

## Foreword

Language is an important and virtually inevitable part of a child's development. Communication with important adults is built in at birth, as a way of being sure to be taken care of. Right after birth, a baby communicates. He is born with six different cries: hunger, pain, boredom, fatigue, discomfort, and a cry that accompanies letting off steam at the end of the day. These cries attempt to draw an important person to him and get that person to meet his needs. They are a baby's first language—a language that his parents will learn from him in his first three weeks of life.

A baby's sucking pattern is also designed to draw out parental responses. From birth, he starts sucking with a typical hungry suck-suck-suck. After a few minutes of initial satiation, he falls into a new pattern: suck-suck-suck-pause, suck-suck-suck-pause. When he pauses, a nurturing parent automatically looks down at him, chucks his chin, and says "Come on" or "Keep eating."

My colleagues and I compared the pauses when a parent said something with those when she didn't. When the mother talked to the baby, her stated goal was to keep him sucking. The pauses where she responded were lengthened by the baby, as if his goal was to heighten communication as a major part of feeding. For him, even as a new baby, feeding was not just for food—but also for communication. This expectation, when it's fulfilled, leads him to feel cared for as well as taken care of. A whole new, exciting world opens up. "I'm important—it's *me* they care about!"

As early as six to eight weeks of age, a baby begins to differentiate mother, father, and a stranger in his behavioral and vocal responses. He not only learns what to expect from each parent, but his behavior in response is geared to draw them to him. With his mother at two months, he squirms slowly, fingers, toes, mouth, eyes going out and coming back smooth, three times a minute. As he smiles and gurgles, she responds with excited smiles and gurgles. She is predictably his! With his father at two months, his every movement is jerky and excited. His face is all "up" as if eliciting the playful poking and joking that new fathers resort to. Play becomes their

communication, as early as two months of age. A new father soon knows his role because the baby leads him. He comes in to play and poke!

As the baby begins to smile and to vocalize, he realizes that he gets a joyful response from these important adults. Their responses fuel his attempts to add vocal behavior to the broad expanse of cries as a technique for drawing them to him. Vocal and responsive behavior become richer and richer. The bases for language are laid down in the first months—between child and parent.

As a baby communicates with a parent, as early as three months of age, he learns a rhythmic burst-pause pattern, as if waiting for the adult's response. Parent and child get into a responsive rhythmic dance. He will have learned from his burst-pause sucking pattern that his parent will respond in the pauses—behaviorally and verbally. He has learned that communication is a timed dual operation. Each important adult has a characteristic behavioral and verbal response to which the baby adapts his own unique behavioral response. He is learning to expect and to separate important people from unimportant ones in the first few months. Language and responsive behavior are already linked in his mind as opportunities for learning about his new world. And he is already learning how to elicit these responses from important adults. "I'm learning that *I* can get them to respond to me in my own way. When I use my body to communicate, they can't resist *me!* I'm important."

As the year progresses, exposure to the speech of the important people in his life shows a baby how to learn words! What a feat! His first word is likely to be "dada"—what could be more politically advantageous? The next, delivered with more squirming and eliciting behavior, is often "mama." No mother can resist. These two important adults are at his disposal. More complex speech follows as they lead him on. "Look how they fall for *me.*"

These important early steps are laying the groundwork for language as important communication and learning. The baby is doing his part in working toward the goal of learning language. As he and his caretakers communicate with each other, they are learning the steps that lead to his self-esteem and ultimately to his intelligence. With language, he can display and even shape this intelligence, but he also knows how to shape his world with his communication skills. He is on his way. He *knows* he can do it. He begins to believe in himself—and he's ready to shape the world!

It is no wonder that speech is important to us as humans. It is one of the two behaviors that separate us from the great apes—speech and the delicate pincer-grasp of thumb and forefinger. In the human child, communication is linked to verbal and to behavioral responses. Each enriches the other. By one year of age, a baby who tells you what she wants will shape her behavior to express it. Already a parent will have several modes of communication

from which to read and interpret her needs and her desires: her face, her body, and her primitive linguistic and behavioral responses.

Then comes real language! It is powerful. Now the baby's language leads in shaping her behavior and vice versa. From the first these modalities of communication are influenced by the environment around the child. When the environment is responsive, the baby's behavior is enriched. When it is sparse, the baby's responsive behavior is severely constricted. Language shapes a child's behavior, her self-esteem and belief in herself, her imagination, and her learning about the world. Although, it is first her way of learning about her caregivers, it quickly becomes the environment's way of fitting her for future learning from the world around her.

A parent who talks to her child right from the first is fitting that baby for a rich future. He will rapidly begin to imitate her—in behavior and in language. Being able to express himself will ensure his future. As this excellent book points out, communication is the hallmark of how well a child will perform in our culture. Our culture demands that children have easily available, rich language and the imagination that it represents. Their capacity to express themselves is our window into their brains. All of our tests of their capacity will be based in their ability to communicate primarily in language. Language is an asset that we require in our society as we assess our children's progress along the way. If they lack this, they are automatically set up for second-class roles. As this book points out, language and the ability to communicate becomes one of the most important ways children slot themselves. And it begins so early. Hence, in the first years, it is critical that we provide verbal enrichment.

