A Language-Based Approach to Managing Echolalia

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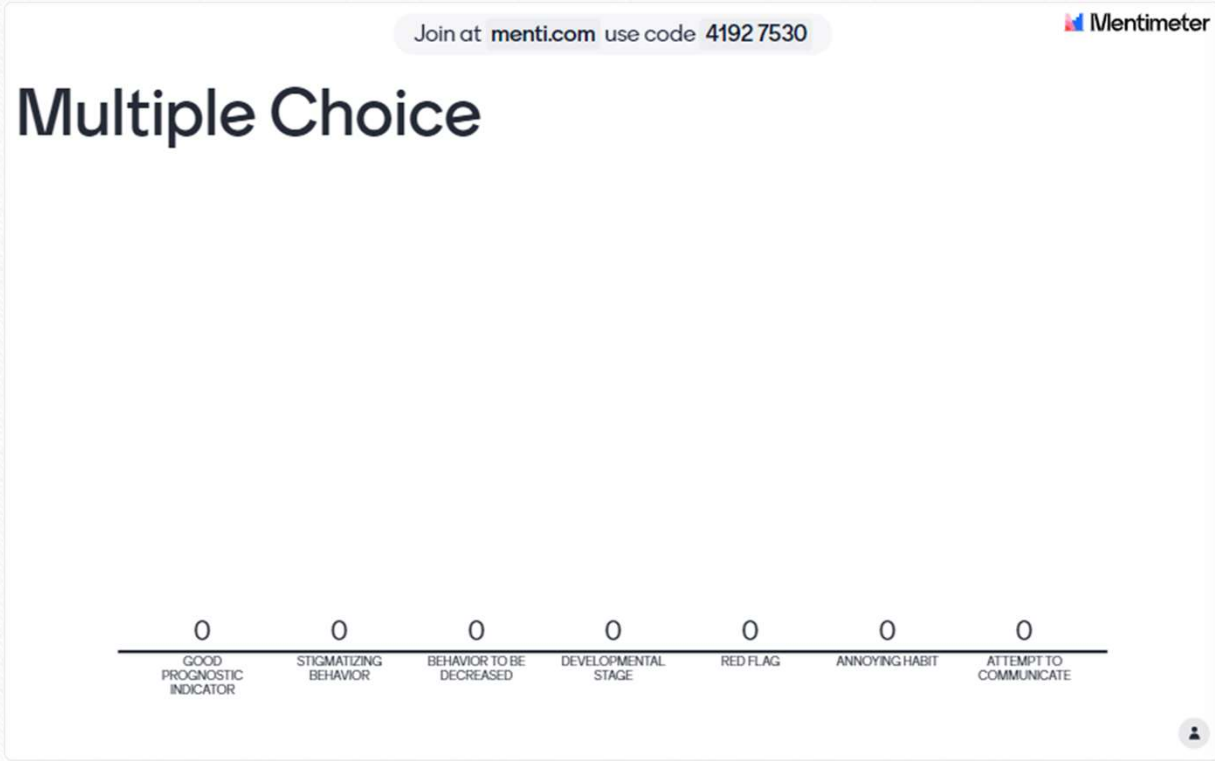
Today we will spend some time thinking about:

- Echolalia
- The Gestalt Pattern of Language Acquisition
- Evidence-based strategies for Facilitating the Transition from Echolalia to Self-Generated Language
- Competing Views in the Literature

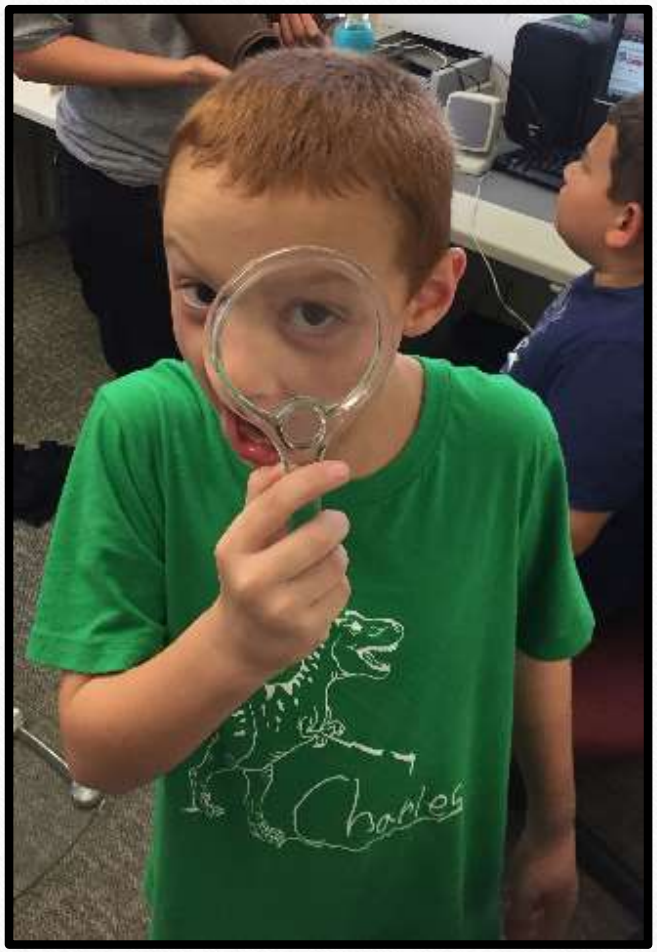
When you hear the word “echolalia”, what is your first thought?

