the implementation of P.L. 99-457. The proposed regulations require that the IFSP include a plan to support the transfer of service responsibility from the early intervention system to a preschool program (Federal Register, 1987, Sec. 303.68) and that a case manager must be responsible for the development of such a plan (Federal Register, 1987, Sec. 303.6). Disputes over the determination of appropriate educational plans, delays in starting services, and disagreements about whether all children enrolled in early intervention programs necessarily qualify for special education classes at age 3 years have all been reported (Association for Retarded Citizens, 1986; Korns, 1988), therefore development of effective transition procedures will require considerable thought and effort (Hanline & Knowlton, 1988).

SUMMARY. From the perspective of public policy, P.L. 99-457 represents a bold initiative that raises a number of critical challenges for the field of early childhood intervention (Hauser-Cram et al., 1988; Meisels, in press). It combines an enduring national commitment to the needs of vulnerable young children with the "new federalism" of the 1980s that has transferred responsibility for many social programs into the hands of state policymakers. Under the new law, each state must make independent decisions about the definition of developmental delay, the service eligibility of children at risk for developmental disabilities, the criteria and methods to be used for family assessment, and the strategies needed to identify a lead service agency, constitute an Interagency Coordinating Council, and facilitate a smooth transition of children and families from early intervention programs to preschool special education services. How these decisions are reached, whose views are solicited by state policymakers, how research is used to inform and defend specific decisions, and how the impacts of existing state practices are assessed, will require the participation of diverse constituencies from the academic, policy, and service delivery arenas. The task is formidable, but the rewards are potentially very great.

EARLY CHILDHOOD INTERVENTION: THE NEXT CHALLENGES

As each state seeks its own path in meeting the challenges of P.L. 99-457, conceptual battles and political struggles will shape the agenda for early childhood intervention
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in the nineties. The final section of this chapter examines four broad issues whose consideration offers considerable promise for launching an exciting new era of services for young, vulnerable children and their families.

Rethinking traditional disciplinary boundaries

Although the contributions of multiple professional orientations continue to influence the delivery of early intervention services, current conceptualizations of the process of early childhood development underline the futility of attempting to divide the needs of young children into discrete components defined by traditional disciplinary boundaries. Debates about the demarcation between health concerns and educational interests, for example, generally become exercises in semantic frustration. If a 2-year-old has recurrent otitis media with a fluctuating hearing loss and associated deficits in communication, is this a medical problem, an educational problem, or perhaps a combination of the two? What about the 800-gram neonate who was born after a 29-week pregnancy to a 15-year-old mother who is living alone supported only by public assistance? Are the needs of this infant primarily medical, educational, or developmental, or are they more appropriately classified within the realm of social service? And what about the 3-year-old with a poor attention span and aggressive, disorganized behavior who poses significant management problems in a Head Start program? Are these problems essentially educational? If the child is found to be malnourished and anemic, do the problems become medical? If the child has been physically abused or severely neglected, are we now more likely to consider the problems as a mental health or social service concern?

The list of examples that illustrate the difficulties inherent in a strict categorical approach to the needs of young children is virtually endless. Furthermore, it is not a list of hypothetical situations; rather, it is a catalogue of the kinds of problems that make up an average caseload in a typical early intervention program. The boundaries among the domains of social welfare, physical and mental health, and early childhood education have become less clear, and the more sophisticated we become in our understanding of the complexities of early human development, the more difficult it becomes to sharpen them.

The progressive and inevitable ambiguity of disciplinary boundaries represents one of the central challenges facing the field of early childhood intervention, and the role of the case manager in P.L. 99-457 may be one of the primary vehicles for successfully communicating among the disciplines. The need to rethink traditional disciplinary boundaries demands an intellectually flexible orientation toward the definition of adaptive functioning and individual needs in young children — an orientation that strikes at the very core of the professional identities of a wide variety of disciplines that have played key roles in shaping our concepts of development and intervention. The stresses that accompany such critical reexamination of the boundaries of disciplinary expertise must not be underestimated, and the implications of this phenomenon for the content of professional training programs are enormous (see Klein & Campbell, this volume). However, despite the formidable nature of the task, such change must occur if we are to move toward the design and implementation of truly integrated services for young children and their families.

Redesigning service delivery systems

At the level of individual service delivery, appropriately trained and experienced professionals are able to deal effectively with the kind of disciplinary overlap and
ambiguity just described. At the level of service system organization, however, and particularly at the point where decisions are made about the allocation of public resources, vague boundaries are a bureaucratic nightmare. In simple terms, this generally comes down to the basic question of, Who will pay?