This volume leads us to realize that other caregivers may be of vital importance as well. Since two thirds of our small children are in early child care, their experience in child care with communication and language is critical. At home and also in early child care, children are already being set on paths that will determine their future. Children who are taught to "use their words," are already being taught the most important assets in the world we have available for them. Parents, talk to your babies from the first! Caregivers, talk to your babies from the first. And with older ones, "use your language!"

This wonderful volume points out the importance to each child not only of a strong language base, but also of the emotional background that it represents. We know now that both intelligence and resilience are founded in emotional learning. Without the necessary emotional base that comes from a devoted environment, a child's intelligence is not likely to flourish. And in the early years, when the bases for emotional learning are laid down, children whose parents or caregivers are too stressed to talk or to read to them are already at risk for their future. We must be able to back up

parents early to feel competent to communicate with their children. We must provide quality child care that values communication and conversation as much as feeding and diapering.

This book emphasizes the importance of the quality of a child's life outside the home. This demands that we provide them with a ratio of 3:1 adults in infancy, adults who are paid, trained, and respected. We are investing in our children's future!

Such adults who have the time and energy to communicate with small children, if they read this book, they will find ideas for reinforcing children's language and satisfying their hunger for words, conversation, and learning.

But our nation has not been responsive to such support systems as child care for working parents. We know now that rich early language experience is important to learning and to the ability to demonstrate this learning. We need to emphasize this as a priority, to provide our children enriching environments in which they can develop their potential for learning. This excellent book provides opportunities and programs for both parents and teachers which will do just that. It is a cookbook of ideas for use for both parents and caregivers of small children. Its dedication to language development is an eye-opener to us all.

We know that the stresses and demands on families and family life are increasing. The number of intact families are decreasing. Poverty and its destructive pressures on the ability to nurture their children are increasing. We know that children's future ability to respond to the demands of our culture is based on the opportunities for communication in the early years. Emotional intelligence is the key. Language is a window into that, and one that is responsive to home and to child care. We must provide stressed families with optimal child care. It will cost, surely. How much? We don't know, but not as much as a battleship or bombs. One study shows that every \$1 spent in early childhood saves at least \$7 later in the child's life. Prevention and salvaging their future is critical. Our prisons are overloaded, and they cost us an enormous amount per adult child.

From this book, we know what to do. Why don't we do it? Education, such as optimal child care, and Early Head Start programs for all children are proven ways to prevent problems, and to ensure our national future. Why don't we fight for them?

Parents are too stressed today to take up the fight and yet they are our most likely advocates for change. We need for parents to demand what they need—enriched environments for their children that emphasize the communication that is critical to their future. This volume can back us all up to fight for what we and our children need!

*T. Berry Brazelton, M.D.*

## Preface

*If parents only knew what they were entitled to in a civilized society, they would demand it.*

—David Lawrence, Jr.<sup>1</sup>

Language is characteristic of human beings, as natural as breathing. Children say their first words around the time of their first birthday, and almost all are speaking fluently by the time they are four. When they are getting what they need, young children are natural chatterboxes and non-stop learners. Their rapidly expanding language connects them to others, helps them control their behavior, and enables them to take in a wealth of information. It thus provides the foundation for literacy, success in school, “emotional intelligence,”<sup>2</sup> and life success.

But too many children are not getting the stimulation and attention they need to develop a strong language foundation. They can’t learn without exposure to language, and they can’t learn well without lots of opportunity for practice. In too many of the settings where our young children are spending significant portions of their days, multitasking adults have too little time to talk with individual children, listen to what they have to say, and encourage further learning. Too many of our children are not getting the kind and amount of practice they need to learn their language well.

Nationally, approximately one third of the children entering kindergarten are significantly behind their peers in the critical area of language development.<sup>3</sup>

Many parents and citizens are unconcerned, believing that the children are simply lacking formal education, which the schools should, can, and will provide. Research shows otherwise. The children who come to school with half the vocabulary of their more advantaged peers can catch up with intervention, but catching up is a challenge that becomes harder and harder as time goes on.<sup>4</sup> Larger vocabularies enable children to learn faster, to learn to read more easily, and to learn more new words and concepts from what they read.<sup>5</sup> At the same time, children who can “use their words” to develop more positive relationships with peers and adults and are less

likely to exhibit behaviors that interfere with their learning, motivation, and overall enjoyment of school.

Recognizing the importance of early learning, many modern societies provide public support—in the form of paid family leave, publicly funded child-care programs, and other assistance to families—to give their children a strong start.<sup>6</sup> Such supports are lacking or insufficient for too many American families.

As parents and grandparents, as citizens and taxpayers, we can demand better.

This book is for all of us who care about the future.

# 1

## Jack and Jill

Jack and Jill  
Went up the hill,  
Full of hope and laughter.