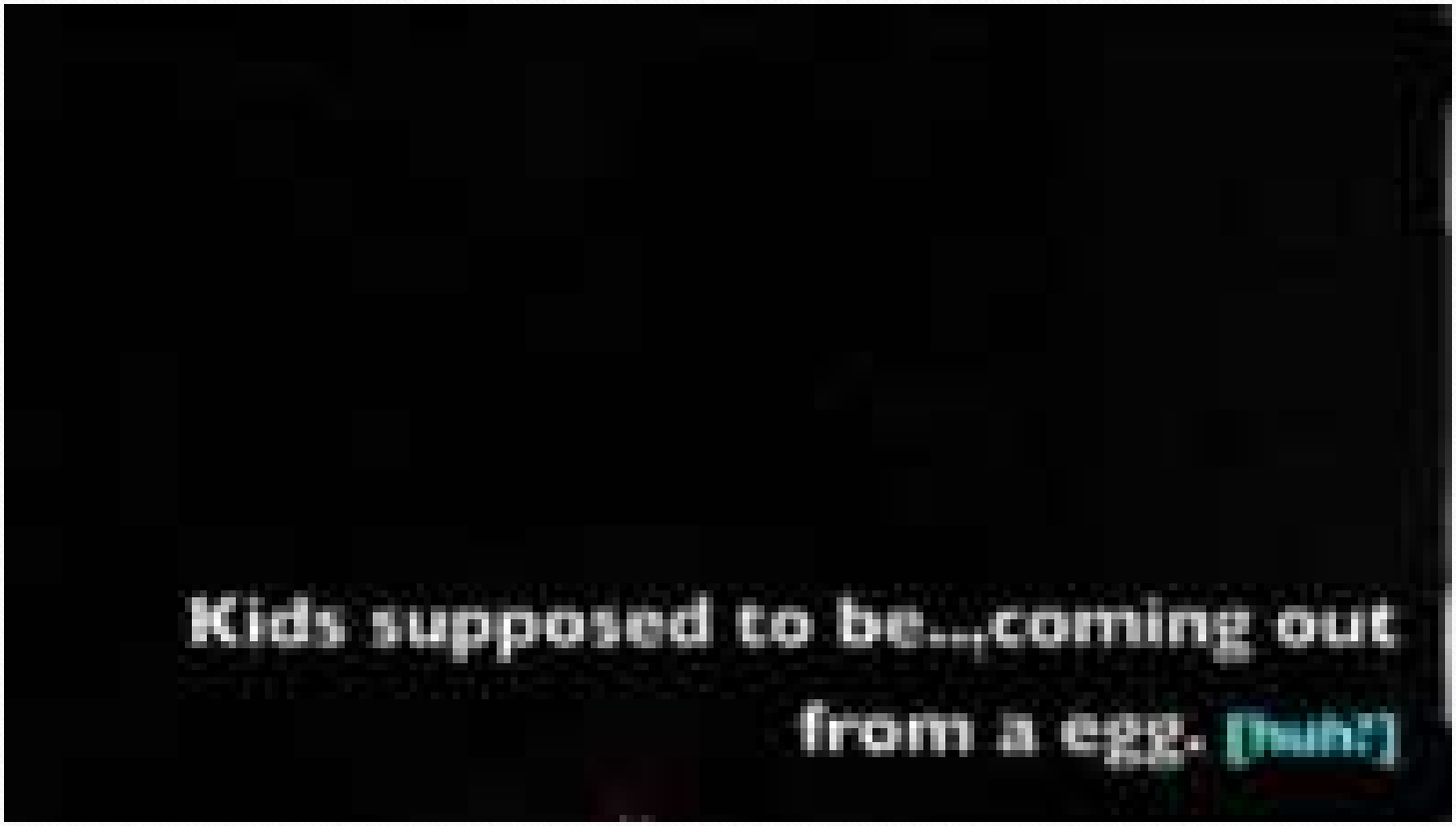


Everyone echoes sometimes…that is, everyone repeats utterances that were originally produced by others.

Consider:

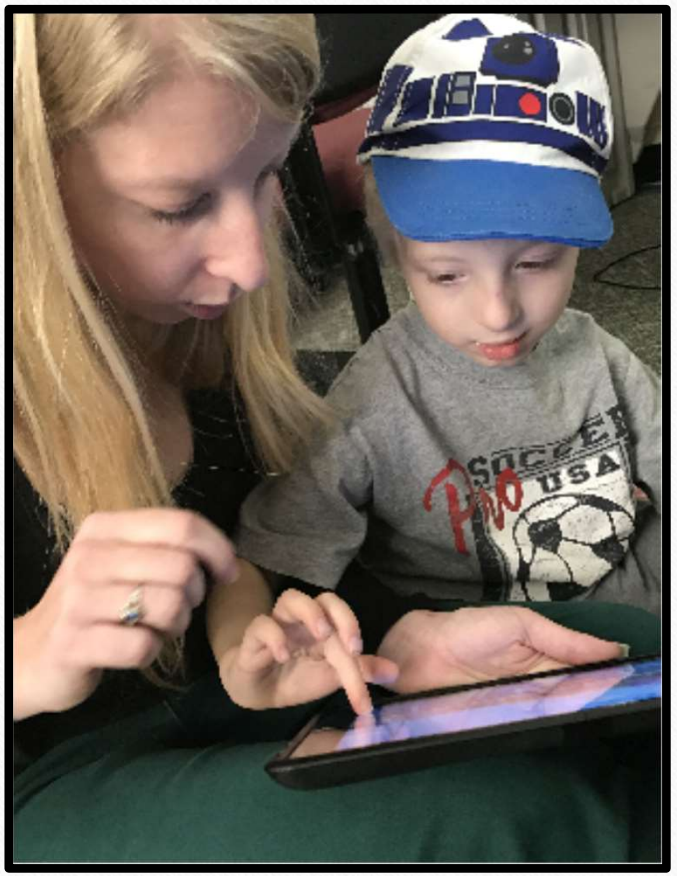
- **Pretend play**
- **Bedtime soliloquies**
- **Quotes**
- **Sayings**
- **Lines in plays**
- **Backchanneling**
- **Therapies**




Kids supposed to be...coming out
from a egg. [huh?]

In ASD, echolalia has been qualitatively described as…

- Immediate
- Delayed
- Pure
- Mitigated
- Functional for communication
- Functional for cognition
- Functional for self-regulation

