

CHAPTER NINE

Intervention to Equalize Early Experience



We undertook 2 1/2 years of observing 42 families for an hour each month to learn about what typically went on in homes with 1- and 2-year-old children learning to talk. The data showed us that ordinary families differ immensely in the amount of experience with language and interaction they regularly provide their children and that differences in children's experience are strongly linked to children's language accomplishments both at age 3 and at age 9.

Our goal in the longitudinal study was to discover what was happening in children's early experience that could account for the intractable differences in rates of vocabulary growth we saw among 4-year-olds. Our pre-school intervention research had shown us an ever-widening gap between the high vocabulary growth rates of the professors' children and the lower vocabulary growth rates of children from families in poverty; the gap seemed to foreshadow the findings from school research that in high school many children from families

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in poverty lack the vocabulary used in advanced textbooks. Our observations of 42 children learning to talk at home showed us a comparable widening gap at age 3 between the vocabulary growth rates of children in professional families and children in welfare families. But we also saw among the 23 working-class children an average vocabulary growth rate we could use as a basis for considering intervention.

The longitudinal data showed us that the most important difference among families was in the amount of talking that went on. Because the richness of the quality features in utterances addressed to children during everyday parenting varied so little among the families, increased amounts of talking provided some children vastly more experience with nearly every quality feature of language and interaction. We exemplified in logical combinations of the quality features five categories of significant family experience: the Language Diversity contributed by lots of talk; the proportional amounts of encouragement and discouragement contributed by Feedback Tone; Symbolic Emphasis on names, relations, and recall; a Guidance Style focused on asking rather than demanding; and Responsiveness that stressed the importance of the child's behavior during interactions. Experience with these categories in the second and third years of life contributes to breadth of knowledge, analytic and symbolic competencies, self-confidence, and problem solving, which are among the interlocking attitudes, skills, and knowledge required for entry and success in an increasingly technological world of work.

Although these categories of significant family experience certainly do not describe the only aspects of parenting important for competence in society, they may be most important for the language-based analytic and sym-

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bolic competencies upon which advanced education and a global economy depend. These competencies may become increasingly important as society separates into technological and service sectors. The longitudinal data showed that differences in the amount of cumulative experience children had with these categories of significant family experience were strongly linked to differences at age 3 in children's rates of vocabulary growth, vocabulary use, and general accomplishments and strongly linked to differences in school performance at age 9.

Is Experience in These Early Years Really That Important?

We learned from the longitudinal data that the problem of skill differences among children at the time of school entry is bigger, more intractable, and more important than we had thought. So much is happening to children during their first 3 years at home, at a time when they are especially malleable and uniquely dependent on the family for virtually all their experience, that by age 3 an intervention must address not just a lack of knowledge or skill, but an entire general approach to experience.

Cognitively, experience is sequential: Experiences in infancy establish habits of seeking, noticing, and incorporating new and more complex experiences, as well as schemas for categorizing and thinking about experiences. Neurologically, infancy is a critical period because cortical development is influenced by the amount of central nervous system activity stimulated by experience. Behaviorally, infancy is a unique time of helplessness when nearly all of children's experience is mediated by adults in one-to-one interactions permeated with affect. Once

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children become independent and can speak for themselves, they gain access to more opportunities for experience. But the amount and diversity of children's past experience influences which new opportunities for experience they notice and choose.

The children we observed all developed normally; they all learned to walk and talk. At age 3 they were all effective speakers; at age 9–10 they were all performing adequately in third grade. But more than basic skills, effective communication, and common knowledge are needed in order to obtain advanced education and to succeed in professional and technical occupations. Skills and knowledge can be improved or retrained; much more intractable are the differences in confidence and motivation gained from years of practice and encouragement in manipulating a vocabulary of symbols and using them to solve problems.

Heredity and maturation set up traits and trends that can be fertilized or poisoned by experience. But people also get better at those things they see and do more; whatever hereditary traits an individual brings to interactions with the environment, the amount of experience the individual has with symbolic language and problem solving cannot be unimportant. The strength of the relationships revealed by the longitudinal data between the amount of children's expressive and receptive experience and their later accomplishments convinced us that whatever the heredity of less advantaged children, more experience could not be irrelevant or wasted.

Do These Data Really Represent the Lives of Children in America?

Before we extrapolate from the longitudinal data to estimate what intervention would need to provide in or-

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der to equalize children's early experience, we must consider the particulars of the population we studied and the methodology we used, and the extent to which they limit the applicability of our findings to other populations and to other hours in children's lives.

Most important to emphasize is that we observed only well-functioning families in the mainstream of American culture; none of the families were dysfunctional, severely stressed, abusive, or addicted. None were independently wealthy. No persons with disabilities were present in any of the homes. Although not all the families owned their homes, they were less transient than may be typical. They were more traditional in their values than may be typical; almost one third regularly went to church. The parents may also be seen as more confident; they felt more comfortable about their parenting and child-rearing practices than may be typical.

The findings from the longitudinal data may be less applicable to families living in deteriorating neighborhoods in inner cities where crime is prevalent, to families with children whose language development is delayed or impaired, to bilingual families, and to families who live in rural poverty such as that experienced by migrant workers. Also, the early experience of children in other cultures is likely to differ, as are the skills needed for success; in Navajo culture, for example, talking a great deal may not be considered socially appropriate. Intergenerational transmission in first-generation immigrant families may (or may not) be quite different from that in mainstream American families.

We feel confident, however, about extrapolating to other hours of the day and to other months and years for these 42 families. First, we saw how stable the amount of talking was in the families over the 2 1/2 years—even as the children learned to talk, new babies were born.

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parents took jobs; and the times of observations shifted from mornings to afternoons, evenings, and weekends when both parents and all the siblings were at home. Amount of talk *did* change, but similarly in all the families: Parents talked more and gave more affirmative feedback when their children first started to talk, and then they talked less after the children began to talk a lot. We would expect the amount of talking to have varied similarly within families when occasional illnesses, vacations, and anniversaries occurred. Our impressions that the parents were comfortable and unthreatened by observation also suggest that the interactions we recorded were fairly representative of those that occurred when the observer was not present.

Second, we saw the comparability of our findings to those of others. The average number of parent utterances (278 per hour) reported by Wells (see Chapter 3, endnote 2) was comparable to our average number of parent utterances (341 per hour). Hall, Nagy, and Linn¹ reported an average number of parent words (2,118 per hour) addressed to preschoolers similar to the average number we recorded (1,440 per hour). The average of 20,000 words Wagner² reported from a full day of recording children's speech is also similar to our data. Unlike Wells, we found only slight differences in talking across the day; in our data talking was going on 37–42 minutes of each hour between 8 A.M. and 7:30 P.M. in an average family.