Departments of health, education, mental health, social service, and public welfare were all established at certain points in history in order to accomplish specific purposes. Each reflects the expertise of a distinct professional discipline and each focuses on an explicitly defined human service domain. As a consequence of this organizational structure, most public programs tend to adopt narrow goals, and well-integrated comprehensive approaches to social problems are rare. In contrast, early childhood intervention efforts demand a coordinated array of inputs from a range of disciplinary perspectives in order to devise a unified approach that views young children as multidimensional, yet essentially indivisible.

Thus, our evolving theoretical sophistication about the process of human development suggests that the traditional bureaucratic organization of services is becoming increasingly dysfunctional for the delivery of early childhood intervention services. Models of interagency collaboration and the designation of lead agencies and coordinating councils represent the first stage in a process designed to reduce the fragmentation and inefficiency that characterizes current agency structures. Such arrangements are likely to proliferate in the nineties, as states seek to fulfill the mandates of P.L. 99-457 for collaborative planning and implementation of comprehensive service systems (see Harbin & McNulty, this volume).

The ultimate challenge for the field of early childhood intervention would be a reconceptualization and reorganization of human service agencies at the community, state, and ultimately the federal level. Such reorganization would require bold, creative political leadership and strong support from constituency groups willing to invest considerable energy and resources in a long-term process of change. Although the bureaucratic inertia and interest group activity that would oppose fundamental restructuring is great, one cannot help but wonder about the long-term viability of a system that continues to ask questions about which aspects of early childhood intervention should be paid for with health dollars, which with education dollars, and which from other agency appropriations. Mandates for the sharing of administrative responsibilities and costs represent an important step in the development of new infrastructures that will facilitate more integrated services delivery.

Matching service goals and recipients

The anticipated growth of a wide variety of child-care services, generic family support programs, and specifically focused early intervention services highlights the need for a clearer definition of target populations and service goals and objectives. Thus, the broad diversity of families and children who could benefit from early childhood programs demands a comparable diversity in the availability of service options (see Bricker & Veltman, this volume; Gilkerson, Gorski, & Panitz, this volume; Halpern, this volume; Musick & Stott, this volume; Seitz, & Provence, this volume; Simeonsson, & Bailey, this volume). As this diversity grows, it becomes increasingly important that we develop criteria for matching specific service models to individual child and family needs.

Some program models concentrate on the basic needs of all parents with young children (Kagan, Powell, Weisbourd, & Zigler, 1987). Rather than focusing on the
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unique needs of youngsters with specific disabilities and their families, such generic family support programs are fueled by the recognition that all young children and their parents need support. Recent demographic trends, such as increased isolation of small nuclear families from extended kinships, larger percentages of working parents, higher numbers of single parents, and greater economic stresses in general serve to create significant burdens for all those who rear young children.

Some programs target their activities to the specific vulnerabilities exhibited by particular subgroups of children or their parents. The identification of appropriate service recipients for such programs will require a more refined understanding of developmental risk as an extremely complex and multidimensional construct extending far beyond the simple presence of univariate "organic" and "experiential" factors. The result of such expanded thinking inevitably will complicate what was once considered to be a deceptively straightforward process of selecting children for services (Meisels & Wasik, this volume).

Closely linked to the task of identifying the target population and specifying individual program objectives more precisely is the responsibility for ongoing evaluation of service efficacy (see Hauser-Cram, this volume). In some cases, intervention or support programs can have substantial impact. Under other circumstances, their effects may be relatively small compared to those of other influences. The investigations of the nineties will require a full recognition of the rich range of individual differences found among children, families, and the social contexts in which they live (see Farran, this volume). Evaluations must focus both on the broad range of children's abilities that programs seek to enhance (see Cicchetti & Wagner, this volume; McCune, Kalmanson, Fleck, Glazewski, & Sillari, this volume) and on the equally important effects that services may have on parents, siblings, and on the family system as a whole (see Barnard & Kelly, this volume; Dunst & Trivette, this volume; Krauss & Jacobs, this volume; Parker & Zuckerman, this volume). Finally, future investigators must acknowledge the diverse audiences for whom efficacy data are needed, including scholars of human development, makers of public policy, providers of direct services, and the children and families for whom programs are and will be designed (Shonkoff et al., 1988).