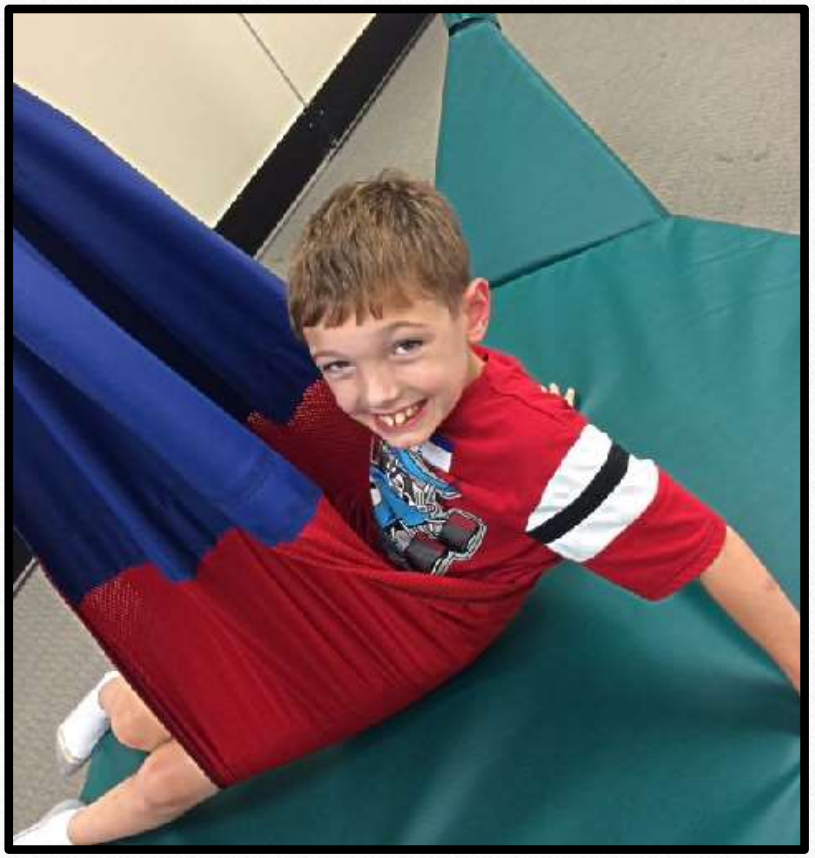


Researchers have described many communicative functions of echolalia…

- Request
- Yes answer
- Directive
- Calling
- Affirming
- Protesting
- Labeling
- Providing information
- Verbal Completion
- Turn taking
- Others?

Cognitive functions of echolalia…

- Rehearsal
- Memory assist
- Self directive
- Others?



Echolalia may serve a **self-regulatory** function at times.

Why does echolalia develop so often in ASD?

…because many children with ASD are **gestalt language processors**!

Let's review what we know about normal language acquisition…

All normal language acquisition begins with **UNITS** of language captured from the ongoing speech stream.

- Some children are analytic processors, and their units are small: **words**
- Some children are gestalt processors, and their units are large, intonationally defined strings: **gestalts**

Many children with ASD seem to be gestalt processors.

Peters, 1983; Prizant et al, 2006

"Word Babies" (Analytic Processors)	"Intonation Babies" (Gestalt Processors)
Focus on referential use of utterances (i.e., labeling objects) and semantic relationships of language	Focus on intonation and social interaction structure of language
Basic units of language are single words	Basic units of language may be words, phrases, and/or complete sentences
Language use is generalized to relevant objects and events quickly	Language use remains specific to situational contexts for longer periods of time
Language is productive and generative early on in the language acquisition process	Language is relatively inflexible in the early stages

(Adapted with kind permission from Prizant, 1983).

"Word Babies" (Analytic Processors)	"Intonation Babies" (Gestalt Processors)
Early language acquisition moves from single words to two-and three-word utterances	Early language acquisition involves multiword phrases functioning as single words
Rule induction of language forms allows for increased grammatical complexity	Increased language complexity is achieved through recombinations of established gestalts

(Adapted with kind permission from Prizant, 1983).

As SLPs, we may have a bias that analytic processing is typical, and gestalt processing occurs only in children with delays/disorders.

But this is not necessarily true.

* Children who are analytic processors may be more intelligible, and thus seem to speak earlier.

* Children who are gestalt processors may be less intelligible for an extended period. This is because their longer units are much harder to articulate.

Blanc, 2012; Peters, 1983

Gestalt processors must gradually break down their long units into smaller units, and finally into words. Next, they must begin to build word combinations, just like their analytical peers.

In children with ASD, gestalts (aka immediate or delayed echoes) can be extremely long, and difficult to break down!

Blanc (2012) described the trajectory of natural language development for gestalt processors, including children with ASD.

Stage 1: Use of *gestalt language wholes*
Stage 2: Mitigation of wholes into phrases
Recombinations of phrases
Stage 3: Isolation of single words
Recombinations of single words
Stage 4: Beginning grammar (self-generated)
Stage 5: More advanced grammar
Stage 6: More complex grammar

Stage	Examples
1. Communicative use of whole language gestalts.	"Let's get out of here." "Want some more?"
2 - A. Mitigation into chunks	(1) "Let's get" + "out of here" (2) "Want" + "some more?"
2 – B. Recombining these chunks	(1) "Let's get + some more?" (2) "Want" + "out of here,"
3. Further mitigation: isolation of single words; recombination of words, and generation of original two-word phrases	"Get – more." "Want – out?"

The Six Stages of Natural Language Acquisition.
Note: Adapted with the kind permission of Marge Blanc. Originally published in *Natural Language Acquisition on the Autism Spectrum: The Journey from Echolalia to Self-Generated Language*, Madison, WI: Communication Development Center, Inc., p. 23.

Stage	Examples
4. Generation of first sentences	"I got more."
5. Generation of more complex sentences	"I wanna go out."
6. Generation of the most complex sentences	"I don't want any more, but you can have mine."
	"How long do you wanna play outside?"
	"Do I really have to go out to play today?
	"How 'bout if you go out and play instead?"

Table 1. The Six Stages of Natural Language Acquisition.
Note: Adapted with the kind permission of Marge Blanc. Originally published in *Natural Language Acquisition on the Autism Spectrum: The Journey from Echolalia to Self-Generated Language*, Madison, WI: Communication Development Center, Inc., p. 23.

