Finding the Words...

by Marge Blanc

To Tell the "Whole" Story
Natural Language Acquisition on the Autism Spectrum

"I wish Pinocchio was a real boy."

"Blue skidoos; you can too!:

"Tramps like us...Baby we were born to run."

"There's only one thing left to do!"

"Look, he talked!"

"It's showtime!"

Probably each of us has a list like this...a list of colorful, but puzzling "gestalts," or whole sentences, repeated verbatim by the ASD children in our lives. We commonly call it "echolalia," or "delayed echolalia," meaning that kids "echo" it, not right after they hear it ("immediate echolalia"), but later, or "delayed." It is the language our ASD kids repeat verbatim from other sources, very often movies. We often call it "video talk," and, even though we've been told otherwise, we sometimes think of it as meaningless.

Until twenty years ago, we thought of "delayed echolalia" as deviant, and we truly thought that we were supposed to "extinguish" it. But, during the next decade, language researchers found that ASD kids use echolalia communicatively...to request, to ask questions, to ache all the same functions of more "typical" language! We then began to treat it more respectfully.

Now, we recognize echolalia as a part of a picture of ASD, and we tend to include it in our

descriptions of our kids. Unfortunately, however, we don't really seem to know what to do with it! We all but ignore it when we are with our kids, silently hoping it will just stop. In the meantime, we usually try hard to replace our kids' language "gestalts" with more typical-sounding language, using phrases that sound more "normal." With variable success, we have taught our kids vocabulary words and scripted sentences that they can access on their own - sometimes only after years of prompting and drills in generalizations.

Is that the best we can do? And, is this strategy consistent with the language research referred to above?

We're here to talk about all this - and more - in this new column on topics in communication competence that affect individuals on the autism spectrum. In the next few columns you'll see "gestalt language development" on the spectrum presented in a new light. You will see it as a natural process (both on and off the spectrum), with predictable developmental stages. You will see that at Stage 1, multi-word language "gestalts" are used communicatively. At Stage 2, these gestalts are broken down, or "mitigated" into two parts and recombined with other language chunks to produce semi-original utterances. At Stage 3, these phrases are further broken down into single words and word-parts, or "morphemes," and kids begin to generate their own original sentences! At Stages 4 and higher, ASD kids look very much like "typical" (or more accurately, "analytic") language processors as they start to develop more grammatically-complex sentences!

The process outlined in the preceding paragraph summarizes the findings of researchers like Barry Prizant, Amy Wetherby, and others, and is the one we have used in our clinic for the last ten years. Translating these steps into action, we in our clinic have successfully helped scores of children on the spectrum develop language naturally.

We'll help you learn what to listen for, and how to respond to what you hear. Then, you, too, can help your child move through the process...naturally!

See if the following story rings some bells. If so, you will find that the remainder of this article will usher in a bright new future for your own child's natural language acquisition!

Will's mother called me about a year ago. She was wondering if speech and language therapy might be a good idea for her 14-year-old son who used some functional, scripted language, which was limited to what he'd been directly taught.

"He can request things he wants, saying 'I want Dumbo,' or 'I want skiing'. He can also take a scripted turn like, 'I like St. Louis Cardinals. Do you like St. Louis Cardinals?' Will's mother, Sally, continued that she wanted to see if we could work on Will's sentence structure, to see if he could learn to say other sentences without prompting. Her ABA therapists had done all they could, she said, and talking seemed to be what Will needed the most help with.

Sound familiar so far?

As we talked longer, Sally also told me that Will used to "verbally stim" regularly, using lots of rhythm and inflection. He used to "recite" lines from his favorite videos, like *Mary Poppins* and *Back to the Future*... including some sound effects like cars screeching, and an electric guitar hitting the high notes. Her ABA therapists had tried to ignore this "movie talk," and had encouraged Will to talk in ways people understood. Over time, he could, somewhat, but his communication was still pretty limited. but his communication was still pretty limited. His mother thought that he had more potential, since he seemed so smart in other ways.