All parent–child research is based on the assumption that the data (laboratory or field) reflect what people typically do. In most studies, there are as many reasons that the averages would be higher than reported as that they would be lower. But all researchers caution against extrapolating their findings to people and circumstances

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they did not include. Our data provide us, however, a first approximation to the absolute magnitude of children's early experience, a basis sufficient for estimating the actual size of the intervention task needed to provide equal experience and, thus, equal opportunities to children living in poverty. We depend on future studies to refine this estimate.

*How Much Cumulative
Experience Do Children Get?*

Because the goal of an intervention would be to equalize children's early experience, we need to estimate the amount of experience children of different SES might bring to an intervention that began at age 4. We base our estimate on the remarkable differences our data showed in the relative amounts of children's early experience: Simply in words heard, the average welfare child was having half as much experience per hour (616 words per hour) as the average working-class child (1,251 words per hour) and less than one third that of the average child in a professional family (2,153 words per hour). These relative differences in amount of experience were so durable over the more than 2 years of observations that they provide the best basis we currently have for estimating children's actual life experience.

A linear extrapolation from the averages in the observational data to a 100-hour week (given a 14-hour waking day) shows the average child in the professional families provided with 215,000 words of language experience, the average child in a working-class family provided with 125,000, and the average child in a welfare family provided with 62,000 words of language experience. In a 5,200-hour year, the amount would be 11 mil-

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lion words for a child in a professional family, 6 million words for a child in a working-class family, and 3 million words for a child in a welfare family. In 4 years of such experience, an average child in a professional family would have accumulated experience with almost 45 million words, an average child in a working-class family would have accumulated experience with 26 million words, and an average child in a welfare family would have accumulated experience with 13 million words. By age 4, the average child in a welfare family might have 13 million fewer words of cumulative experience than the average child in a working-class family. This linear extrapolation is shown in Figure 19.

We can extrapolate similarly the relative differences the data showed in children's hourly experience with parent affirmatives and prohibitions. The average child in a professional family was accumulating 32 affirma-

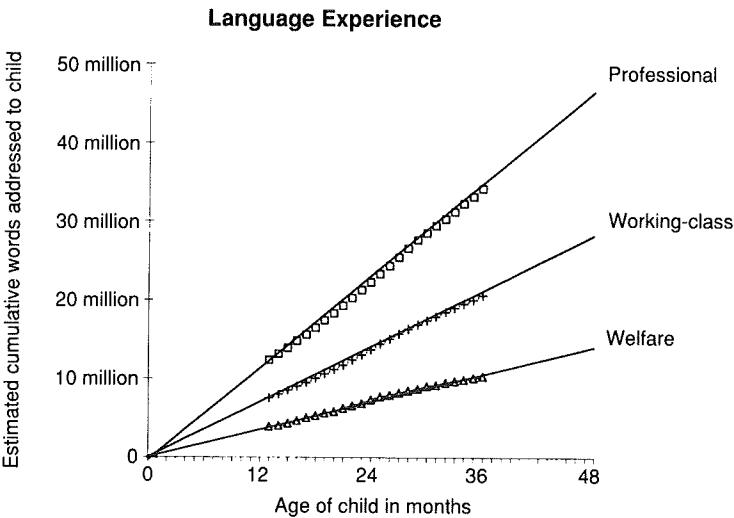


Figure 19. Estimated cumulative differences in language experience by 4 years of age. (See Appendix B for a detailed explanation of this figure.)

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tives and 5 prohibitions per hour, a ratio of 6 encouragements to 1 discouragement. The average child in a working-class family was accumulating 12 affirmatives and 7 prohibitions per hour, a ratio of 2 encouragements to 1 discouragement. The average child in a welfare family, though, was accumulating 5 affirmatives and 11 prohibitions per hour, a ratio of 1 encouragement to 2 discouragements. In a 5,200-hour year, the amount would be 166,000 encouragements to 26,000 discouragements in a professional family, 62,000 encouragements to 36,000 discouragements in a working-class family, and 26,000 encouragements to 57,000 discouragements in a welfare family.

Extrapolated to the first 4 years of life, the average child in a professional family would have accumulated 560,000 more instances of encouraging feedback than discouraging feedback, and an average child in a working-class family would have accumulated 100,000 more encouragements than discouragements. But an average child in a welfare family would have accumulated 125,000 more instances of prohibitions than encouragements. By the age of 4, the average child in a welfare family might have had 144,000 *fewer* encouragements and 84,000 *more* discouragements of his or her behavior than the average child in a working-class family (see Figure 20).

Extrapolating the relative differences in children's hourly experience allows us to estimate children's cumulative experience in the first 4 years of life and so glimpse the size of the problem facing intervention. Whatever the inaccuracy of our estimates, it is not by an order of magnitude such that 60,000 words becomes 6,000 or 600,000. Even if our estimates of children's experience are too high by half, the differences between

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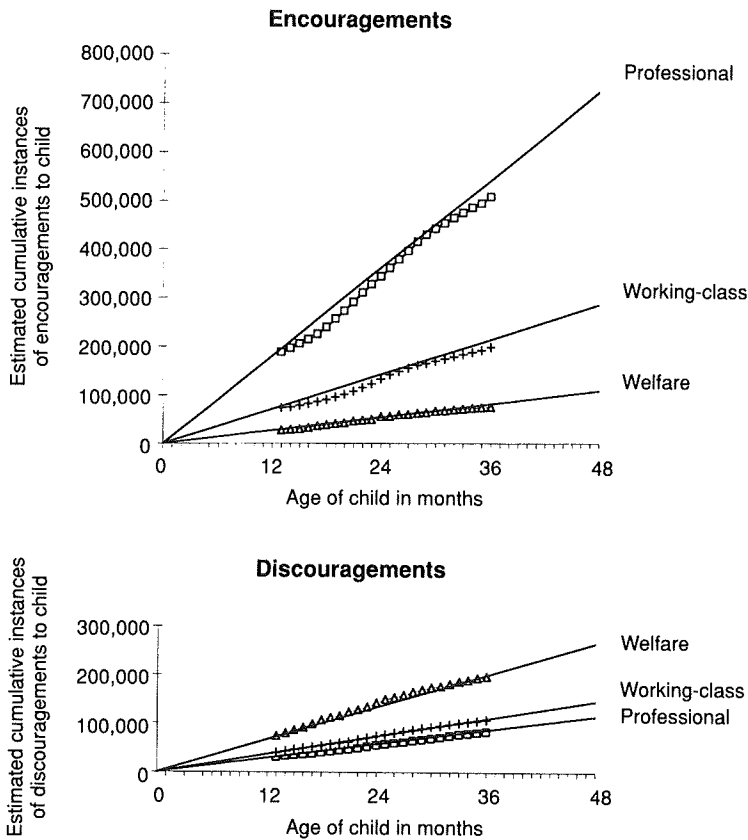


Figure 20. Estimated cumulative differences in confidence-producing experience by 4 years of age. Note the reversal of the lines in the bottom graph, reflecting the prevailing negative Feedback Tone in the welfare homes. (See Appendix B for a detailed explanation of this figure.)

children by age 4 in amounts of cumulative experience are so great that even the best of intervention programs could hope only to keep the welfare children from falling still further behind the children in the working-class families.