NLA Stage 1 utterances:

* Entire multi-word gestalts lifted from elsewhere
* All or nothing – not flexible
* Can be incredibly LONG!
* Stage 1 utterances can't be used any other way
* Should not ever be taken literally by listeners
* Can be meaningful and functional, but they're rarely an exact fit for what the person would like to say
* Takes time, effort, and familiarity to figure out the source of the gestalt and what it might mean
* We can help by offering useful gestalts that are easy to mitigate


InShOt

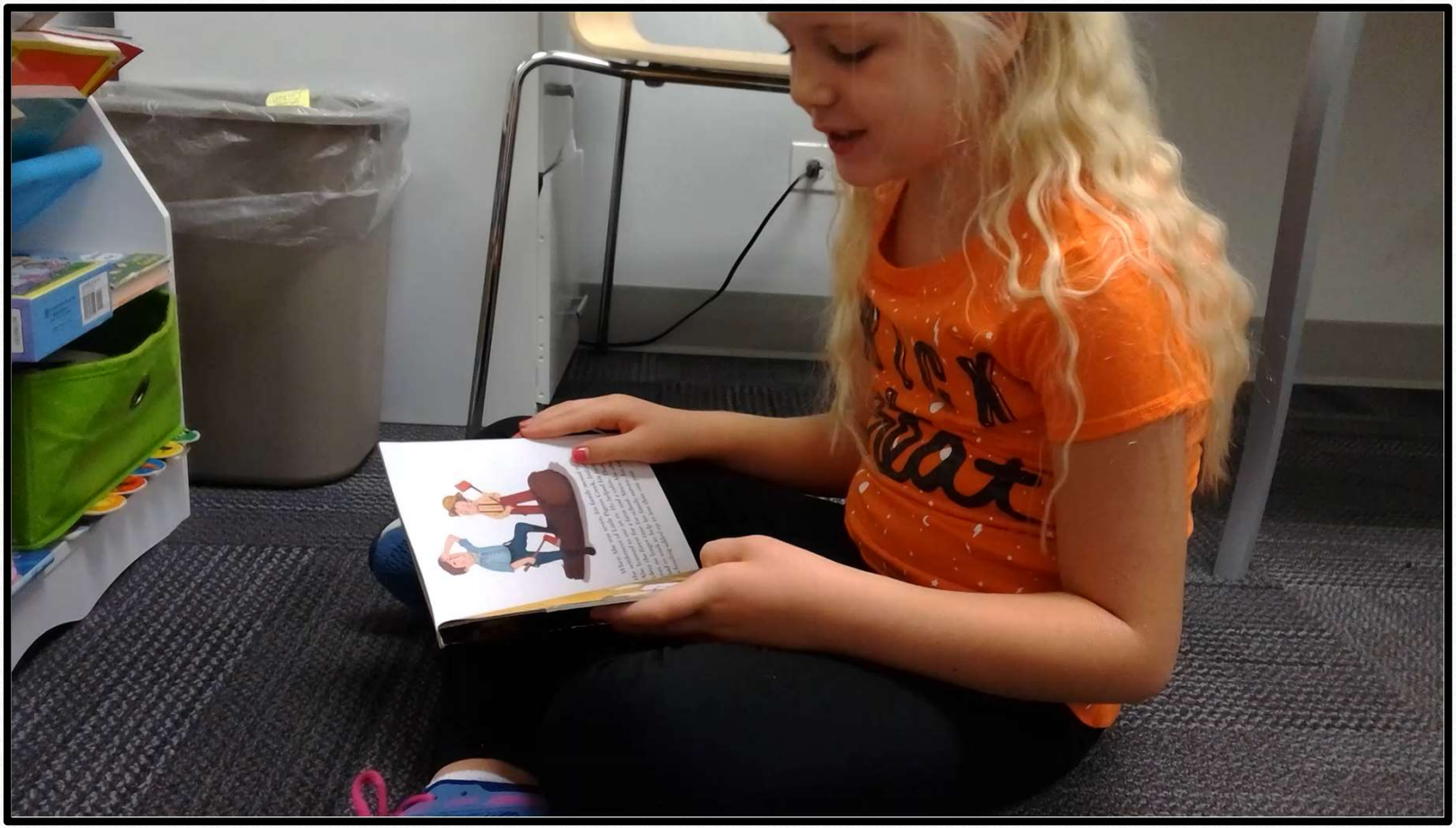
Some people with ASD still use Stage 1 gestalts in adulthood. This often allows them to participate more fully in social interactions.

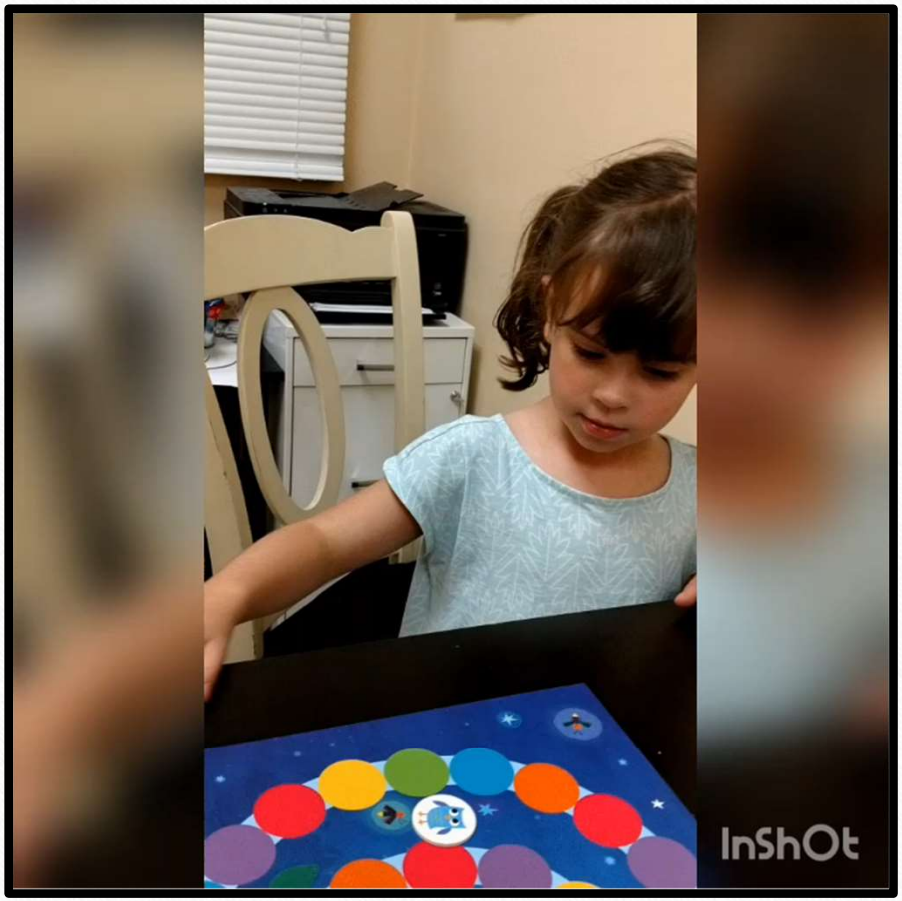
NLA Stage 2 utterances:

* Finding and separating out smaller chunks that are common across gestalts = mitigations
* The person may be working on many mitigations at once
* This is the mix and match stage – a bit less rigid and more original, but still not grammar
* In planned treatment, we have some control over the smaller phrases the person will discover (with movies, we don't)
* We can present every day language in exciting ways
* This is a natural process…it just needs to be supported

NLA Stage 3 utterances:

* Further mitigation into single words, then combining these words into two-word constructions
* These are very similar to the 2-word combinations that analytical processors produce much earlier
* Fully original
* Seem much less sophisticated than utterances in Stage 1 or 2, *but represent an enormous leap forward*
* If we can get them to this point, it may be life-changing
* So important not to focus on utterance length!

