The language of love: 'When you have no voice, you need an ally'

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Drew was an easy baby to care for, good-natured and a fine traveler. His mother took him on several business trips in his first year of life alone. And like any parents, she and her husband were eager to savor the joy of hearing his first words, of listening to the lovely sounds of language beginning to form.

Professor Morton Ann Gernsbacher plays with her son, Drew. (Photo: Jeff Miller)

But Drew spoke no intelligible words after 12 months, nor after 18 months, nor after two years. Even his babbling seemed too open-mouthed, he couldn't suck through a straw, and he couldn't lick off ketchup drips from his lips.

By then it was clear to his mother, Morton Ann Gernsbacher, that something was different with Drew, now 4 years old. He was diagnosed with autism, which in turn changed the course of Gernsbacher's research as Sir Frederic C. Bartlett Professor of Psychology at UW-Madison.

Autism is often characterized by impairment of language and social skills, as well as certain repetitive behavior. "Autism is not a unitary thing," says Gernsbacher, whose husband is Hill Goldsmith, Leona Tyler Professor of Psychology at UW-Madison. "It's similar in a sense to a fever, which can be readily diagnosed though the underlying causes can be diverse."

In fact, she and Goldsmith have proposed a new autism subtype called developmental verbal dyspraxia, based in part on what they have observed in Drew. Children with DVD may know what they want to say, but they just can't say it. The brain doesn't tell the face, tongue, lips and jaw how to make words.

"When you have no voice, you need an ally," says Gernsbacher. "You also need a world that accepts the communication you can offer, even if it's as unusual as taking an adult by the hand to show what you need or want.

"As a well-known researcher who's had success in getting federal funding, I'm in a lucky position to help these kids. The goal of Hill's and my National Alliance for Autism Research project is to identify other kids out there like Drew and find out what has made these kids so different."

Gernsbacher has found that much of the autism research focuses on deficits, disability and

damage. She often finds it chilling to read papers from European labs, which show that children like Drew are even institutionalized. But she and Goldsmith take a very different approach.

"Drew is a beautiful, brilliant, affectionate child who can barely talk," says Gernsbacher. "He's not broken in my eyes. I think he's going to be a success story."

With the help of therapists, she and Goldsmith provide him with what she calls "a safe, warm, engaging and stimulating environment. We want him to be happy and to be a kid."

To that end, Gernsbacher has turned into a self-professed "E-Bay junkie." For example, she once bought different types of colored streamers to simulate rain for Drew and packing peanuts to give him the feeling of playing in leaves, which he loves. And he improvises on his own, as when he "played" the leaves of an ivy vine after attending a piano recital.

Such stimulation can boost neural development that prompts one part of the brain to take over for another. In Drew's case, Gernsbacher believes that the affected part of his brain might be Broca's area and parts of the brain that control both speech and manual gestures. "It's said that the hands lead the mouth," says Gernsbacher.

It's the world beyond their home that bothers her the most. "What hurts me is society's assumption that a child who can't speak can't think," she says. "But Drew has been able to read words since he was 2-1/2, enjoys math and is a little scientist who loves exploring the physical world."

What's being blocked or slowed is not thinking, but oral expression of thinking.

That Drew is thinking is obvious in person. His demeanor and speech approximations his parents understand show a lively curiosity and intelligence. And the smiles he flashes are hard to resist.

"He charms all the adults he meets," says Gernsbacher.

Though she didn't focus professionally on autism before Drew was diagnosed, Gernsbacher has always been a specialist in language comprehension. Since joining the UW-Madison faculty in 1992, she's helped build the language and cognition program to the point where she expects it to soon become No. 1 in the nation.

"I'm a much better scientist now because of Drew," she says. "The passion I now have for knowledge about autism begs for an interdisciplinary approach, so I'm learning more about genetics and neuroscience."

That Gernsbacher studies language would come as no surprise to her high school classmates, she says, "because they know how chatty I am."

To this day her knowledge of geography is a little hazy, because that class in elementary school came right after lunch. She couldn't turn off the verbal spigot once the geography bell rang, so often the teacher banished her to the hallway.

But today Gernsbacher gets paid for talking, even in class, and for throwing light on how people talk — or don't talk. And she wants some of that light to fall on Drew, who inspires her research.

"Hill and I never doubt Drew's intelligence, his creativity, his love and his uniqueness," she says. "We think of him as a hero."