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How Many Hours of Intervention Are Needed?

Using our extrapolations of the children's average experience in a 100-hour week, we can estimate the hours of intervention needed to keep the experience of the average welfare child equal to that of the average working-class child. We extrapolated to an average welfare child getting experience with 62,000 words per week and to an average working-class child getting experience with 125,000 words per week. To keep the language experience of welfare children equal to that of working-class children, the welfare children would need to receive 63,000 words per week of additional language experience. If the welfare children's home experience gave them 600 words per hour of language experience and an intervention program gave them the 2,100 words per hour average in a professional family, each hour the children were in intervention rather than at home would provide them with a net gain of 1,500 words. Just to provide an average welfare child with an amount of weekly language experience equal to that of an average working-class child would require 41 hours per week of out-of-home experience as rich in words addressed to the child as that in an average professional home.

We extrapolated to an average welfare child accumulating experience with 500 affirmatives and 1,100 prohibitions per week and an average working-class child accumulating experience with 1,200 affirmatives and 700 prohibitions per week. To keep the confidence-building experiences of welfare children equal to those of working-class children, the welfare children would need to be given 1,100 more instances of affirmative feedback per week—700 instances to bring the 500 affirmatives up to the 1,200 given an average working-class child plus 400 affirmatives to reduce the 1,100 prohibitions to the 700

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of the average working-class child. It would take 26 hours per week of substituted experience for the average welfare child's experience with affirmatives to equal that of the average working-class child. It would take 66 hours of substituted experience per week to lower the average welfare child's experience with prohibitions to that of the average working-class child. Overall, 40 hours per week of substituted experience would be needed to keep the welfare children's ratio of lifetime experience with encouragement relative to discouragement equal to that of the working-class children.

Any program to provide welfare children with experience equal to that of working-class children would have to start at birth and run continuously all year long. There are no extra hours available to make up for the 60,000 words of experience that may have been lost in some past week. And for caregivers to give 2,100 words of experience every hour to every child in a group setting exceeds the capabilities of even the best of current early childhood programs. Furthermore, such a program would require arranging an environment and organizing activities that would keep young children so engaged that few prohibitions would be called for; such a program would require training staff to be continuously noticing and appreciating children's behavior in order to keep the amount of encouragement high. Even if we have overestimated by half the extra amount of experience the welfare children would need and the effort a program would have to devote each hour to children, it would be difficult to do more than merely keep the welfare children's experience on par with that of the working-class children.

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Is It Worth Trying to Change Children's Lives?

Estimating the magnitude of the differences in children's cumulative experience before the age of 3 gives an indication of how big the problem is. Estimating the hours of intervention needed to equalize children's early experience makes clear the enormity of the effort that would be required to change children's lives. And the longer the effort is put off, the less possible the change becomes. We see why our brief, intense efforts during the War on Poverty did not succeed. But we also see the risk to our nation and its children that makes intervention more urgent than ever.

The current trend in American society is toward increasing separation of work in the service sector from analytic, problem-solving work largely restricted to persons with advanced academic training. Since we began this study in 1983, the economic importance of intellectual, symbolic, and problem-solving work has increased and that of blue- and white-collar work has decreased. The social distinctions between the professional and the working class have increased.³ In our intensive examination of a small sample of American families we saw virtually all the professional families preparing their children for symbolic problem solving from the very beginning of the children's lives. We saw them devoting time and effort to giving their children experience with the language diversity and symbolic emphasis needed for manipulating symbols; we saw them using responsiveness and gentle guidance to encourage problem solving; we saw them providing frequent affirmative feedback to build the confidence and motivation required for sus-

tained independent effort. We saw how strongly related the amount of such experience was to the accomplishments of children from working-class families. But we saw only one third of the working-class families and none of the welfare families similarly preparing their children.⁴

The nearly uniform advantages received by the children of the college-educated professionals suggest the evolution of an increasingly distinct subculture in American society, one in which adults routinely transmit to their offspring the symbolic thinking and confident problem solving that mark the adults' economic activities and that are so difficult for outsiders to acquire in mid-life. A trend toward separation into subcultures jeopardizes the upward mobility that has given this nation greatness and presages the tragedy of downward mobility that produces increasing numbers of working poor.

If this trend is to be reversed, a beginning must be made now. The issue is no longer one of eradicating poverty or of putting welfare recipients to work but of reversing a trend, the downward drift of the working class. Given the national commitment to providing equal opportunities to all citizens, as evidenced by support of programs such as Head Start and WIC, it is not a question of whether to intervene but of how to intervene.

Having estimated the amount of experience children would need, we can consider what alternatives there are for intervention, what they would cost, and how long it would take to counteract the threat posed by successive generations of children with ever-fewer skills and less experience to transmit to the next generation. We can ask whether it is possible to actually change children's lives within a single generation if whatever resources were required were committed fully. We can ask

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whether, if present efforts were expanded, the gains would be sufficient over time to stem the downward drift of the working class and, if not, whether there are any other alternatives worth trying.

*Is It Possible to Change
Children's Lives in a Generation?*

From our extrapolations we estimated the amount of experience an early education program would need to provide to children. To ensure that an average welfare child had a weekly amount of experience equal that of the average child in a working-class family, merely in terms of hours of language experience of any kind (words heard), 41 hours per week of out-of-home experience as rich in words addressed to the child as that in an average professional home would be required. For the ratio of encouragement to total feedback to equal that experienced by the average working-class child, 40 hours per week of substituted experience would be required. Thus, welfare children would need to be in substitute care 40 hours every week from birth onward.