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NLA Stage 4 utterances:

* Self generated grammar: first simple sentences
* Allows some flexible self-expression
* Can be "correct" or "incorrect" *
* We can help by surrounding a child with sentences that are at his own developmental level…but first we must become fluent in the level ourselves (Blanc, 2012).
* We should avoid question forms for now…they might seem like questions to us, but they are language models for gestalt processors.


InShOt

NLA Stage 5 and 6 – even more complex grammar !

How much progress can your client achieve? What would happen if we all EXPECTED children with ASD to develop flexible, higher-level language?

How can SLPs help children move through the stages?

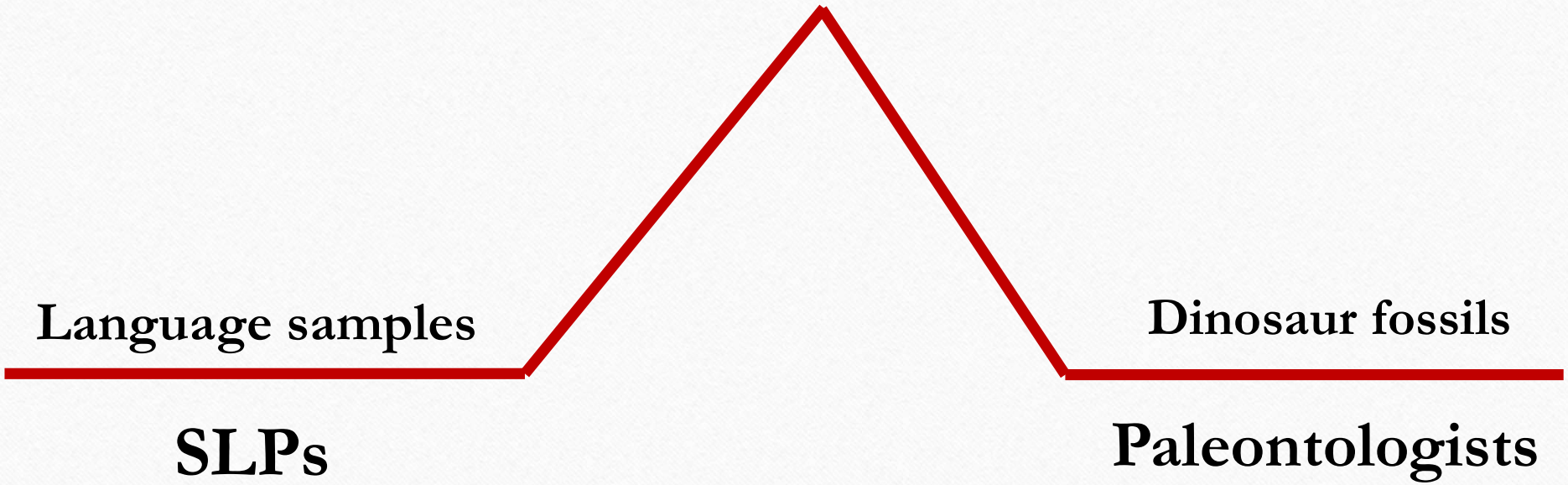
We must be willing to listen to our clients, write down what they say, figure out their ZPD and *systematically plan our support*.

Here are some language intervention **PRINCIPLES** derived from research evidence

*** Carefully observe to (1) assess comprehension, (2) discern underlying functions, and (3) watch for mitigations.**

- **Look for gaze, gesture, body orientation, etc. as markers of comprehension**
- **Try to discover the functions of utterances by context, consistency of use**
- **Mitigations are clear indicators of progress and should be tracked**

* Write down what your client says. This is critical.
Language sample data are the physical evidence of our field.



You can:

- Have parents or teachers record samples
- "Scribe" what the child says – this lets him/her know you are listening, but doesn't interrupt
- Look at the utterances and think about language components like vocabulary and syntax and pragmatic functions
- Think about your next steps in treatment!
- Blanc (2012) has numerous examples of language sample data and clear instructions for collecting and analyzing

Sample Example

D – Now wait, let's sing
C – Let's sing.
(Dad starts singing the birthday song, and C quickly joins in, singing on key and clapping at the end of each phrase of the song. They both blow out the candles.)
D – Whoo Care Bear, no spitting, no spitting! Care Bear!
C – No spitting
D – Easy does it!
C – Easy
D – Wow, look at that huh?
C – (in a low pitch) It's awesome
D – Ooh, that's a cake and a half. Did you pick that out?
C – Yes!
D – What kind is it?
C – It's a it's a yellow one
D – It is?
C – It's got flowers on it.
D – Oh that's great, what a birthday cake huh?
C – (following Dad's intonational contour) What a birthday cake huh?

* Facilitate verbal **INITIATIONS** – structure intervention so that the individual *initiates* as often as possible, rather than respond to questions and/or commands.

(Sussman, 1999).

* Facilitate low-constraint interaction styles among all communication partners

This means partners should *avoid too many direct questions and commands* because they are most likely to result in echolalia. Try to use comments more often than questions.

(Rydell & Mirenda, 1994).

If your client uses immediate echolalia (Stage 1 gestalts) during his/her conversational turn, try to use your turn to **provide information** that will build comprehension and **honor the client's communicative intent**. Here are some examples from Miller (1981).

Nonfocused: Clinician redirects attention by providing additional instruction about the activity

Clinician: (Holding straws) "Do you want a blue one?"
Child: (Looking away) "Want a blue one?"
Clinician: "Ben, here's your straw. Let's make our boat."