Jack got to play  
And learn all day,  
But Jill kept struggling after.

**W**hy do some students learn easily and joyfully while others in the same classrooms continue to struggle? Why are so many of our children coming to kindergarten so far behind their peers that “All children shall start school ready to learn”<sup>1</sup> is an unrealized national goal rather than a safe assumption? Why is there an “achievement gap” between haves and have-nots, and why is it so difficult to close?

The answers to these questions are complex. Yet it is becoming increasingly clear that much of the explanation lies in what we are doing—and not doing—as parents and teachers, as communities and as a country, to support our youngest children. The more we learn about the astounding capabilities of young children, the rapidity of their learning, and the impact of that learning on their later development, the clearer this becomes.

Before we examine the evidence though, let us look at two real children whose daily experiences and approaches to learning illustrate what research captures on a larger scale.

Jack and Jill<sup>2</sup> are two real children who live in suburban towns in eastern Massachusetts. At the time of this writing, Jack is two-and-a-half and Jill has just turned three. Both children live in two-parent families where both parents work, so both children spend much of their time in a formal child-care setting. Both are oldest children with a younger brother. Both children are healthy, with no biological risk factors, sensory-motor impairments, or diagnosed handicapping conditions. Both come from middle-income, English-speaking families and hear only standard English in their daily lives.

Unfortunately, this is where the similarity ends. Jack's parents have jobs that allow them some flexibility in when and where they work and enough discretionary income to purchase relatively expensive child care. Jack spends three days a week in a family child-care home with an exemplary educational program. The rest of his waking hours are spent with one of his parents or, occasionally, with a grandparent. Jill's parents both work long hours with no flexibility. Jill spends two days a week with her grandparents and three days at the best child-care center her parents can afford. Jill's mother works required overtime nearly every week; Jill and her baby brother spend a lot of time in her office waiting for her to finish.

In their solitary play, interaction with adults and peers, and especially in their use of language, Jack and Jill are as different as night and day. These differences, as we shall see, are priming one child to flourish and the other to struggle when they reach elementary school.

Jack is full of curiosity and constantly on the go. He has only recently learned to talk, but he keeps up a steady stream of conversation. His pronunciation is a bit idiosyncratic—c's become t's and s's are sometimes left out entirely—but his parents, teacher, and playmates understand most of what he says.

Jill is much more "well-behaved." She'll sit quietly for an hour, playing with a toy, or, if no toy is available, fiddling with her fingers or just watching whatever is going on around her. Her speech is quite clear, but she tends to speak only when spoken to.

Spend a little time playing with Jack and with Jill, and you'll see even starker differences. Let's eavesdrop on a typical playtime conversation between Jack and his mother. Notice the range of ways in which Jack uses language, how much he knows, and how his mother extends his vocabulary as she joins him in play.

*Jack:* Go park now?

*Jack's Mother:* Yes. We can go to the park. Can you get your jacket on?

*Jack:* No jacket. Park.

*Mother:* It's cold outside today, Jack. You have to wear your jacket if you want to go to the park.

*Jack:* No. No cold. No jacket. Go park now.

*Mother* (putting on the jacket as Jack squirms): Ooh, where did your hand go? Oh—Here it comes! Hi, Jack's hand! Oh, no—the other one got lost! There it comes! OK—You do the zipper. Then we can go to the park.

(Jack pulls up the zipper and looks to his mother for affirmation.)

*Mother:* Good job, Jack. You're getting good at zipping up your jacket.



On the way to the park, Jack's mother sings the train song that Jack learned at child care. Jack shouts out his favorite line "Chug, chug, toot, toot, off they go!"

As soon as they reach the park, Jack lets go of his mother's hand, runs for the train, and climbs on.

*Jack* (concerned): Seat all wet. Rain?

*Mother*: Yes. It rained last night. The rain made a puddle on the seat.

*Jack*: 'Tand here. I drive train.

*Mother*: Where are we going today, Jack?

*Jack*: Tontord.

*Mother*: Oh, you want to go to Concord? Should we buy some cookies at the bakery?

*Jack* (handing his mother an imaginary cookie): Here tootie.

*Mother*: Thank you, Jack. Umm. This is a delicious chocolate chip cookie.

*Jack* (driving the train again): Choo, choo. Goo, goo. I drive train.

*Mother*: Jack, what kind of engine does this train have?

*Jack*: 'Team engine. See 'moke 'tack?

*Mother*: Does it have a tender?

*Jack* (pointing to the small platform behind the engine): Here tender.

*Mother*: Do we need some more coal for the fire?

*Jack* (jumping off the train and pulling up pieces of grass): I get toal. Need lotta toal for fire.

*Mother*: That will make a hot fire.

*Jack* (throwing "coal" into the "fire"): Fire hot. Train go fast. (He turns the steering wheel rapidly back and forth.) I drive fast. Go Boston.

*Mother*: We're going to Boston. Should we stop at the zoo?

*Jack*: See 'raffe.

*Mother*: OK. Here we are at the zoo. Let's go see the giraffe.