We as a nation could deliver the necessary time and experience for every child who needs it, not just for children in welfare families. We have an example of an intervention program that did this by applying a range of the sophisticated technologies that have been designed to serve people with special needs. As a nation we routinely provide help to families in crisis, enroll children with disabilities in infant stimulation and remediation programs, intervene with dysfunctional families, arrange job training for parents, and deliver quality child care. To provide children the necessary amounts of experience would only require integrating and applying technologies we already have.

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The Milwaukee Project⁵ was an early intervention program that worked. Infants whose mothers' IQ tested as 75 or below were enrolled at 6–8 weeks of age in out-of-home, full-day child care. The transition from the home to full-day child care was made by having the para-professional who would become the infant's individual caregiver spend 3–5 hours, 3 days a week, in the family home with the mother, participating in family activities, talking about the mother's concerns, and advising her about parenting and environmental arrangements. When the infant entered full-day child care, the mother entered a program combining remedial education classes and on-the-job training as a nurse's aide guided by an experienced employee. The children in the Milwaukee Project, unlike children from comparable families not enrolled in the project and unlike children in other less time-consuming intervention programs, were equal to the national average in accomplishments at age 8.

The comprehensive program of the Milwaukee Project included many components that have become fairly standard in programs such as WIC and Parents as Teachers (PAT)⁶ that serve low-income families: parent education and training classes, parent group meetings, resource centers, and a welfare-to-work program. The Milwaukee Project used parent coaching, which is the technology that family preservation programs such as Homebuilders⁷ have used successfully to improve the daily lives of entire families. Parent coaching provides a coach who works in the home one-to-one with a parent to find out what changes are needed to improve daily interactions in the home and to help the parent incorporate these changes into the parent's individual lifestyle. The coach remains in the home as long as needed and gives as much support and advice as needed to help the parent

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arrange a home environment and activity schedule conducive to improvements in interactions and child care.

Parent coaching becomes job coaching at the place of paid employment. The coach provides one-to-one, on-the-job coaching for people who need help to sell themselves during an initial interview, to perform a particular task, or to decide how to dress and what to say or ask for and when. As in the home, the coach is there to model, guide, and help an individual as long as needed. An employer may have to help pay the coach but is assured that the job gets done and meets standards for quality. Welfare-to-work programs use job coaching to provide parents with skills, a paycheck, and the dignity of work; the programs also serve to undo the detrimental effects of isolation by getting welfare parents participating on a regular basis in the lives of middle-class people.

Quality out-of-home care can be provided for infants and young children, even though it so rarely is. The kinds of learning experiences and nurturing that developing children need have been well documented, as have the arrangements needed to provide environments that are safer and more stimulating than most homes.⁸ Procedures to get and keep children engaged in learning activities, to provide physical exercise and adequate nutrition, and to teach self-care skills have been described in detail; as have procedures for training, supervising, and monitoring staff interactions with children. The technology is available that could actually provide welfare children with the amount of language and interaction, the 2,100 words and 32 affirmatives per hour, we estimated that children in professional families experience per week.

The Milwaukee Project showed that a comprehensive program, beginning at birth and integrating all the

technology routinely available to families in crisis and children with special needs, is within this nation's capabilities. It is possible to provide all children equal experience and thus equal opportunity. But to implement even a small local program serving 17 families in Milwaukee required the enthusiasm of the War on Poverty, resolute reallocation of resources, and some sacrifice of American values about the sanctity and responsibilities of families.

It is possible to change children's lives within a generation, but the cost would be immense. To organize, implement, and monitor on a nationwide scale an intervention as intensive as the Milwaukee Project would require far more in money, efficiency, and accountability than has so far been achieved in the limited intervention known as Head Start. Even more difficult might be enlisting the support of families who are struggling themselves and persuading them to undertake the sacrifices necessary to provide a better future for other people's children.

Why Not Just Do More of What Is Being Done Now?

Inertia, divided opinion, and uncertainty about outcomes virtually assure that what is being done now will continue to be done—a bit of prevention and a lot of repair. Established programs will continue to provide nutrition through WIC, help to families in crisis, foster care to neglected children, training and counseling to parents, services to children with special needs, remedial classes in public schools, and retraining as industrial jobs are lost. Head Start will be continued and extended to a larger number of children and to younger children.

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Early intervention programs that provide enriched experience *do* improve the lives of children. A long-term follow-up study undertaken when children from 11 different early intervention programs were 8–18 years old showed that in public school fewer of these children had been retained in grade or placed in special education classes, more had stayed in school, and more had been employed after graduation.⁹ Over successive generations, these children's increased experience will be transmitted to their children, who will add still more experience through the continuation of existing early intervention programs, especially those that follow through into elementary school.

Present intervention programs are familiar; their cost and relative effectiveness are known. There are questions, though, concerning their long-term effectiveness. Intergenerational transmission of enriched experience takes years, and whether this process will keep pace with the increasing demands of a technological society and the growing numbers of families raising children in poverty remains uncertain. Employers already need to include remedial language classes as part of job training and to hire foreign nationals for work in science and engineering. Declining competitiveness with other nations has become a national concern; it is increasingly unclear whether present intervention programs are commensurate with the complexity of the problem they were designed to help solve.

Is Parenting the Problem?

Intergenerational transmission of a culture and its knowledge passes from parent to child. During the first years of life when almost everything a child learns de-

depends on what the family provides, parenting puts in place not only fundamental skills and understandings but also an entire general approach to experience. Our data showed that the magnitude of children's accomplishments depends less on the material and educational advantages available in the home and more on the amount of experience children accumulate with parenting that provides language diversity, affirmative feedback, symbolic emphasis, gentle guidance, and responsiveness. By the time children are 3 years old, even intensive intervention cannot make up for the differences in the amount of such experience children have received from their parents. If children could be given better parenting, intervention might be unnecessary.

Our observations showed us, though, how hard American parents are trying now to provide better futures for their children. All the parents we observed wanted their children to be successful students and productive citizens. Many sought advice and read books on how to be better parents. Working-class families were seen to be following the route traditional in an economic system that for generations produced upward mobility: Mothers took jobs so the family could move to a newer house and a better school system in the suburbs. Families went into debt to secure an environment for their children in which parents did not need to prohibit exploration in order to keep their children safe, an environment in which their children would be casually introduced to the next rung up, the skills and values of their better-educated neighbors.