Turn-taking: Clinician provides a physical demonstration that helps the child comprehend critical vocabulary

Clinician: "We need to stick it in the soap."
Child: (Looking at clinician) "Stick it in the soap"
Clinician: "Watch, I'm going to stick the straw in the soap." (saying the words while demonstrating the action)

Declarative: Clinician models an appropriate linguistic form to match the child's expressed intent

Clinician: "We need the glue."
Child: (Reaches for glue) "Need the glue"
Clinician: [whispers] "You can say" [out loud] "I'll get it."

Yes-Answer: Clinician provides additional information relative to the conversational topic

Child: "What's that?"
Clinician: "That's a paper cup."
Child: (Picks up cup) "A paper cup"
Clinician: "We're going to use the cup to make a flower."

Memory Assist: After completion of the task, clinician confirms that the motor task is correct and successfully implemented

Clinician: "Now you have to cut the paper."
Child: (In a low intensity voice) "Cut paper. Cut paper." (repeats as he continues to cut the paper)
Clinician: (After completion) "Great, look at how well you cut the paper."

Rehearsal: Clinician confirms that the child's participation is successful; a time delay is inserted to allow information processing

Clinician: "Let's use a crayon to draw the eyes."
Child: (Chooses crayon) "Draw the eyes" (in a whisper)
Clinician: (After a brief time delay) "That's right, we're making the eyes."

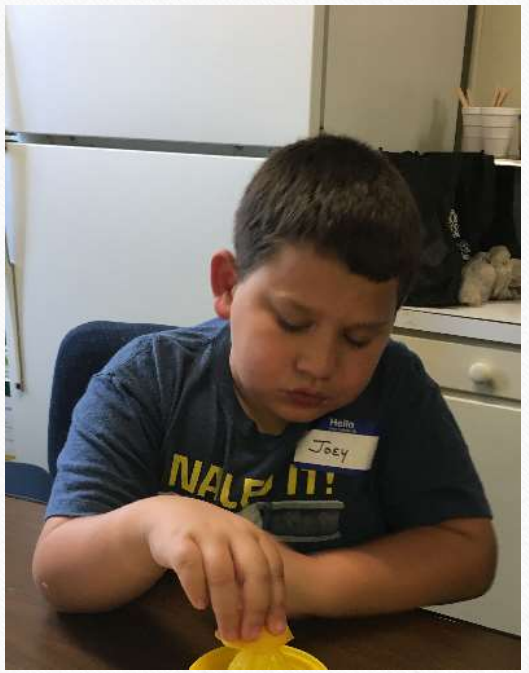
* Model useful gestalts

- Useful
- Easy to mitigate
- Playfully offered
- Matched to the individual's intent
- Developmentally appropriate…if it's a child, model "kid language"
- Blanc (2012) suggests starting with "Lets…", "It's…" and "I'm" as examples of easily used forms

* If you determine that the child is functioning primarily at Stage 1, you can model (a) more **useful** Stage 1 gestalts and (b) some Stage 2 utterances that break down current gestalts

Examples:

1. "To infinity and beyond!"
2. "I'm looking for West Esplanade"



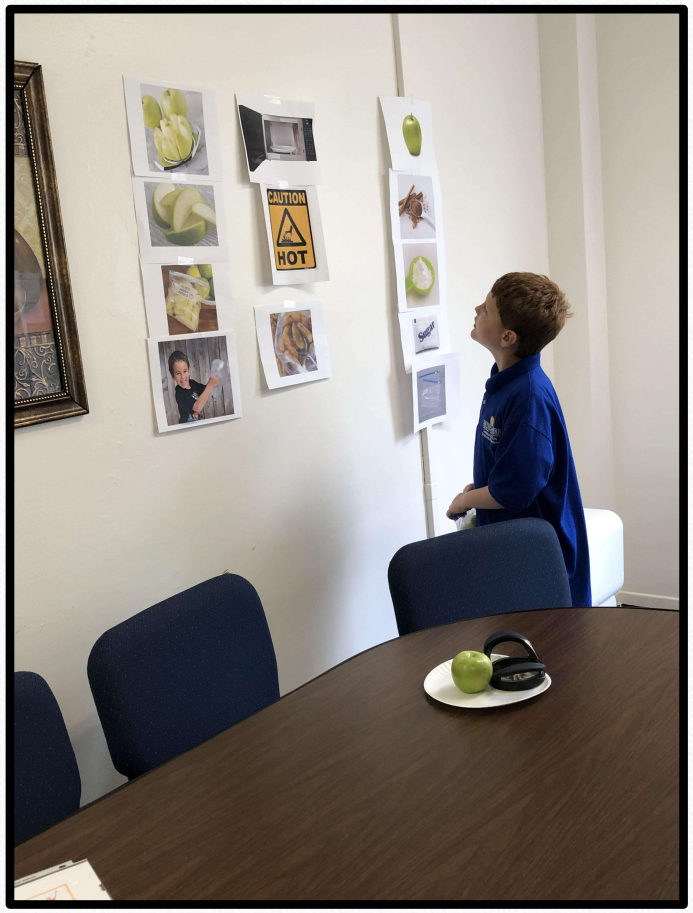
PRACTICE SCENARIO:

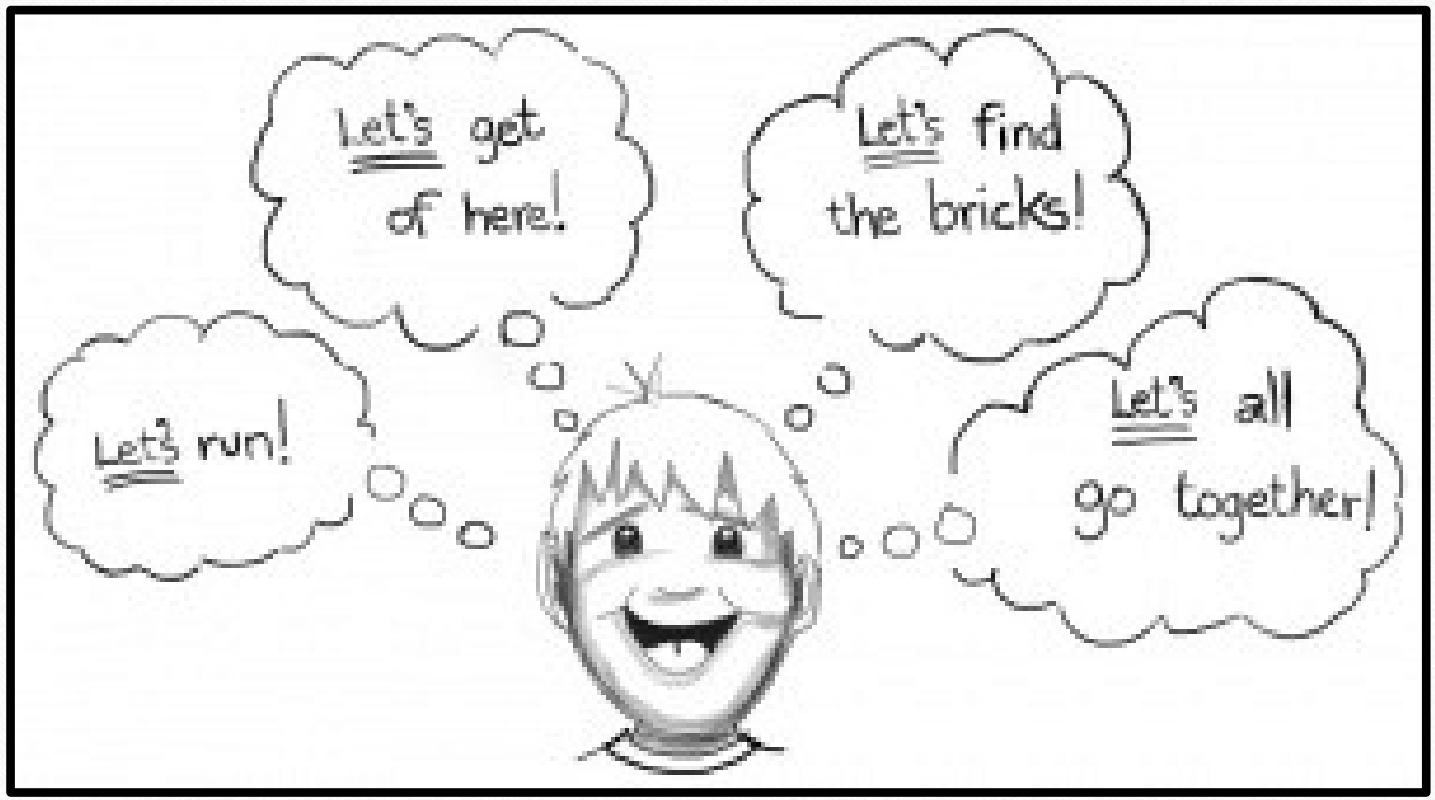
Imagine a client often uses the gestalt "***Okay please put the monkey down***". He uses it when there is no monkey present. He seems to use it to in stressful moments. It comes directly from an animated movie.

1. Think of a different gestalt that might more closely match what the child would like to say in stressful moments.
2. Think of functional mitigations of the monkey gestalt that you might model

* Once you determine that the client is using Stage 2 utterances, you can (a) continue to model Stage 2 utterances and (b) redundantly and meaningfully model Stage 3 – this means breaking out/highlighting individual words.

If your client is clearly using Stage 3 utterances at least 50 percent of the time, you can model Stage 4 – very simple, useful, meaningful age-appropriate sentences that contain familiar words and new vocabulary.





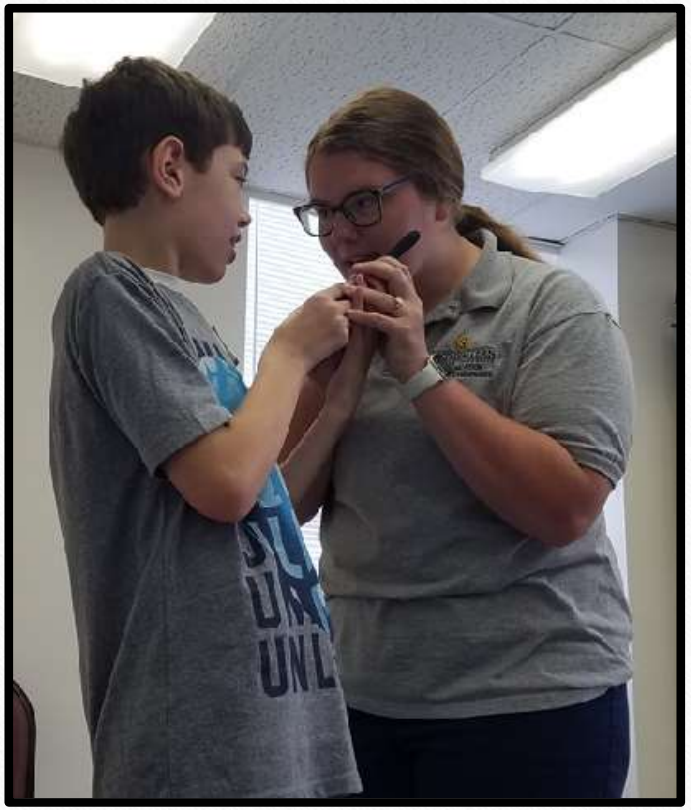
Natural Language Acquisition (Blanc, 2012)

* Be careful about teaching rote "functional" or "survival" utterances.
* A child who is a gestalt processor will learn rote utterances as gestalts – he/she won't necessarily comprehend their intended meaning, or be able to flexibly use the individual elements of the utterances.
* While requests such as "I want a ___ please" are powerful and important, they are quite basic. Consider modeling equal numbers of other pragmatic functions, such as protests, greetings, comments, expression of feelings, descriptions, etc.

(Blanc, 2012).

* Lead the Communicative Team

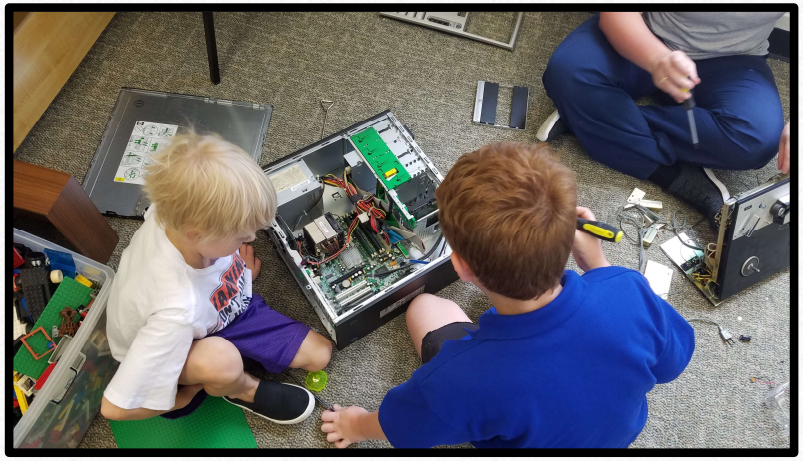
One of the most important parts of our job is to teach others what to do to help enhance communication!