I asked about some of the things Will used to recite, and if he sometimes still did, outside of his therapies. Sally thought for several seconds, and said, "Yes." She and her husband had even thought that some of the lines made sense in a funny kind of way, and she gave me a few examples. Once recently, Will had said to his father, "Sent from heaven up above, here's a baby for you to love." Sally explained that this was a line from the movie, *Dumbo*. She continued that Will's father laughed when he heard the line, and thought it was clever of Will to remember such a long, complicated sentence. Sally, too, was proud of her son for expressing himself in such a poetic, if unconventional, way.

After this phone call, I couldn't wait to meet Will! And I couldn't wait to begin to listen to his language more closely. If my experience with kids on the spectrum over the last 10 years had taught me anything, it was that this gestalt language was prevalent among children with ASD diagnoses...and was part of the predictable pattern of our kids' language development!

[See Table: The Stages of Gestalt Language Acquisition]

The Stages of Gestalt Language Acquisition

Stage 1 – Communicative use of language gestalts
(learned and spoken in their entirety)

“Let’s get out of here!”
”Want some more?”

Stage 2 – Mitigation into chunks (a) and recombining (b)

(a) “Let’s go + out of here!”
”Want + some more?”
(b) “Let’s get some more!”
”Want out of here?”

Stage 3 – Isolation of single words and morphemes, and beginning generation of original two-word phrases

“Get...more!”
”Want...out?”

Stage 4 – Generation of more complex sentences

“I got more.”
”I wanna go out?”

We have come a long way from the days when early ABA researchers admonished kids, "Don't echo," before the functional value of language gestalts was understood. The efforts of numerous researchers, including Prizant, Wetherby, and others, established the functions of echoed utterances, analyzing over a thousand of them spoken by children with ASD diagnoses, and realizing that they serve all the same communicative functions of more typical language. Prizant, Wetherby, Rydell, and others determined that "echoing" is used by 85% of ASD kids, and, in many of them, is the first step in a language acquisition process that leads to flexible, generative language development, like "typically-developing" children.

These findings were revealing and quite surprising to an autism community that had thought that "echoing" was a non-meaningful and even disturbing characteristic of autism. While historically, linguistics and language development literature have contained numerous references to gestalt language processing (variously referred to as "formulaic", "intonational", etc.) as a part of normal language acquisition, its everyday application to kids with ASD has not been widespread.

Ann Peters' hallmark book, *The Units of Language Acquisition*, originally published in 1983, was made available again in 2002 on her website. It was written about the gestalt processing that is part of ***all*** children's language acquisition, and it is refreshing reading at a time when we seem to think that ASD kids are so different from others.

Let's take a look at how language develops in all kids. Peters wrote that a "unit of language" at the first stage of language acquisition is whatever a child is able to extract from the continuous stream of sound spoken by adults. It might be a word, but it is more likely a stream of sound longer than a word. It seems that in typical language development, two avenues of processing are seen in kids: "gestalt" processing and "analytic" processing. Each simply refers to the size of the units kids have "extracted" from running speech around them. Neurological propensities might predispose a child to favor one process over the other, but all children pick out some longer gestalts from the stream of sound they hear.

Depending on the language environment, Peters wrote, kids might hear one-word naming by mothers who presume words to be the building blocks of language development: "Dog." "Cat." "Table." If this language environment matches an analytic predisposition in the child, language is acquired accordingly.

Alternatively, if the sound a child can extract has exaggerated intonational contours, punctuated by exclamation points, (animate, lively language) the child's propensity for language is probably more gestalt. Back in the 1980's, when Peters wrote *The Units of Language Acquisition*, the language environment for a gestalt processor lacked the easy access our kids have to movies. But now, the ability to rewind videos is made to order for such kids, many of whom (our ASD kids) lack the neurological maturation and sensory integration to explore their environments effectively. They often spend considerable time hearing language gestalts on their favorite videos.

Granted, analytic learners are those who seem more "normal" to us. They use the basic constituents of language (words and word parts) to move through the stages of increasing linguistic complexity. These children are easier to understand, too, as single words are infinitely easier for little kids to say, and their motor skill grows along with their increasing

sentence length.