*Jack*: No. You 'tay on train. Go to Tontord.

Jack's large vocabulary is above average for his age, though not unusually so. Neither is it unusual for children as young as Jack to have a favorite book or a compelling interest, and therefore to know specialized words like "steam engine," "coal," and "tender." Jack's range of language use is also age-appropriate. He uses language to point out interesting things, to express emotions like anger, impatience, and concern, to get others to do what he wants them to, to ask questions, to recall past experiences, to accompany his private play, and to play out an imaginary story. He plays with language, and uses language to play with others. Jack is a good pretender, and he is particularly good at roping in adults and holding their attention. He gets a lot of practice.

Now, eavesdrop as Jill interacts with her mother's coworker, Linda (with whom Jill is very familiar and comfortable), on one of her weekly visits to her mother's office. Notice the range of ways in which Jill uses language, how much she seems to know and understand, and how she responds to Linda's attempts to engage her in conversation.

*Linda:* Jill, would you like to help me water the plants?

*Jill:* Water the plants.

*Linda:* Yes, the plants are thirsty. I need to get them a drink of water. Do you want to come with me?

(Jill looks at her mother for guidance.)

*Mother:* Go with Linda, Jill. You can help her.

*Jill:* Help Linda.

*Linda:* Good. Come with me.

(Jill gets out of the chair and follows Linda.)

*Linda:* Here. Would you like to carry the cup?

*Jill:* Cup. (She takes the cup.)

*Linda:* OK. Here we are at the sink. I'll turn on the water, and you fill up the cup. OK?

*Jill:* OK. (She watches silently as the water is turned on, without lifting the cup.)

*Linda:* Put the cup under the faucet.

*Jill:* Under the faucet.

*Linda:* Here, like this. OK. That's enough. Now we'll take it to the plants. (They go over to the plants.)

*Linda:* OK, now let's give the plants a drink.

*Jill* (unmoving): Give plants drink.

*Linda* (helping Jill pour): Here, pour it in, like this. Should we get some more?

*Jill:* More.

Jill's pronunciation is clearer than Jack's, but, compared to his, her language sounds impoverished. It is. She typically repeats words she hears, but rarely initiates conversation. In everyday interactions with adults and peers, she doesn't introduce new ideas, ask questions, or point out details. Neither does she use her language routinely to push others around. Her vocabulary is limited to everyday words, and she seems to lack both imagination and playfulness. Most disturbing, her receptive vocabulary is limited; she doesn't seem to grasp simple directions or understand basic conversation. Jill's spoken, or expressive, vocabulary is below average for her age, though not out of the realm of normal. Her lack of curiosity, her willingness to do as she's told even if that means doing nothing, her

difficulties in comprehending basic conversation, and her limited use of language for her own ends are not appropriate for a child her age, although they are all too common. Even in familiar situations where she feels relatively secure, Jill tends to keep quiet. Instead of practicing her communication skills, Jill has learned to shut down.

For Jack, language is a path to learning. Every day he learns new words, new distinctions, and new information. By the time he is three, he will be speaking in complete sentences and peppering the adults in his life with questions. He'll be asking why the things he sees work or happen the way they do, what people are doing and why they are doing it that way, and when an anticipated event will happen. He'll be telling stories of past experiences and playing out real and pretend scenarios with his friends. Long before he gets to kindergarten, he will know the names of numerous animals, vehicles, tools, foods, places, and people—and important facts about each. When he masters reading, we can expect Jack's learning pace to pick up even more.

Jill—though only three—is already being “left behind.” If she and Jack continue at their current word-learning paces, Jill will enter kindergarten with less than half the vocabulary that Jack will have. According to Dr. Catherine Snow, who led the National Academy of Sciences team that reviewed the research on reading,<sup>3</sup> first graders who know fewer than five or six thousand words are very likely to have trouble learning to read. Their early difficulties tend to be compounded when they move from simple texts with short, regularly spelled words to more naturally written narratives. When too many of the words are new, it's hard to get the gist of what you are reading.

If Jack and Jill continue to follow the pattern revealed in the research, Jack will be learning new words from context, while Jill will still be struggling to understand the story. By third grade, when both Jill and Jack are likely to be able to read to themselves, Jill will still be reading simple texts, while Jack will be garnering new information and rapidly expanding his vocabulary. His early language advantage will enable him to learn more independently and more quickly, so his learning curve will be steeper. Jack and Jill could receive the same elementary school curriculum—even in the same classrooms—and we would still expect the gap in their educational achievement to widen as they grow, unless Jill receives intensive intervention. When they take standardized tests in the fourth grade, we would not be surprised to see Jack scoring at the sixth-grade level or above, while Jill's scores are likely to be in the second- to third-grade range.

But this doesn't have to be. Jill and Jack are two very different children, but they don't have to go through life with vastly unequal chances at success.

If Jill could receive, every day, the same sustained adult engagement that Jack gets, she would not be at such a loss for words.

