

Editor's Column

Language and quantum behavioral improvement

By Bernard Rimland, Ph.D.

"If only he could tell me what is troubling him." "If only he could tell me what he wants." It is clear that the prognosis of autistic children is intimately tied to their ability to communicate. Kanner noted 30 years ago that autistic children who had useful speech by age 5-1/2 had far better chances for a reasonably favorable outcome than those without language. Now we know that even if meaningful language starts much later, the outlook for the autistic child — or adult — is considerably brightened.

Although we all know that language is an important predictor of outcome in autism, and we are all aware that even limited language skills are very useful to the child and those around him or her, most of us are unaware of the enormous difference that the onset of language can make in a child's overall behavior.

There is abundant evidence, from many sources, that if language can somehow be stimulated in an autistic child or adult, there will often be a sudden and unexpected improvement in a wide range of non-language behaviors. Note that I am saying "language," not necessarily speech. I refer to this phenomenon — the great general leap forward which accompanies the onset of language — as Quantum Behavioral Improvement (QBI).

My first encounter with a QBI was in a brief 1964 article titled, "Teaching a Mute Autistic Boy to Read," by Frank Hewett (ICBR publication #41). Jimmy was a mute, head-banging 13-year-old boy who knocked over furniture and was generally out of control when brought into the classroom. Using gum drops as a reward, his teacher began a series of behavior modification steps which resulted in Jimmy's being able to slide the card saying "ball" (rather than "box") to the appropriate place, behind the ball, in a slotted word board. More behavior modification, and Jimmy was able to discriminate a 55-word sight vocabulary. Then came short sentences, first by sliding cards along the slot, then by writing. Before long, Jimmy, still mute, was communicating in writing. Although the thrust of the article was to present the then-new behavior modification technology for teaching reading, Hewett remarked in passing on the "breakthrough" that had taken place in Jimmy's overall demeanor. Access to language, even if not to speech, had given Jimmy a more positive attitude, and had almost made him a new person.

The story of Jimmy reminded me about Helen Keller's initiation to language. The story is a familiar one, but in

Helen Keller's case, just as in Jimmy's case, so much attention has been directed to the main process — the acquisition of language itself — that the secondary process, the remarkable transformation of personality, tends to be overlooked. Helen's sudden grasp of the concept of language quickly converted her from a wild, unruly, very difficult-to-manage child. Again, gaining access to language had triggered a personality change.

Several very dramatic cases of QBIs were reported in the *New York Times* and elsewhere, in the mid-1960s, in accounts of the work of pediatrician Mary Goodwin, who used a primitive computerized teaching machine, the "Talking Typewriter," to instill a bit of language into a number of severely handicapped autistic children. One such case was Robby, a seven-year-old autistic boy, who was brought howling and screaming to Dr. Goodwin's office because there was no room for him in the state hospital, where it was expected he would spend the rest of his life. Dr. Goodwin had recently acquired the Talking Typewriter for use with the mildly learning-disabled children with whom she also worked. She decided to try Robby on the Talking Typewriter, because she could think of nothing else to do with him. "When Robby went home 15 minutes later, he had left behind him a full page of random typing interspersed with many words: 'liquid,' 'final,' 'touch,' 'ivory,' 'downy,' 'clorox,' 'Mr. Clean,' 'NBC,' 'ABC,' 'CBS,' 'Judy,' 'ARRID deodorant,' etc...."

During later visits he typed "...an original story paraphrased from the *Flinstones*, (and) covered the blackboards with the names of detergents (and) television commercials...As visits continued, temper tantrums, head-banging and hyperactivity gradually diminished; personal pronouns were heard; teachers were called by their proper names...Visits were often stormy during the next two years, but progress was measurable and outbursts were less frequent." Robby later was allowed to enter a special class for brain-injured children. His teacher reported continuing improvement in both behavior and performance.

Mary Goodwin's work with autistic children on the Talking Typewriter was the predecessor of the hundreds of programs, now underway in the U.S., England, Australia and elsewhere, in which microcomputers are used to help instill language skills in autistic children.

Several years ago renowned physicist Arthur Schawlow reported the remarkable results he and his wife had observed not long after providing their then 27-year-old son with a small, hand-held Canon Com-

municator. Artie had been trained to use a communication board, but communication was slow and not spontaneous. The Schawlows reported that on September 24, 1983, he used his Canon Communicator to type a word for the first time without copying it from his communication board. He typed the word "shoes" and was immediately rewarded with a new pair of shoes by his delighted parents. Sentences, questions, and answers soon followed. While still without speech, except for an occasional word (surprising himself and others), he was able to communicate quite effectively using his keyboard. "Can you imagine how frustrated he must have been?" asked his father.

Some of the technology which has been used to teach language to autistic children was first developed by researchers trying to understand the language capabilities of chimpanzees. Duane Rumbaugh, who started teaching language to chimpanzees, tried the same techniques in teaching non-speaking retarded children. Rumbaugh reported that in at least half of the children the communication training led to great improvement in behavior, not only during the actual language training sessions, but also in their living quarters in their institution. Improvement was seen in the children's "sensitivity to others, their ability to follow complex commands, their readiness to interact in a complicated way...."

A great deal of time and attention have been devoted, during recent years, to a variety of attempts to improve language skills in autistic children. A great many innovative training methods and devices have been developed. The innovations range from rather low-tech, such as singing, signing, and the use of communication boards, to the high-tech, such as microcomputers. Recently one firm has begun to market a low-tech but clever "Talking Mitt," a large glove with the letters of the alphabet printed on it. One "talks" by wearing the glove on the left hand and spelling words by pointing to the letters with the right hand. As in Hewett's slotted board for reading cards, the absence of electronics is not necessarily a disadvantage.

Although there is already a great deal of emphasis on the teaching of communication skills to autistic persons, the potential payoff is so great that even more effort should be directed toward that goal. If one method doesn't work on an autistic person, other methods should be tried until, hopefully, communication ability, and thus perhaps QBIs, can be achieved.

You may be sure that the editors of ARRI will keep its readers informed of developments in this important field.