Gestalt learners are "normal" too, but their language acquisition happens in a very different manner. Because they begin with multiword strings of words, attempting to say them as "unanalyzed chunks," their articulation skills may render their attempts unintelligible. Over time, as gestalts are mitigated, or broken down into their constituent parts, they are easier to say, and, thus more intelligible, and identifiable. But by the time we recognize that our kids are talking, they have usually been talking for a long time, albeit unintelligibly. And, because their process takes longer than analytic learners, children who use this method appear "delayed."

We can find children all around us who are gestalt language learners. Many of them are little boys who tell long, complex stories, mostly with their hands and action figures, and whose lengthy "jargon" is completely unintelligible! By the time these children are four and five years old, they have successfully analyzed their long story chunks (they really were word strings, not "jargon" at all, but too hard to pronounce by young tongues!) into phrases and single words, have learned to say these shorter sound sequences correctly, and have built up a sizable repertoire of original, generative sentences. They may appear "delayed" compared with their more analytical (often female) kindergarten peers, but that is what we "expect" of boys!

OK, so this language acquisition processing of typical kids may make some sense, as you think about boys you have known (or been!)...but, what about our kids...what about Will...what about your own child?

One reference that helps bridge our understanding from more typical kids to our kids is *Right-Brained Children in a Left-Brained World* Reading about the children "in between" typical and ASD can be both illuminating and comforting. Writing about children with ADD labels, authors Freed and Parsons note, "Right-brained people are holistic, whole-to-part learners. They pick up skills more easily by having them demonstrated than by having the steps explained. Instead of learning to ride a bike through trial and error...they'll study how others ride a bicycle, then jump on and do it when they feel confident they're ready. They tend to be late walkers for this reason. They tend to master larger concepts first, then prefer to go back and fill in the informational gaps..."

We in the autism community are used to thinking of autism as a continuum...but we're not so used to thinking of ASD as part of a larger continuum that encompasses all learners. Educators like Jeffrey Freed view it this way, however, and consider all people on a single continuum, with those labeled "autistic" far to the right side. As he says, "Autism is found at the extreme right end of my continuum; it's the most pronounced form of hypersensitivity and right-brainedness." Indeed, Temple Grandin, in her endorsement of the book, wrote, "This book could help a lot of creative thinkers...make it through an educational system that is run by linear thinkers." (While Freed does not include Aspergers learners on his continuum, we might extrapolate. As children, they meet language milestones at the expected time, but their language complexity outstrips its social application. Although Freed includes what he calls "word salad" on the extreme left end of his continuum (run-on verbage that extremely left-brained people are capable of), those of us in the autism community might consider that Aspergers might also reside on the left side of Freed's continuum line.)

We will return to Will's story, I promise you. But before we do, let's continue to construct the conceptual bridge from typical kids to ADD kids, and next, to those ASD children who are younger and solidly within the prime language learning years...those who are 3-8 years old. Their story will help us better understand older kids, like Will, whose language appears more rigid and intractable.

How does the language acquisition of our younger ASD kids compare with that of other right-brained kids who are gestalt processors, and whose language appears simply "delayed?"

For starters, our kids (excluding those with Aspergers, of course) rarely "get" language without a struggle. For most extremely right-brained children, those with ASD diagnoses, the tendency to rely on strengths and avoid relative challenges, undermines the unaided progression of the natural gestalt language acquisition process.

In our clinic, we have found that intervention that acknowledges this naturally-occurring progression makes all the difference for children who cannot get there on their own. Early interests provide the starting place, and parents are the best detectives. Even before a child is old enough to be able to say anything, parents can begin to amass lists of the child's fascinations, favorites, and joys. Books, songs, and movies are the most common inputting modalities in these early years, when children's motor skills are limited to sitting and letting images go by their not-yet-developed focal visual systems.

The second area to look at early on is evidence of gestalt thinking. That first evidence will rarely be with language, since speech needs to be fairly sophisticated before children can say the long strings of sounds they have in their heads. Evidence may come with some motor accomplishment, some play routine, or interest in collections or sets of things. Early interest in the entire alphabet, a set of story characters, or the completed circle of a train on a track are common examples of gestalt thinking.