Among the working-class parents, the choice to be consumers and to make the financial commitment necessary to move to the suburbs promised both immediate and future advantages for their children. But those advan-

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tages required a second income, and most of that went to pay for child care. Parents wanted enriched experience for their children but could not find it, could not get to it, or could not afford it. We wondered why any of the parents chose to stay at home and make do with less in an effort to become better parents. Yet one third of the working-class parents chose to sacrifice material advantages in order to spend time providing their children with the enriched experience that would prepare them for advanced skill training or higher education.¹⁰

The difficulties of parenting encourage the choice to be consumers. Even among the highly educated parents with extensive skills in gentle guidance, we saw the challenges parents face daily in persuading children to participate in reading a story rather than watching a video, to undertake chores such as picking up their many toys, to eat healthy foods, and to refrain from exploring dangerous equipment and fragile possessions. Parenting in a society without television, toy stores, gas-powered lawn mowers, and sugar-coated cereals was easier by far. Technology has removed parents' need for children's help, the traditional means by which parents transmitted across generations the importance of work, and has left parents to guide their children as best they can through a maze of continuously available entertainment.

At the same time that parenting has become a dauntingly demanding job, the competencies needed to prepare for and to participate in an increasingly technological world of work have multiplied. Parents with little experience or knowledge concerning such competencies have always depended on teachers and schooling to provide them to their children. Yet the cumulative experience of many children is such that the most the public schools can do is to prepare the children for unskilled jobs that no

longer exist. There can be scant hope for better parenting in a society that assumes that nuclear families and single-parent households can turn out well-informed, highly motivated, and well-behaved children in conditions that would almost certainly lead any other enterprise into bankruptcy. Entrusting the future of the nation and the lives of its children to a work force of parents offered little training, no support, and no quality control can continue only if there is no alternative.

Is There an Alternative?

Helping parents is an alternative worth trying. Rather than design or expand early intervention programs, this country could focus on helping parents ensure that their children get enough early experience so that differences never become so great as to be intractable to even the most effective intervention. The nation could commit to a goal of ensuring that all children get enriched experience and models of good parenting whether at home or in child care facilities. It would not be possible to ensure that all children would match the accomplishments of advantaged children, but it would be feasible to make them better parents and thus improve intergenerational transmission over the long term.

Parents could be helped by making quality child care affordable for all parents on an income-graded basis. Children would receive experience with good parenting and planned developmental activities; parents would see models and get feedback and informal advice about child rearing. Quality child care would provide, from infancy, whatever additional hours of language and affirmative feedback children might need. All working parents would benefit from what only a few can now afford: the

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support that quality child care provides, which enables parents to be productive on the job rather than worried about their children. Creating neighborhood child care centers could provide part-day enriched experience to children and a locus for early diagnostic and intervention services, a haven for families in crisis, and a training site for parents of children at risk.¹¹

Parents could be helped by making parent aides available, the extra pair of hands that extended family once provided. Especially for young people, working as parent aides would provide experience with how well-functioning families work together, the amount of talking and kinds of experience they provide their children, the environments they arrange, and the expectations they hold. A program of parent aides would provide apprenticeships in good parenting.

Parents could be helped by making mentors available to all parents. A mentor would provide one-to-one parent coaching if needed, but in most cases the mentor would be a friendly, more knowledgeable and experienced person chosen by a parent to visit the home and to watch, listen, and talk with the parent. Mentors in the past were members of the community of extended family who transmitted knowledge about societal standards and developmental expectations for child behavior; about strategies for coping with, or preventing, misbehavior; and about the possible consequences, good or bad, of what parents were doing with their children from moment to moment.

Parents could be helped by the establishment of a national policy that is as concerned with children's early experience as it is with their health and nutrition. A national commitment to support good parenting could encourage mothers who enjoyed interacting with children

to stay at home and provide mothers who wanted to work with choices concerning the amount and quality of the experience their children were getting outside the home. The need for helping parents, through subsidies or family allowances, has been publicly stated for years; other countries have shown the feasibility of this alternative and its benefits to families and children.

Why Is Deciding to Help Parents So Difficult?

Paying for subsidies, and using tax revenues for that purpose, cannot be the real issue when subsidizing parenting is considered. The nation routinely pays for cropland left fallow, guarantees mortgages and deposits in savings and loan institutions, and provides tax abatements to businesses. Neither can the threat of socialism be an issue in a country that provides unemployment benefits, Medicare, and Social Security. Nor can the form of government be an issue when Americans consider what the alternative system in the Yugoslavia of yesterday accomplished relative to the intergenerational transmission of culture.

In America the culture we see in intergenerational transmission is the democracy de Tocqueville described in 1835.¹² Americans can recognize themselves still as a resolutely individualistic people, categorically committed to the profit motive. Looking beyond stated beliefs to visible benefits, it is apparent that healthy people will pay for Medicaid because they might need it themselves someday. People will pay for universal education because they benefit from getting children off the streets and out of the unskilled labor market. But childless people will resist paying for services they will never use. Parents will defend their right to do as they please with

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their children, and everyone will draw the line at invading the privacy of the home.

In a democracy the will of the majority may determine election outcomes, but the priorities of the people are communicated through lobbies and special interest groups. Almost anyone can form a special interest group to advocate for particular rights and to ensure profits. The Farm Bureau speaks out in favor of school lunches and the distribution of free commodities because farmers benefit. Advocating for children's rights can profit a law firm just as a special interest in studying parent-child interactions can benefit an academic career. A first step toward subsidies for good parenting may have been taken by the well-educated advocates of extended parental leave programs and flexible work hours.

Working-class parents, like the assembly-line workers in the early auto industry, await the leaders who will educate them about where their interests lie and what potential profits would accrue from forming a special interest group. With the loss of industrial jobs and the increasing separation of work in the service sector from analytic problem-solving work, the upward mobility of working-class families will increasingly depend on preparing their children for advanced skill training or higher education. To ensure a better life for their children, working-class parents will have to add to their traditional duties a concern with giving their children early experience with many of the competencies they had always depended on schooling to provide.

As working-class parents are made aware that the amount of experience provided to children in advantaged families could be provided to their children, by themselves if they could afford to stay at home, or by someone else if they could afford to enroll their children in

quality care outside the home, they will organize a special interest group whose issue is the need for help with the immense responsibilities a technological society has so casually assigned them. A special interest group of working-class parents will join with other special interest groups representing families, educators, and child care and social service providers to lobby for helping parents. Joining them might then be a national commitment to providing a voice to those who cannot form a special interest group to demand equal cumulative experience, the infants and toddlers upon whom the nation's future depends.