Reconsidering parent-professional relationships

One of the most important legacies of the human service programs of the past decade, whose spirit is reflected in the provisions of P.L. 99-457, is the growing recognition of the need for a more collaborative, less hierarchical relationship between service providers and service recipients. The degree to which our reexamination of these relationships moves beyond the facade of simple slogans, and the extent to which we are able to examine the substance and complexity of these extremely sensitive interactions, will be an important gauge of how our service system matures.

The 1990s are likely to be a decade in which relationships between parents of young developmentally vulnerable children and providers of early childhood intervention services undergo critical examination and redefinition. However, in order for this process to be successful, its complexity and the importance of individual differences must be appreciated. Some parents of young children with developmental disabilities, for example, have the personal resources and motivation to assume responsibility quickly for all aspects of decision making regarding their child’s care and education. Others may require a longer period of dependence on professional guidance, and still others may resist greater autonomy for indefinite periods of time.
Advocates of "parent empowerment" correctly emphasize the critical role that parents play in the development of their children, as well as the enduring responsibility they maintain long after program resources are gone. Some suggest, however, that the concept of empowerment itself can be paternalistic if it is viewed as the giving of power to parents by professionals, rather than the assumption of power by parents themselves (see Pizzo, this volume). Notwithstanding the critical need for the parenting role to be strengthened, all families who seek the resources of an early childhood intervention program begin inevitably from a position of dependence. Differences among parents are reflected in the time frame within which a transfer of power can take place, and the nature of the transition process itself.

The needs of professionals cannot be ignored in this process, and an endorsement of the ultimate value of parental autonomy must not be tantamount to a dismissal of the value of professional expertise. Service providers are also people with needs for respect, appreciation, and reinforcement of self-worth. Early childhood intervention programs require professional staff with highly refined skills and sensitivities. In many circumstances, years of formal education and practical experience culminate in jobs whose rewards come more from the satisfaction of "making a difference" in a family's life than from significant financial remuneration. Thus, the process in which parental competence is affirmed cannot succeed if it depends upon a devaluation of professional expertise. It is only when the roles of both partners in the relationship are respected that the potential contributions of each can be realized optimally. Under such circumstances, the professional service provider may be viewed best as the generalist regarding early childhood development, while the parent is considered the ultimate specialist who knows her or his individual child best.

Finally, the extent to which decision-making powers can be shared optimally between parents and professionals depends upon the often-complex dilemma of determining who represents "the best interests of the child" when there is disagreement. In all matters related to a child’s well-being, the parent’s claim must be (and usually is) presumed to be paramount. There are, however, circumstances under which such presumptions are unwarranted and potentially dangerous. Some parents, for example, inflict physical abuse upon their children. Others may neglect their children’s needs and may demonstrate consistently poor judgment in their child-rearing decisions. Circumstances of abuse or neglect involve the most delicate and difficult challenges for the parent–professional relationship, and highlight the dangers of an unequivocal endorsement of parental supremacy in all circumstances. On the other hand, too many professionals have, without any justification, usurped decision-making powers from parents who are capable of making appropriate decisions on behalf of their own children.

The social and political pressures for a reexamination of the balance between parental and professional control over decision making in early childhood intervention programs are clear. The traditional asymmetry of the parent–professional relationship has been challenged, and the demands for greater equality in that relationship that have been advanced by a variety of advocacy groups have been strengthened by the due process provisions of P.L. 99-457. Much work remains to be done in this highly sensitive area.

A FINAL RECAPITULATION

The concept of early childhood intervention has roots that extend back to the earliest years of our country’s history. Its foundations are humanistic, scholarly, and, above all,
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Sociopolitical. The development of service models in the next decade must balance responsiveness to children's and families' needs with a respect for the privacy of family life and a commitment to parental autonomy in child rearing. Consequently, the best early childhood programs will aim for maximal support and minimal intrusion in the lives of those who can benefit from their assistance. Ultimately, early childhood intervention must reflect our best attempts to translate ever-growing knowledge about the process of human development into the formation of the best kind of environment in which a child can grow.

In an analysis of the recent history of early intervention efforts, Zigler and Berman (1983) observed: "With the wealth of early childhood intervention experience behind us and a commitment to become and remain an experimenting society, in the next decades we can successfully build and improve on the achievements of the past" (p. 904). The history of early childhood intervention in the United States has been one of continuous experimentation. It reflects our interest in pragmatic solutions to human problems and our loyalty to enduring social values within the context of an ever-changing, pluralistic society. Early childhood intervention is a concept that continues to evolve. It reflects our willingness to invest in young children and our determination to help them and their families take charge of their lives and have a greater influence on their future.

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