Parent stories of children learning to walk commonly illustrate a gestalt cognitive style. Truman's parents, for instance, said that their boy never even tried to walk at all, when all of a sudden, he got up one day and walked all the way across the room! Many parents describe how their children never ventured onto a bicycle until they simply got on and rode one day. This characteristic "flat learning curve" can be torturously horizontal for parents who wait years for some evidence that their child is taking in anything. When the curve abruptly elbows up vertically, it is stunning and seems to come out of "nowhere".

Cam's mother described the first evidence she had that her child was registering anything he saw around him. Here is her story: "Cam used to love to watch videos, and I would sit with him many a night, and we would watch the videos together. At this time, he basically was non-verbal, didn't say much, didn't point...was basically very passive. I would sing to him all the time. I'd sing the songs and try to get him to the video, or whatever we were doing. We were sitting there one time and I remember I was singing him the 'Pooh' song, and I went, 'Winnie the...' and he went, '...Pooh.' I started to cry, and I looked at him again, and I said it again, 'Winnie the...' and he went, 'Pooh.' He never made eye contact, but he filled in the

blank. And that's the first time I realized that something was getting through. Even though he didn't have the capacity to tell me what he was doing with it, I realized that stuff was getting through. And that made a big impression on me because I realized I had to keep doing it. I had to keep sitting there. We had to watch the video 800 times. We had to sing the song 8 million times, because it mattered." Cam's motor system was finally able to provide the proof that he had mitigated the gestalt of this favorite song! Armed with some evidence that her child was paying attention, this mom's confidence was buoyed up for the long road ahead!

Cam's mother was fortunate. Even though Cam was moderately dyspraxic, and mostly silent up until then, he did have the motor strength and coordination to say something at a relatively young age. Those children who are more severely dyspraxic might not say anything intelligible for many more years, and parents' glimpses of gestalt thinking and processing might not appear through language for a very long time.

Nicky's mother could see it in other ways, though. Kay understood gestalt thinking because she recognized it in herself, and, then could sympathize with her son's dilemma when asked to share his toys in preschool. Nicky had always lined up his toys, from the time he was motorically coordinated enough to do so. This his mother honored, seeing it as a way of looking at "sets" or "wholes." But, if another child tried to break up one of those sets, Nicky's world was shattered. Kay explained her child's perspective to his teachers this way: "For Nicky to share his set of pirates, it would be like asking another child, 'Please share your doll with me. I'll just pull one arm off to play with."

As we know, among children who are verbal as youngsters, gestalt language processing is often seen as "echoing" from movies. With Daniel, a child we will highlight in the next column, the language acquisition process was easy to see...if you knew what you were looking for, that is! When we first met him, he was nearing four years old, and he could recite numerous lines from favorite videos. His mother knew all the lines, and could say the preceding and following lines, a strategy she used to create verbal interactions with her son, and to "keep the conversation going." Karen was doing more than that, however, but until she met us, she wasn't aware of it. What Karen was doing was many-fold: she was confirming her child's interests and intentions by joining him, she was acknowledging his language as communicative, she was creating emotional and social reciprocity, and she was allowing her child plenty of practice with language at the first step of the gestalt language acquisition process!

We helped Karen learn to build useful, flexible "gestalts" into their daily lives. Recognizing that all language that surrounds a child constitutes inadvertent "models," we wanted to make sure that Daniel heard not only Walt Disney's language, but plenty of other language that would become useful in everyday communication. "Let's get out of here!" works much of the time, but "Come on!" is more generally communicative.

What we did with Daniel's family was create home-made videos they could watch together. We made sure our language was fun and lively, like Walt Disney's, but more predictable, and lent itself to ready mitigation. Repetitive games and stories were also created so Daniel could hear, "Let's play with the..." and "It's a..." a bizillion times a day. When Daniel was ready for Stage 2 of the gestalt language acquisition process (mitigation) he knew that "Let's play with the..." could be extracted from the many examples he heard daily, and that "It's a..." could be

equally mitigated from the wholes.

Daniel moved through the stages in a "textbook" fashion, recombining parts of his former gestalts in Stage 2, and, eventually, isolating individual words in Stage 3. Up until then, Daniel's language sounded grammatically intact, because whole sentences and phrases had been "lifted" verbatim from other sources. The mitigations and recombinations of Stage 2 sounded quite good ("Let's play with the + alphabet", "Let's play with the + blocks"), but Stage 3 single words and two-word combinations would have sounded like a step backwards to someone who didn't understand the gestalt process.