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Endnotes

1. Hall, Nagy, and Linn (1984) audiorecorded 5 hours (2 1/2 hours on 2 consecutive days) of parents talking to their children at home and during walks to preschool and talk with and by the children's teachers at preschool. The children were 4 1/2–5 years old; 19 (10 African American) were working-class children and 20 (11 African American) were middle-class children. The middle-class adults averaged 2,383 words per hour; their children averaged 1,713. The working-class adults averaged 1,840 words per hour; their children averaged 1,455.
2. Wagner (1985) reported speech data, standardized to a 12-hour waking day, from 12 studies of children 1 1/2–14 years of age. The children said about 20,000 words in 1 day and used about 3,000 different words. Children age 3 1/2 said about 100 words per minute. Wagner also discussed some important considerations concerning the recording of spontaneous speech, such as how representative it is of speech when children are not being recorded.
3. Reich (1991) described this trend; he linked it to the shift from a national to a global economy and cited the reasons that it will accelerate.
4. All the professional families were above average on four or more of the five categories of significant family experience. Their parenting reflects the diversity of vocabulary and Symbolic Emphasis in their speech to their children, the problem-solving style of their guidance, and their willingness to respond to their children's initiatives and to give encouraging feedback. Only 8 of the working-class families (5 of the 10 white-collar, 3 of the 13 blue-collar) and none of the welfare families showed this pattern.
5. See Garber (1988) for a complete description of the Milwaukee Project's design and results.

6. Participation in WIC (see Chapter 2, endnote 10), the nutritional program for low income families, requires attendance at parent meetings. Parents as Teachers (PAT) is a program for parents with children from birth to 3 years of age that includes group meetings and home visits; among its goals are realistic expectations for child behavior and methods of positive discipline.
7. Homebuilders is perhaps the most well-known of state-funded family preservation programs. (Homebuilders is based at the Behavioral Sciences Institute, 34004 Ninth Avenue South, Suite 8, Federal Way, Washington 98003.) Family preservation programs are brief, intense interventions for families who are about to lose their children. For 4–5 weeks the family has 24-hour access to individually tailored, goal-oriented services, all delivered within the home and community.
8. The Infant Center (Herbert-Jackson et al., 1977) and Toddler Center (O'Brien, Porterfield, Herbert-Jackson, & Risley, 1979) were fully operational programs of all-day out-of-home care that were also documented demonstrations of optimum child care procedures.
9. See Lazar and Darlington (1982) for a report of the findings of the Consortium for Longitudinal Studies, which undertook a monumental reanalysis of the raw data from 11 very different early intervention programs, an undertaking as awesome to read about as the Bristol study. (See Chapter 3, endnote 2.)
10. If you are a working parent reading this and wondering about your choice to go to work, we note that the data do not suggest that you need to stay at home with your child. The remarkable consistency of the parenting we observed suggests that if you are concerned about whether you are doing your best for your child, you are probably among those parents above average on most of the parenting variables. Your thoughts should rather be about the time your child does *not* spend with you. The data show that the most important consideration is the

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amount of cumulative experience your child has with language and interaction; anyone, educated or not, who enjoys talking with children can deliver this necessary time and attention. The more time your child spends in the care of other people, the more carefully you need to choose caregivers and the more attentively you need to monitor the amount of experience with language and interaction your child is actually receiving while in alternative care.

11. The organization of child care and recreation centers and of parent advice and mentoring programs, and the methods for efficient mastery training of the people who work in them, were described as early as 1976 by Risley, Clark, and Cataldo (1976).
12. DeTocqueville (1835) was a French aristocrat who spent 9 months in America in 1831–1832 examining the nature and workings of American democracy to see how it might be applied in Europe following the French Revolution. Reading his account, it is amazing to see how little Americans seem to have changed in 150 years.

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References



- Barker, R.G., & Wright, H.F. (1951). *One boy's day. A specimen record of behavior*. New York: Harper & Row.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs*, 4, 99–103.
- Bayley, N., & Schaefer, E.S. (1964). Correlations of maternal and child behaviors with the development of mental abilities: Data from the Berkeley Growth Study. *Monographs of the Society for Research in Child Development*, 29 (6, Serial No. 97).
- Becker, W.C. (1977). Teaching reading and language to the disadvantaged: What we have learned from field research. *Harvard Educational Review*, 47, 518–543.
- Belsky, J., Gilstrap, B., & Rovine, M. (1984). The Pennsylvania Infant and Family Development Project, I: Stability and change in mother–infant and father–infant interaction in a family setting at one, three, and nine months. *Child Development*, 55, 692–705.
- Bereiter, C., & Englemann, S. (1966). *Teaching disadvantaged children in the preschool*. Englewood Cliffs, NJ: Prentice Hall.
- Bernstein, B. (1970). A sociolinguistic approach to socialization: With some reference to educability. In F. Williams (Ed.), *Language and poverty: Perspectives on a theme* (pp. 25–61). Chicago: Markham Publishing.
- Bloom, L. (1993). *The transition from infancy to language: Acquiring the power of expression*. New York: Cambridge University Press.
- Bloom, L., Rocissano, L., & Hood, L. (1976). Adult–child discourse: Developmental interaction between information processing and linguistic knowledge. *Cognitive Psychology*, 8, 521–552.
- Bretherton, I., & Waters, E. (1985). Growing points of attachment theory and research. *Monographs of the Society for Research in Child Development*, 50 (1–2, Serial No. 209).
- Brottman, M.A. (Ed.). (1968). Language remediation for the disadvantaged child. *Monographs of the Society for Research in Child Development*, 33 (8, Serial No. 124).
- Brown, R. (1973). *A first language: The early stages*. Cambridge, MA: Harvard University Press.
- Brown, P., & Levinson, S. (1978). Universals in language usage: Politeness phenomena. In E.N. Goody (Ed.), *Questions and politeness: Strategies in social interaction* (pp. 56–289). New York: Cambridge University Press.
- Capaldi, D., & Patterson, G.R. (1987). An approach to the problem of recruitment and retention rates for longitudinal research. *Behavioral Assessment and Review*, 11, 169–176.

