

Babies put language puzzle together like statisticians, researcher says

Learning process to be discussed as part of series

By Kathy Walsh Nufer
Post-Crescent staff writer

Parents might be surprised to hear this, but babies analyze language and their environment like miniature mathematicians, says researcher Jenny Saffran.

Newborns are already at work deciphering sounds that make up language, how sounds com-

bine into words, how words combine into sentences and then what words mean, Saffran maintains. "They have to figure it out. They don't come with English factory installed."

Saffran, a psychology professor at the University of Wisconsin-Madison and director of UW's Waisman Center infant learning lab, is the second brain investigator to speak on early brain development as part of the "Brain to Five" community education series spon-

sored by the Appleton Education Foundation.

She will discuss how babies learn at 7 p.m. Wednesday at Appleton North High School.



Saffran

In a phone interview this past week before going to a meeting of the International Society of Infant Studies in Vancouver, where researchers from all over the world shared their

'Brain to Five' education series

The series features four leading "brain investigators" from the University of Wisconsin's Waisman Center in Madison speaking on early brain development in infants, toddlers and preschoolers, and their groundbreaking studies on brain behavior and learning.

Free presentations coming up:
Wednesday: Jenny Saffran on "How Babies Learn," 7 p.m.

findings on early learning, Saffran said much goes on behind a baby's eyes that fascinates re-

Appleton North High School auditorium

April 23: Seth David Pollak on "Children's Emotions and the Developing Brain," 7 p.m., Appleton North High School auditorium

May 13: Richard "Richie" Davidson on "Shaping Your Child's Brain," 7 p.m., Appleton East High School auditorium

searchers. Her field holds extra challenges, however. "A lot of our research is fig-

On the Web

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uring out what babies know before they can say it," she said. "We're studying complex behavior in little people who don't talk."

Julie Krause, executive director of the Appleton Education Foundation, hopes for a big turnout for part two of the series.

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BABIES: Amazing amount of info learned during the first year of newborn's life

From A-2

"We were thrilled when more than 500 people came in March to learn about the stages of child language development," she said.

"We expect parents, educators and child care providers to be just as enthusiastic about Dr. Saffran's presentation. She has done fascinating research involving babies' natural abilities to figure out language and music. We look forward to her opening our eyes to how we can best encourage those innate abilities."

Saffran said babies have an amazing capacity for absorbing and processing information.

"During the first year of life after they are born they probably learn more than you and I

have in the last two decades," she said.

"How incredible that transition is from being sentient, to not very knowledgeable of how things in their environment will interact and how they can interact with them, to being what a 1-year-old is — curious, exploring and extremely knowledgeable about how language works."

Saffran, 38 and the mother of two, got hooked on the study of infant cognitive development in high school.

Saffran's studies focus on what infants are learning and how they do it.

"Rather than just watch babies, we bring them into our lab and give them something to learn," she said.

In the act of exposing them

to language, she said, researchers find out "what they are interested in and what they are able to learn just by listening and being little sponges."

Saffran, who will share the latest studies by her and others on how babies learn, said she has a particular interest in pinpointing what kind of information babies pick up on in language they hear.

"Part of what they are doing is being little mathematicians and statisticians," she said. "They keep track of patterns they hear in their environment and do the math and then they hone in on sounds and words, where one word ends and another starts, and grammatical patterns that are important in their native language. By the time babies are 7 to 8 months

of age, they are able to find words and pluck them out of a babbling brook of speech."

Most parents aren't aware this is an issue, or that their infant is remarkably skilled at picking out patterns.

"Initially, when I tell parents their babies' brains are doing statistics, they look at me like I'm crazy, but later it makes lots of sense. There are a lot of things babies are picking up on without being aware of that at all. Most of what babies learn is not because it is being taught in any conscious way by parents."

Saffran also has learned that as babies listen to us talk they predict the language to come. "They actually make guesses about what we will say next," Saffran said. "They are extraordinarily actively engaged in

Free child care

Free child care will be available for parents attending the Appleton Education Foundation's "Brain to Five" presentations at Appleton North High School this Wednesday and April 23. The Apple Tree Connections day care will offer this service. Apple Tree is located near North at the corner of JJ/Edgewood Drive and Providence Avenue. Parents must register their children by calling 920-560-5437 before noon Tuesday so staffing can be arranged for Wednesday.

their environment. That's why they are such great learners."

Saffran, who said questions moms and dads ask often inspire research, said the most important thing parents can do to spur learning in infants is to in-

teract with them.

"They can't learn if they don't get talked to," she said. "There is something about having someone respond to you and you to them that is a powerful thing."

She said some think a young child's language development in English will be delayed if he or she is exposed to another language in the home. "That is not a problem. A lot of exciting new data suggests the benefits really outweigh the costs."

Saffran said she encourages parents to rein in their obsession to provide their baby with the most sophisticated or expensive "learning" aids. "The average toilet paper roll is just as stimulating as a \$40 toy."

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