PEN International
Teacher Education Institute
Language Acquisition-KChristie
Transcript of Video

TALKIN' BABIES from Scientific American: Frontiers
(with Laura Petitto and Paula Marentette)

(Opening: Mother and Child)

Baby: ba ba

Narrator: This is Corey Rae, aged 12 months old. She's learning to speak.
And so far she made one major accomplishment…

Baby: Hi

Narrator: Researchers are paying less attention to her first word, than to this…

Baby: Ma ma ma ma

Mother: Who's ma ma ma?

Narrator: Listen again…

Baby: Ma ma ma ma

Father: There you go.

Baby: ma ma ma ma ma

Mother: Who's ma ma ma? Ma ma ma..
ma ma ma

Narrator: This is babbling—when a baby repeats one syllable over and over. All babies do it, it is part of learning to communicate.

(Laura interacting with the baby)
Laura: What is it?

Narrator: But according to psychologist Laura Petitto babbling is not language as we know it, meaning and content, but language as a baby knows it.

Laura: The important thing about the way children use these forms is that they don't mean anything. They aren't referring to anything. It is a stage of human development where they are simply playing with the raw forms of language.

Laura: How did you know that she was babbling?

Mother: She just started ba ba ba ba…

Narrator: Then why does she do it? Most linguists believe that a baby like Corey Rae babbles because she is establishing control over the muscles that produce speech. But Laura has a much more radical idea.

She thinks that Corey is babbling not because her vocal tract is maturing, but because her language ability is maturing. This disagreement is fueling an intense debate about the nature of language itself

Narrator: Here is the central question: Are language and speech as intimately connected as they seem? = We have evolved in a way that our brains work together with our vocal tract to produce language in the form of speech.

But if our vocal tract hadn't developed, would we still have language?

Laura says yes…that language would still find a way to come out in the absence of sound.

But in a world where language is expressed through speech, how would you study such a question?

(Baby swinging)

Here's how: this is Ramy who is 18 months old. Ramy is profoundly deaf and so are his parents. He's been exposed to sign language since birth based not on speech, but on signs… produced not with the vocal tract, but with the hands.

Children like Ramy provide a unique opportunity to test Laura's theory.

Laura: If you want to understand if languages are involved in babbling or if speech is involved, then sign languages are the test case because they are not based on speech.

If Laura's theory is right, if babbling is tied to language and not based on speech, then children like Ramy should babble. Of course, they wouldn't babble with their voices, but with their hands if babbling is not tied to speech…Do they? How would you know if they did?

Laura and Paula are trying to figure out. It's hard work to figure out if Ramy babbles.

Each videotape that she shoots takes hundred of hours for Paula to analyze. That's because kids use their hands in many different ways…to point to things, to scratch themselves, handle objects express anger…

All kids do this kind of gesturing when they are excited. To filter these out, Paula and Laura study the gestures of hearing children as close as deaf children…

Paula: Given this way that Corey is producing an open and closed gesture, we sort of store that knowledge, and when we notice that a Deaf child uses that form as well as a hearing child, so its probably a gesture rather than a babble.

But even when Paula throws out all the gestures, points and scratches, that she knows are not babbles, there still is a lot of activity left.

(videotape of baby)

Narrator: This is Isabelle, watch her hands closely…Her hands are not referring to anything….

Now Paula can move to a new level of analysis Is the hand shape and hand movement common to anything we see in adult sign language?

Watch the adult model signing for anger…and curly.

Notice the hand shape in both the child and adult…

The same as Isabella…and the movement is a kind of flick of the wrist as seen in the signs for don't want

(child with microphone on back)

Narrator: Compare with this…

Child: Don don don don

Narrator: For Laura, all the hours comes down to this question:
Is what the Deaf child doing with his hands the same as what the hearing child is doing when he babbles?

Laura: What he did is he has extracted a sound from his environment ---a sound that's in the worlds' languages. It is organized in relation to another sound… so there is a consonant and vowel . Its organized into a syllable that is then repeated again and again.

(Videotape of baby at table)

His sister and mother are signing what they did eariler in the day and he is trying to get into the conversation…but not yet able to sign, directly in their line of sight, he makes this gesture.

This is nothing she has seen in the tapes of hearing children gesturing. The babbling is not organized in a syllable, but with a hand shape and hand movement

Vance is babbing. He is not actually signing the way his mother and sister are, but he's on the first step.

Laura: None of these forms are the identical form that an adult uses. I mean, not many adults go around saying "da da da." Nevertheless, the child produces them. So the babbling is the child's active attempt to master the form of the language.

To listen in the environment..to look in the environment for a particular structure and to extract out of that structure, in baby steps, to play with the form of the language in an attempt to build and master the target language.

Narrator: After analyzing hundreds of hours of videotapes, Laura has concluded that Deaf babies babble just like hearing babies and that's vital evidence for the theory that language does not need speech to express itself.

It will find a way out by whatever means available . But does this mean that sign language is just substitute for speech.. something that the brain turns to when speech is not available?

(parents and child in video room)
Narrator: Here's a way to find out. Simon is almost two years old he is signing and speaking. His mother is profoundly deaf and signs to him (in LSQ); His father is partially deaf and speaks to him(in French). Simon is hearing. He seems comfortable with the arrangement.

(in this segment Simon and Father speak in French…Mother and Simon sign…)

Father: For Simon, its very natural. He doesn't get frustrated with it. He doesn't make a distinction between the hearing and the deaf. People are very surprised he can sign. He is like a model for the world.

But does he find speech more natural than signing? Laura and Paula have been videotaping Simon since he was 4 months old.

And here's what they've discovered: Simon is passing every major milestone In both sign and speech at exactly the same time. One of these milestones is putting words/signs together.

He says (in French) ‘the water is all gone.” (two word phrase in French). A few minutes later in the tape, he is putting two signs together. He signs Monkey and then he signs SAME. Meaning the money in the room is the same as the one in the book.

Paula: It suggests that the brain doesn’t care if one is a spoken language and one is a sign language…It can take input equally well and do what it needs to make a fully productive language

Years of painshaking on babbling and language learning are bringing Laura closer to her ultimate goal touching the highly inaccesible part of the brain which is language itself.