Excerpted from *Meaningful Differences in the Everyday Experience of Young American Children* by Betty Hart, Ph.D., & Todd R. Risley, Ph.D

- Carmichael, L. (Ed.). (1954). *Manual of child psychology*. New York: John Wiley & Sons.
 - Chase-Lansdale, P.L., Mott, F. L., Brooks-Gunn, J., & Phillips, D.A. (1991). Children of the National Longitudinal Survey of Youth: A unique research opportunity. *Developmental Psychology*, 27, 918-931.
 - CTBS. (1987). *Comprehensive Tests of Basic Skills* (CTBS/U, 3rd ed.). Monterey, CA: CTB/McGraw-Hill.
 - deTocqueville, A. (1945). *Democracy in America*. (H. Reeve, Trans.). New York: Alfred A. Knopf. (Original work published 1835.)
 - Deutsch, M. (1967). *The disadvantaged child*. New York: Basic Books.
 - Dunn, L.M. (1965). *Peabody Picture Vocabulary Test*. Circle Pines, MN: American Guidance Service.
 - Dunn, L.W., & Dunn, L.M. (1981). *Peabody Picture Vocabulary Test-Revised* (Forms L and M). Circle Pines, MN: American Guidance Service.
 - Durkin, K. (1987). Minds and language: Social cognition, social interaction, and the acquisition of language. *Mind and Language*, 2, 105-140.
 - Fletcher, P., & Garman, M. (Eds.). (1986). *Language acquisition: Studies in first language development*. New York: Cambridge University Press.
 - Furstenberg, F.F., Jr. (1985). Sociological ventures in child development. *Child Development*, 56, 281-288.
 - Garber, H.L. (1988). *The Milwaukee Project: Preventing mental retardation in children at risk*. Washington, DC: American Association on Mental Retardation.
 - Gazaway, R. (1969). *The longest mile*. Garden City, NY: Doubleday.
 - Gleason, J.B. (1985). Language and socialization. In F.S. Kessel (Ed.), *The development of language and language researchers: Essays in honor of Roger Brown* (pp. 269-280). Hillsdale, NJ: Lawrence Erlbaum Associates.
 - Goody, E. N. (1978). Towards a theory of questions. In E.N. Goody (Ed.), *Questions and politeness: Strategies in social interaction* (pp. 17-43). New York: Cambridge University Press.
 - Gottfried, A.W. (Ed.). (1984). *Home environment and early cognitive development: Longitudinal research*. New York: Academic Press.
 - Gray, S.W., & Klaus, R.A. (1968). The Early Training Project and its general rationale. In R.D. Hess & R.M. Baer (Eds.), *Early education* (pp. 63-70). Chicago: Aldine.
 - Hall, W.S., Nagy, W.E., & Linn, R. (1984). *Spoken words: Effects of situation and social group on oral word usage and frequency*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Excerpted from *Meaningful Differences in the Everyday Experience of Young American Children*
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References

- Hamhill, D.D., & Newcomer, P.L. (1988). *Test of Language Development-2: Intermediate*. Austin, TX: PRO-ED.
- Harris, M. (1993). *Language experience and early language development: From input to uptake*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hart, B. (1982). Process in the teaching of pragmatics. In L. Feagans & D. Farran (Eds.), *The language of children reared in poverty* (pp. 199–218). San Diego: Academic Press.
- Hart, B. (1983). Assessing spontaneous speech. *Behavioral Assessment*, 5, 71–82.
- Hart, B., & Risley, T.R. (1975). Incidental teaching of language in the preschool. *Journal of Applied Behavior Analysis*, 8, 411–420.
- Hart, B., & Risley, T.R. (1978). Promoting productive language through incidental teaching. *Education in Urban Society*, 10, 407–429.
- Hart, B., & Risley, T.R. (1980). *In vivo* language intervention: Unanticipated general effects. *Journal of Applied Behavior Analysis*, 12, 407–432.
- Hart, B., & Risley, T.R. (1981). Grammatical and conceptual growth in the language of psychosocially disadvantaged children: Assessment and intervention. In M.J. Begab, H.C. Haywood, & H.L. Garber (Eds.), *Psychosocial influences in retarded performance: Vol. 2. Strategies for improving competence* (pp. 181–198). Baltimore: University Park Press.
- Hart, B., & Risley, T.R. (1982). *How to use incidental teaching*. Austin, TX: PRO-ED.
- Hart, B., & Risley, T.R. (1989). The longitudinal study of interactive systems. *Education and Treatment of Children*, 12, 347–358.
- Hart, B., & Risley, T.R. (1992). American parenting of language-learning children: Persisting differences in family–child interactions observed in natural home environments. *Developmental Psychology*, 28, 1096–1105.
- Heath, S.B. (1983). *Ways with words: Language, life, and work in communities and classrooms*. New York: Cambridge University Press.
- Herbert-Jackson, E., O'Brien, M., Porterfield, J., & Risley, T.R. (1977). *The infant center: A complete guide to organizing and managing infant day care*. Baltimore: University Park Press.
- Huston, A.C. (Ed.). (1991). *Children in poverty: Child development and public policy*. New York: Cambridge University Press.
- Huston, A.C., Wright, J.C., Rice, M.L., Kerkman, D., & St. Peters, M. (1990). Development of television viewing patterns in early childhood: A longitudinal investigation. *Developmental Psychology*, 26, 409–420.

Excerpted from *Meaningful Differences in the Everyday Experience of Young American Children* by Betty Hart, Ph.D., & Todd R. Risley, Ph.D

- Jastak, S., & Wilkinson, G.S. (1984). *The Wide Range Achievement Test-Revised*. Wilmington, DE: Jastak Associates, Inc.
- Karnes, M.B., Hodgins, A.S., Stoneburner, R.L., Studley, W.M., & Teska, J.A. (1968). Effects of a highly structured program of language development on intellectual functioning and psycholinguistic development of culturally disadvantaged three-year-olds. *Journal of Special Education*, 2, 405-412.
- Lazar, I., & Darlington, R. (1982). Lasting effects of early education: A report from the Consortium for Longitudinal Studies. *Monographs of the Society for Research in Child Development*, 47 (2-3, Serial No. 195).
- Maccoby, E.E., & Martin, J.A. (1983). Socialization in the context of the family: Parent-child interaction. In E. M. Hetherington (Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp. 1-101). New York: John Wiley & Sons.
- McFarlane, M. (1994). *Nonlinear multilevel modeling of growth*. Unpublished doctoral dissertation, University of North Carolina at Chapel Hill.
- Mead, M. (1928). *Coming of age in Samoa*. New York: Morrow.
- Menard, N., & Santerre, L. (1979). La richesse lexicale individuelle comme marquer sociolinguistique [Individual lexical richness as a sociolinguistic marker]. *Cahier de Linguistique*, 9, 165-190.
- Moerk, E.L. (1992). *A first language taught and learned*. Baltimore: Paul H. Brookes Publishing Co.
- Montessori, M. (1912). *The Montessori method*. New York: F.A. Stokes.
- Nelson, K. (1986). Event knowledge and cognitive development. In K. Nelson (Ed.), *Event knowledge* (pp. 231-247). Hillsdale, NJ: Lawrence Erlbaum Associates.
- O'Brien, M.O., Porterfield, J., Herbert-Jackson, E., & Risley, T.R. (1979). *The toddler center: A practical guide to day care for one- and two-year olds*. Baltimore: University Park Press.
- Otis, A.S., & Lennon, R.T. (1989). *Otis-Lennon School Ability Test* (6th ed., OLSAT). San Antonio, TX: The Psychological Corporation.
- Patterson, G.R., DeBaryshe, B.D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, 44, 329-335.
- Reich, R.B. (1991). *The work of nations: Preparing ourselves for 21st century capitalism*. New York: Alfred A. Knopf.
- Rice, M.L., & Kemper, S. (1984). *Child language and cognition: Contemporary issues*. Baltimore: University Park Press.
- Richman, A.L., LeVine, R.A., New, R.S., Howrigan, G.A., Welles-Nystrom, B., & LeVine, S.E. (1988, Summer). Maternal behavior to infants in five cultures. In R.A. LeVine, P.M. Miller, & M.M. West (Eds.), *Meaningful Differences in the Everyday Experience of Young American Children* (pp. 1-10). Baltimore: Paul H. Brookes Publishing Co.