To understand what it is that Jill is missing, let's take a closer look at how she and Jack spend their days.

Jack's days usually begin with a bang. Sometime around six, he wakes up, jumps out of bed, charges into his parents' room, and leaps onto their bed. His morning cuddle lasts only a few seconds, then he is ready to pull his parents out of bed and engage them in play. Sometimes, his Mom or Dad gets up with him; usually they buy a few more minutes of rest by reading him a book or two from the stack they keep beside the bed. Jack's favorite is the train book: he loves to label the steam engine, diesel engine, cattle car, and caboose; to find the smoke stacks, cattle guard, and tender; and to shout "All aboard!" blow the train whistle, and remind the conductor to punch the tickets.

Jack's dad usually gets Jack dressed and readies the breakfast, while his mother attends to the baby. This is Dad's special time to be with Jack. Getting dressed involves a lot of jumping, tossing, and tickling, along with a few tummy kisses. But it is also full of opportunities to learn and practice language. Dad lets Jack decide whether he wants to wear jeans or overalls, the red shirt or the one with a train on it. Jack follows his father's directions, helping to put his hands in his sleeves, pull up his socks, and push his feet into his shoes.

At breakfast, Jack and his parents keep up a steady stream of conversation. They talk about what Jack is eating for breakfast, the taste and texture of the food, what the baby is doing, where Jack will be going that day, and some of the things they are going to do. Just as his mother did at the park, Jack's parents keep the conversation going by expanding and elaborating Jack's "sentences." They don't correct his grammar or pronunciation, but, as they repeat what Jack says in their own words, they give him the correct forms. They add only one or two new ideas at a time, making sure that Jack is with them. When they introduce new vocabulary—which they do fairly frequently—its meaning is usually clear from the context or the situation. The discussion stays focused, for the most part, on things that Jack has seen, heard, or done or has learned about from picture books.

Most adults naturally talk in this way to young children—when they can take the time to focus on one child and respond to most of what he says.

With both parents working long hours, Jill's family finds it difficult to take the time for such intense involvement. Mornings tend to be hectic. Jill's dad leaves for work at 6 A.M., and getting Jill and her brother to child care and herself to work on time is always a challenge for Jill's mother. For Jill, getting dressed is a process to be accomplished as quickly as possible,

not a game or a chance to learn and practice new words. When Jill doesn't follow a direction promptly, her mother usually jumps in to help rather than waiting for Jill to figure out what to do and how to do it. Likewise, Jill's mother's talk during their morning routine tends to have a practical focus. She uses fewer words than Jack's parents do and is less likely to engage Jill in the conversation. There are more commands, fewer questions, simpler sentences, and far less silliness. As with Jack, the focus is on things that are seen, heard, touched, and directly experienced. But Jill and her mother focus more on the here and now, less on what has happened, will happen, or might happen.

A classic study by Betty Hart and Todd Risley, published in 1995,<sup>4</sup> followed the language experiences and vocabulary sizes of forty-two children in three groups—children whose mothers were on welfare, children from working families with low to moderate incomes, and children from professional families. The researchers found differences in the size of the children's vocabularies that were statistically significant at eighteen months and continued to grow, until by thirty-six months the children from the highest income families had vocabularies twice as large as those from the lowest (see Figure 1.1).

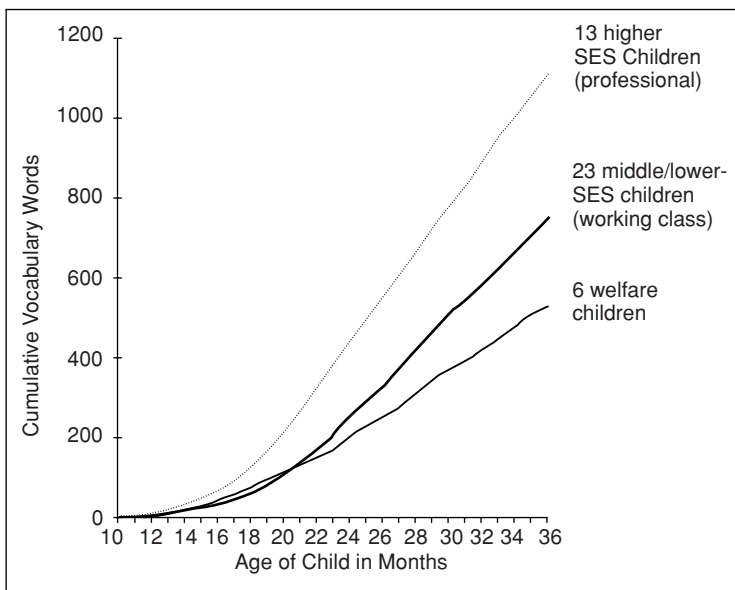


FIGURE 1.1. The Widening Gap in Young Children's Vocabularies.

Note: SES: Socioeconomic Status

Source: Hart, B., and Risley, T. (1995) *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, Paul H. Brookes Publishing Company, p. 47.

The differences in the children's vocabularies, manifest so early, persisted through age ten and resulted in differential school performance.