We were delighted, though, because we knew that the progression from "Let's play with the monsters" to "I...toy" was truly progress!! As startling as it was, we knew that Daniel had begun the process of generating his own unique sentences. We never actually witnessed single words being spoken in Stage 3, however, as Daniel's language competence led immediately to rudimentary generative grammar.

In the next column, we will examine Daniel's progress in more detail, taking you through the stages of mitigation and then those of generative grammar. We will provide a roadmap to use with younger children, but also a model that can be modified for an older child...like Will.

Will's case, and those of other children who are beyond the preschool and early elementary years, is much more complex. Will's language acquisition, now that he is older, is not proceeding as neatly or completely as it did for Daniel. On the other hand, some aspects of the process are actually easier to see in older children, because their motor systems (including speech) are more refined, and their ability to store and use lines from many sources can be so extensive.

Before we wrap up this column, let's review Will's situation. He could be prompted to say, "I want Logical 1 Ranch, please," but at age 14, he couldn't generate adult-sounding language spontaneously. Would it be appropriate to expect him to expand his drilled sentences? Could he still learn generative language at all? Or, as the conventional "wisdom" suggests, was it too late? And if so, were his parents supposed to just "let" him say lines from *Mary Poppins*...assuming that there was some elusive meaning hidden in them? Were they to figure out what Will had in mind when he said things like, "But you got to take orders!" or "Angels in the Outfield".

To answer the question, we already knew that Will was attempting to communicate with his gestalts. Considering the thousand utterances analyzed by Prizant et al, plus all those we'd heard in our clinic, we knew that gestalts served all the same communicative functions of "typical" language. We knew that the Wills in our lives, and the Daniels, are attempting to communicate. The only missing link to successful communication is our ability to understand what they mean!

Time and again we have learned that once we examined the original source of a gestalt, and tried our best to understand its meaning from the child's perspective, we could respond accordingly! And it is pure magic when our kids realize we "get it!" Their joy is palpable, and sets the stage for more to come! We know from considerable "near misses," too, that even the attempts at understanding are amazingly satisfying to our kids. They know then that we take

them seriously as communicators, and will keep trying to understand them better.

So therapy with Will began with this strategy...with acknowledging, and helping Will's parents further acknowledge, the language gestalts Will used. The first time we realized that Will's rendition of "Earth angel, earth angel, won't you be mine..." was addressed to us when we did something helpful, we blushed and loved him for it. As the weeks went by, we started saying, "Thank you!" in response. Recently, our joyful banter over our mutual admiration led to the following conversation among C1 (the primary clinician), C2 (a supporting clinician), P (one of Will's parents), and W (Will):

W: Earth angel, earth angel...

C2: We'll have another earth angel here next week, too, Will!

P: Will always likes the girls.

W: I love 'em (spoken rapidly)

C2: Did you just say, "I love 'em?"

W: (signs "like" to clarify himself and everyone bursts out laughing!)

This single example illustrates the use of multiple gestalts in a real-time conversation, and the use of a mitigated, signed word as a conversational repair! So, Will is solidly in Stage 1. But he also mitigates at Stage 2. We often hear him saying part of a gestalt under his breath, and the part he wants to communicate out loud. Will recombines at Stage 2 routinely, and even isolates individual words and recombines them in a rudimentary Stage 3 fashion.

This one example shows how, with older children, even without a history of support in natural language acquisition, the stages of the process can occur. That all the stages are happening at once with Will is confusing, to be sure. But we overcome that by writing it all down. (Will's mother is our most reliable scribe). If we don't know where a gestalt comes from, she and Will do. Then we speculate about its current usefulness to Will. We can then respond conversationally, often giving Will a more "transparent" (common) gestalt as his next language model.

Over the next few columns, we'll provide further examples of Will's language development progression, and contrast it to the more predictable pattern demonstrated by a younger child, Daniel.

Once you have the more detailed progression to look at, you can begin to apply the intervention techniques to your own child...and begin to see that natural language acquisition does take place in children on the spectrum!

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BIO

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