References

- (Eds.), *Parental behavior in diverse societies. New directions for child development*, No. 40 (pp. 81–96). San Francisco: Jossey-Bass.
- Risley, T.R. (1977a). The development and maintenance of language: An operant model. In B.C. Etzel, J.M. LeBlanc, & D.M. Baer (Eds.), *New developments in behavioral research: Theory, method, and application. In honor of Sidney W. Bijou* (pp. 81–101). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Risley, T.R. (1977b). The ecology of applied behavior analysis. In A. Rogers-Warren & S.F. Warren (Eds.), *Ecological perspectives in behavior analysis* (pp. 149–163). Baltimore: University Park Press.
- Risley, T.R., Clark, H.B., & Cataldo, M.F. (1976). Behavioral technology for the normal middle-class family. In E.J. Mash, L.C. Handy, & L.A. Hamerlynck (Eds.), *Behavior modification and families* (pp. 34–60). New York: Brunner/Mazel.
- Risley, T.R., Hart, B., & Doke, L.A. (1971). Operant language development: The outline of a therapeutic technology. In R.L. Schiefelbusch (Ed.), *Language of the mentally retarded* (pp. 107–123). Baltimore: University Park Press.
- Risley, T.R., & Reynolds, N. (1970). Emphasis as a prompt for verbal imitation. *Journal of Applied Behavior Analysis*, 3, 185–190.
- Schieffelin, B.B., & Ochs, E. (1978). A cultural perspective on the transition from prelinguistic to linguistic communication. In R.M. Golinkoff (Ed.), *The transition from prelinguistic to linguistic communication* (pp. 115–131). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Schumaker, J.B., & Sherman, J.A. (1978). Parent as intervention agent from birth onward. In R.L. Schiefelbusch (Ed.), *Language intervention strategies* (pp. 237–315). Baltimore: University Park Press.
- Smith, M.D., & Locke, J.L. (Eds.). (1988). *The emergent lexicon: The child's development of a linguistic vocabulary*. New York: Academic Press.
- Snow, C.E. (1986). Conversations with children. In P. Fletcher & M. Garman (Eds.), *Language acquisition: Studies in first language development* (pp. 69–89). New York: Cambridge University Press.
- SPSS Inc. (1988). *SPSS/PC+™*. Chicago: Author.
- Stanley, J.C. (Ed.). (1972). *Preschool programs for the disadvantaged: Five experimental approaches to early childhood education*. Baltimore: Johns Hopkins University Press.
- Stevens, G., & Cho, J.H. (1985). Socioeconomic indexes and the 1980 census occupational classification scheme. *Social Science Research*, 14, 142–168.
- Terman, L.M., & Merrill, M.A. (1960). *Stanford-Binet Intelligence Scale: Manual for the Third Revision Form L-M*. Boston: Houghton Mifflin.
- Excerpted from *Meaningful Differences in the Everyday Experience of Young American Children* by Betty Hart, Ph.D., & Todd R. Risley, Ph.D

- Thissen, D., & Bock, R.D. (1990). Linear and nonlinear curve fitting. In A. von Eye (Ed.), *Statistical methods in longitudinal research: Vol. II. Time series and categorical longitudinal data* (pp. 289–318). San Diego: Academic Press.
- Vygotsky, L.S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press.
- Wagner, K.R. (1985). How much do children say in a day? *Journal of Child Language*, 12, 475–487.
- Walden, T.A. (1993). Communicating the meaning of events through social referencing. In A.P. Kaiser & D.B. Gray (Eds.), *Communication and language intervention series: Vol. 2. Enhancing children's communication: Research foundations for intervention* (pp. 187–199). Baltimore: Paul H. Brookes Publishing Co.
- Walker, D., Greenwood, C., Hart, B., & Carta, J. (1994). Prediction of school outcomes based on early language production and socioeconomic factors. *Child Development*, 65, 606–621.
- Weikart, D.P. (1972). Relationship of curriculum, teaching, and learning in preschool education. In J.C. Stanley (Ed.), *Preschool programs for the disadvantaged: Five experimental approaches to early childhood education* (pp. 22–66). Baltimore: Johns Hopkins University Press.
- Weikart, D.P., Bond, J.T., & McNeil, J.T. (1978). The Ypsilanti Perry Preschool Project: Preschool years and longitudinal results. *Monographs of the High/Scope Educational Research Foundation*, No. 3.
- Weinberg, A. (1989). Intelligence and IQ. *American Psychologist*, 44, 98–104.
- Wells, G. (1985). *Language development in the preschool years*. New York: Cambridge University Press.
- Wells, G. (1986). Variations in child language. In P. Fletcher & M. Garman (Eds.), *Language acquisition: Studies in first language development* (pp. 109–139). New York: Cambridge University Press.
- White, B.L. (1985). *Experience and environment. Vol. 2*. Englewood Cliffs, NJ: Prentice Hall.
- Whiting, J.W.M., & Whiting, B. B. (1978). *Children of six cultures: A psychocultural analysis*. Cambridge, MA: Harvard University Press.
- Zaslow, M., & Rogoff, B. (1981). The cross-cultural study of early interaction: Implications from research in culture and cognition. In T. Field, A. Sostek, P. Vietze, & H. Leiderman (Eds.), *Culture and early interactions* (pp. 237–256). Hillsdale, NJ: Lawrence Erlbaum Associates.