As documented by the researchers, children in the professional group heard substantially more language and more varied language than those in the lower income groups. In fact, the three-year-olds in the professional families used more different words during the taped conversations than did the PARENTS who were on welfare! Also, the professional parents shared more information, asked more questions, issued relatively fewer commands, and were generally more responsive to the child's communications. Both how and how much parents talked to their children were reflected in the children's vocabularies.<sup>5</sup>

As shown in Figure 1.2, the differences in the amount of language input the children received are striking. By age four, the children in professional families would have heard an average of fifty million words, while those in the working class families would have averaged just thirty million. The six children whose families were on welfare were likely to have heard only fifteen million words. It would take a lot of input during the first few years of schooling to close a gap of that magnitude!

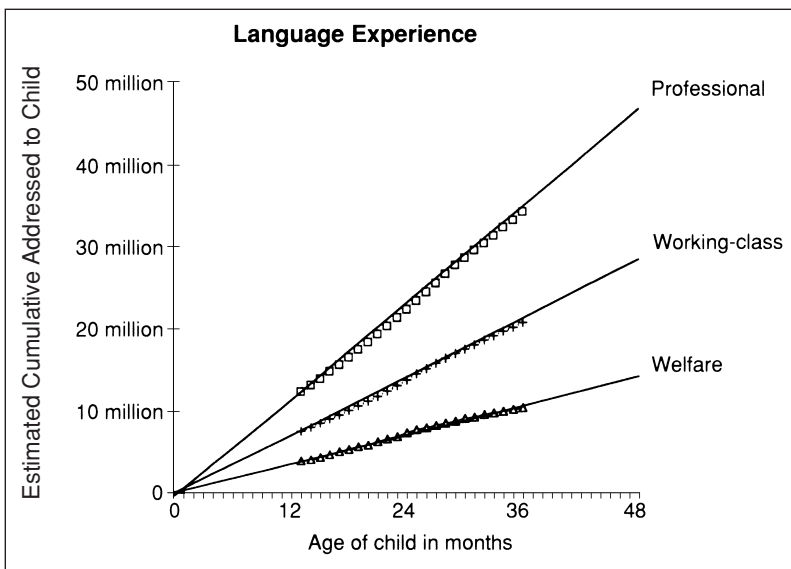


FIGURE 1.2. The Widening Gap in Language Input Addressed to Young Children. Source: Hart, B., and Risley, T. (1995) *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD: Paul H. Brookes Publishing Company, p. 198.

In a subsequent book,<sup>6</sup> Hart and Risley trace what they call the “dance” of communication and explain why these differences occur. They found that in homes across the economic spectrum, parents used roughly the same amount of talk geared to accomplishing the routine tasks of family life, including managing their children’s behavior. The differences occurred in the amount of “optional” talk, when parents and children played together or exchanged communication as they engaged in parallel tasks. “As partners in play,” the researchers found, “the children tended to be more cooperative, the parents more approving, and both of them less demanding and more likely to comment on the nuances and elaborate what was said.”<sup>7</sup> In other words, some families supplemented their routine interactions with their toddlers with freer, more playful conversations, and toddlers in these more talkative families were both hearing and practicing more varied and complex language. The children’s increasing knowledge and communicative facility elicited increasingly complex and information-rich language from their conversation partners, and their learning tended to proceed at a rapid pace.

Jack and Jill’s language experiences at home fit the pattern that Hart and Risley observed for families spending more and less time in “optional” talk. But both Jack and Jill spend a significant fraction of their waking hours with people other than their parents. The differences in their interactions with their parents might not be so significant if their child-care experiences were comparable.

Both children spend three full days each week in a licensed child-care setting. Jack is in family child care, while Jill goes to a center, but this is not the important difference. The difference that counts is quality. Jack’s child-care environment has been rated “excellent” by independent observers and experts in the field.<sup>8</sup> Judged according to similar criteria,<sup>9</sup> Jill’s classrooms would be rated “mediocre.” The center she attends meets basic health, safety, and program requirements, but its deficiencies in teacher expertise, provision of individual attention, and activities that stimulate language are contributing to Jill’s language delay.

A recent large-scale study by the National Institute of Child Health and Development (NICHD)<sup>10</sup> found that children whose mothers were warm and encouraging during structured teaching tasks tended to show more advanced language development. Three-year-olds who had been in high quality child-care settings, with teachers who provided good language stimulation, tended to score higher on tests of receptive (understood) and expressive (spoken) language than those who had received lower quality care. Neither of these findings is surprising. What was significant was their interaction: the researchers found that the quality of children’s

child-care experiences could mitigate or exacerbate the impact of a less engaging and responsive parenting style. This finding mirrored their results for emotional development. In that realm, the research showed that when children with problematic attachments to their mothers were in high quality child care, their relationships with their mothers improved. Likewise, strong family attachments could protect children in poor quality care, but the children who were insecurely attached to parents *and* receiving poor quality child care were at serious risk for emotional, behavioral, and developmental problems.

In general, children who get a healthy dose of language interaction at home or in child care develop hefty vocabularies and strong functional language; children who do not get enough input or meaningful practice in either situation are likely to be at a loss for words.

TV doesn't count,<sup>11</sup> and neither does overheard conversation. Although children will learn individual words, songs, and stock phrases from TV and videos (particularly the names of TV characters and kid culture slang), the bulk of language learning occurs through conversational give-and-take. When they have interesting things to talk about and interested people to talk to, two- and three-year-olds learn many new words each day and rapidly develop rich vocabularies.

Jack's parents carefully researched his child-care placement, and were lucky enough to find an unusual treasure—an experienced, highly educated provider who is a leader in her field. Her family child-care home had been accredited by the National Association for Family Child Care,<sup>12</sup> a certification of excellence.

Jill's mother also wanted the best for her child. When Jill was a baby, she brought her to work with her, taking time to feed and change her, but otherwise leaving her in a swing or bassinet while she worked. This arrangement worked until Jill was six months old; then Jill's paternal grandparents agreed to take her. That arrangement worked for a year, until Jill's brother came along, and the grandparents declared that they could only take the children two days a week. Jill's mother investigated several centers and family child-care homes, but all were either full or too expensive. Shortly before Jill's second birthday, a slot opened up in a child-care center near Jill's mother's workplace. Jill's mom was thrilled! The center was large, clean, and well equipped. The staff seemed friendly. The two-year-old classroom was filled with active toddlers, and there seemed to be an ample supply of books and toys. What was missing, however, was an ample supply of confident, caring, well-trained adults who could give Jill and the other children individualized attention and stimulate their learning.



A significant body of research links children's language development with the quality of their child-care environments and links the quality of the child-care environment to the teachers' training and education, the staff/child ratio and "class" size, and the level of compensation the staff receives. Let's look more closely at Jack's and Jill's child-care experiences to see how the markers of quality—professional training, low child/staff ratios, and adequate staff compensation—translate into differences in classroom environment and practice that impact children's language development.

Jack's provider, Elaine, has a masters degree in early childhood education and has been running her own family child-care home for ten years. She has taken courses in early childhood language and literacy development and working with children with special needs. Her prices are somewhat higher than the average and she's only open four days a week—8 A.M. to 6 P.M.—in order to allow time for planning, administration, professional development, and leadership activities. With the help of two assistants, she handles a mixed-age group of no more than ten zero- to five-year-olds at a time. She has been caring for Jack since he was three months old.

When Jack and his mother enter the playroom in the morning, Elaine greets them warmly. Stooping down to Jack's level, she talks directly to him about topics that she knows interest him. She helps Jack choose a toy or activity, and then spends a few moments talking to his mother.

Throughout the day, Elaine engages Jack in conversations and sets up opportunities for him to talk with her and with the other children in the program.

The day is about evenly divided among routines, planned activities, and child-initiated play. Planned activities reflect the children's interests and trigger their curiosity. Taking advantage of the mixed-age group, Elaine frequently plans multiday activities in which children work on a project together and older children help the younger ones. She stays with a theme for a week or more so that children and their families can participate in planning activities. For example, this week's theme is "space," a follow-on to explorations of "weather" and of "things that go up in the air." One of the families has contributed a small tent to serve as a spaceship, which Elaine has set up in the living room and stocked with astronaut helmets and flashlights. Other families have brought in picture books to supplement Elaine's already extensive library. As the theme develops, children will talk about what they already know and what they want to learn. They'll pore over picture books and listen to fiction and nonfiction stories, brainstorm ideas of what to add to their spaceship, bring over toys to serve as pretend play props, chronicle their imagined travels in space logs, and make scenery

to enhance their journeys. A family supper will give them a chance to observe the night sky together.

During today's "morning activities," Elaine and her staff take up stations in different rooms. One assistant goes to the kitchen, where she helps children paint the stars, moons, and planets that they have made from self-drying clay and will hang on space mobiles. The other takes up a position beside the spaceship, where she can encourage and enrich pretending as pairs of children get their turns to "blast off." The younger ones enjoy pushing buttons, looking out the windows, and pretending they are going for a ride. The older ones practice the "countdown" and blast off on a trip to Pluto. Encouraged by their teachers, they look through the books to find out more about their destination.

Meanwhile, Elaine sits on the floor of the playroom, where she can observe and expand children's interests as they play with the toys and with each other. Let's eavesdrop.

*Elaine:* What are you making, Kayla?

*Kayla* (24 months): Pasta.

*Elaine:* Mmm. That pasta smells good. Is it ready?

*Kayla:* Ready.

(She brings her pot and spoon over to Daniel, who is playing with some Legos.)

*Elaine:* Did you want to give Daniel some pasta?

*Kayla:* Yes.

*Elaine:* Can you tell him?

*Kayla:* Mmm.

*Elaine:* Say, "Here's some pasta for you, Daniel."

*Kayla* (to Daniel): Here pasta, Daniel.

*Daniel* (age 4): Thank you, Kayla.

(Kayla goes back to the play kitchen. Daniel takes out the drum and starts to bang loudly.)

*Elaine:* Daniel, I'm thinking that you should take the drum over to the corner, so you don't hit anyone with the sticks.

*Daniel:* OK.

*Elaine* (to Jack, who is wandering): Jack, do you want me to help you build the Lego train?

*Jack* (age 2½; picks up a toy plane and flies it over his head): Rrrrr, Rrrr.

*Elaine:* Jack, your plane is going really high. Are you the pilot?

*Jack:* I pilot. Fly plane. Rrrr.

*Elaine:* Is it going to land? Maybe it needs the runway.

*Jack:* Yes. Need runway.

*Elaine* (laying out two pieces of Lego road for the runway): There you are, pilot.

*Jack*: Rrrr. R-r-r. Plane landing on runway. People get off. Take off again.

*Elaine*: Daniel, that's nice music you're making on the drum. I was wondering, if you turned them over, would they make a different sound?

(Daniel turns the drum over and bangs on its metal bottoms.)

*Elaine*: That sounds like another instrument. Do you know what it is?

*Daniel*: I don't know.

*Elaine*: Something big, that's made of metal.

*Daniel*: Yeah. Those things you crash together. What are they called?

*Elaine*: Cymbals. Or, it could be a different kind of drum. Have you ever heard someone play a steel drum?

Elaine and her staff take time each day to document what the children are learning. Indeed, it was Elaine who first noticed Jack's interest in trains. Jack had been playing with the toy train one day, and had been uncharacteristically possessive when another child wanted a turn. The next day, he toddled over to the shelf and pulled out the train as soon as he arrived. Elaine noticed that Jack was trying to say "train," and pointed out this new interest to his mother. Over the next few weeks, Elaine introduced Jack to picture books, songs, crafts, and play activities that capitalized on his interest. Jack's parents added a trip to the library to find more train books, rides on a real (subway) train, and visits to the park with the climb-on train. Soon Jack was becoming a train expert—and his train vocabulary was soaring.

While Jack is rapidly learning new words and concepts, Jill is marking time.

Jill and her brother spend two days a week with kindly grandparents, who love and nurture them but see their role as "watching" the children rather than educating them. The TV is on most of the time, and the children rarely go out of the house. Rather, they play with their toys, watch (and occasionally help with) cleaning and cooking chores, watch children's videos or cartoons and a couple of adult shows, eat meals, and take naps. Jill's eighteen-month-old brother is "a handful," and his grandparents spend a fair amount of time stopping him from climbing on the furniture or taking things off the shelves. They are careful to keep both children clean, safe, and comfortable, but they leave the "teaching" to the child-care center.

For the past two years, Jill has spent three days a week at the for-profit child-care center. Such centers range widely in quality, and the one Jill attends would be considered about average by early childhood experts.<sup>13</sup>

The space is clean and safe, the teachers are gentle, there are lots of age-appropriate toys and books for children to use, and the teachers follow a planned program of activities geared to the children's ages.

Still, the environment has often been too noisy for Jill, and rarely provides her with enough meaningful stimulation or opportunities for extended conversation. The toddler program, which includes gym and playground time as well as classroom activities like story reading, block play, puzzles, and teacher-initiated games, would seem at first glance to provide many opportunities for learning. Unfortunately, much of what the children learn are the school's routines—like lining up to go out to the playground, bringing books to the teacher at reading time, and putting the toys away where they belong. The teachers use music—played constantly at high volume—to energize the children, control their behavior, and signal transitions between activities. Teachers literally talk down to the children, issuing orders and suggestions from a distance and rarely getting on the floor, stooping down, or lifting children up so they can converse face to face. Much of the teachers' language consists of gentle commands and requests to remind children of the rules, prevent or resolve conflicts, or direct a group in an activity.

Teachers do find some time to play with individual children, respond to their bids for attention, and comfort them when they show distress. However, these interactions are usually very brief (less than half a minute) and are often nonverbal. It is quite common for a child to go for as long as half an hour without hearing any language addressed directly to her and without making eye contact with an adult.

Last year was especially difficult for Jill. She cried much of the day for the first six months, and the adults in her classroom were unable to comfort her. Still, her parents felt they had no choice but to keep Jill at the center.

Like other children at the center, Jill moved up to the three-year-olds group three months before her third birthday. She seems happier now, but she is still not getting what she needs. With a more academic focus, the program for three-year-olds provides brief lessons in letter naming, counting, calendar reading, recognizing colors and shapes, nutrition, and topics of interest such as space travel and dinosaurs. These are often followed by projects—such as cutting out pictures of vegetables and gluing them onto paper plates—that extend a lesson theme but do not call for much thinking, creativity, or conversation.

The teachers do a good job of keeping the group calm and focused, which is especially important to Jill, who tends to freeze or withdraw when there is too much noise. They use language to prepare children for transitions, to remind children of safety rules, to explain the steps in a process