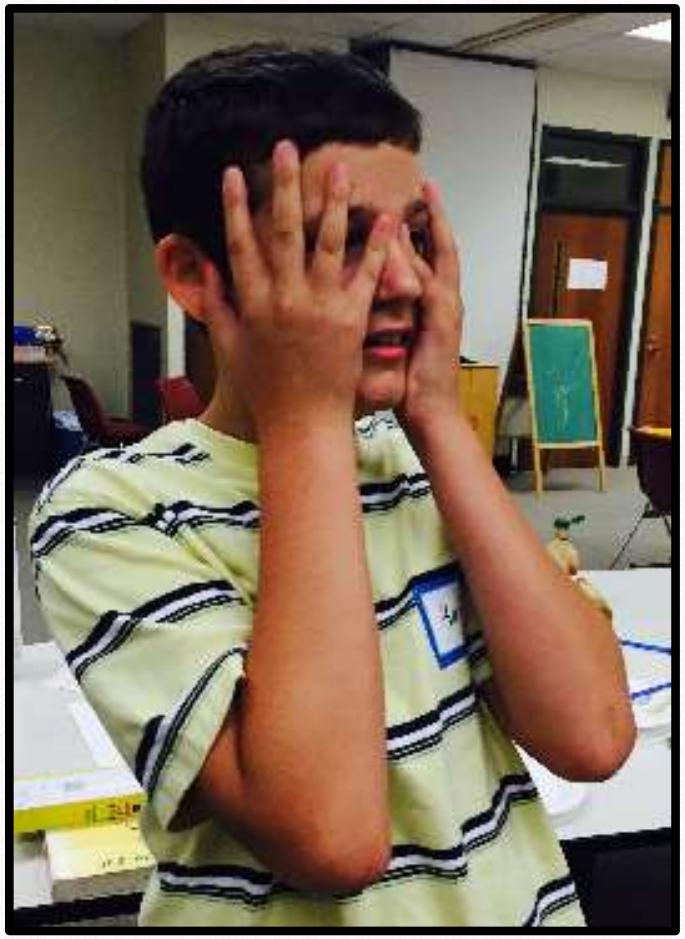
* Provide many opportunities to practice!

* Variety of partners, especially peers
* Variety of topics
* Variety of settings

* Find treatment activities that have a chance of “competing” with animated media.



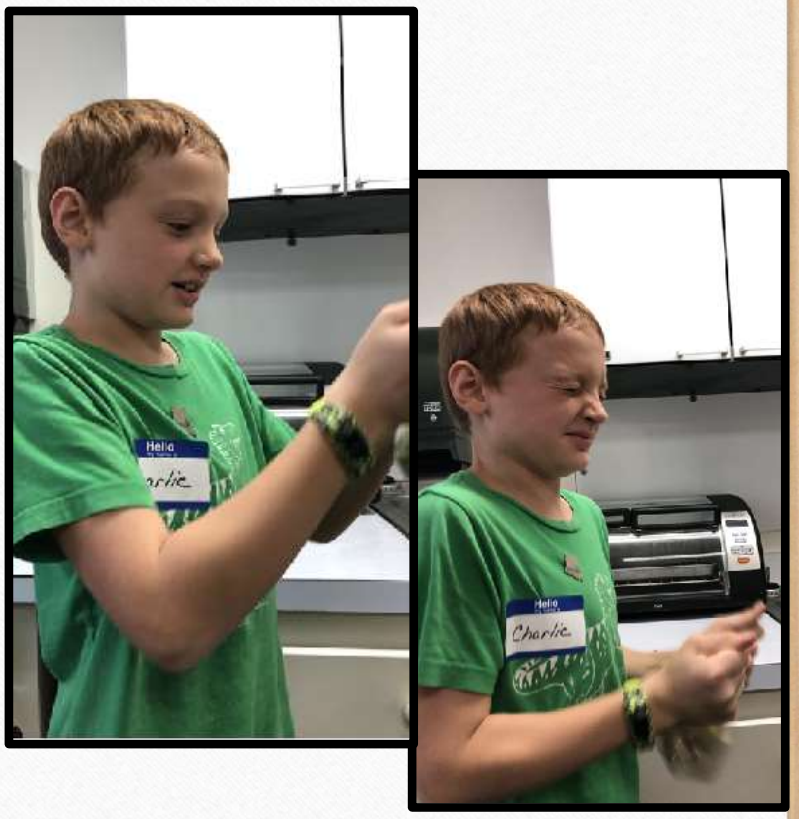
Finally, it's important for SLPs to know that other professionals may define, characterize, treat and refer to echolalia very differently.



There are numerous articles in the behavioral literature that refer to echolalia as "vocal stereotypy" and describe treatments for abatement. This is concerning, because we know that echolalia is simply a reflection of gestalt language processing, and abatement of echolalia could severely impede a child's potential for language acquisition.

Echolalia Misunderstood

- Often, when echolalia is included in definitions of vocal stereotypy, either immediate echolalic utterances or delayed echoes that seem out of context and meaningless (e.g., "movie talk") are being referenced
- In a diagnostic report from a prestigious hospital team, delayed echoes (i.e., gestalt units) such as "Firefighters drive trucks." and "Pet the bunny bot, Jessica." were erroneously described as "non-echoed speech," "speaking in full sentences," and "notable for abnormalities associated with ASD"



From Breaux (2016). Multiple Discourse Analyses Reveal the Communicative Value of Echolalia in a Child with Autism. Unpublished Master's Thesis.

Table 2. Examples of operational definitions of vocal stereotypy.

Study	Operational definition
Taylor et al. (2005)	"[A]ny audible vocalization not related to the context. Such vocalizations included humming, singing parts of songs, delayed echolalia, and repeating text/narrative fragments from previously viewed videos or previously read books." (p. 242)
Ahearn et al. (2007)	"[A]ny instance of noncontextual or nonfunctional speech [including] singing, babbling, repetitive grunts, squeals, and phrases unrelated to the present situation" (p. 266)
Athens et al. (2008)	"[L]oud, repetitive, noncontextual verbalizations (e.g., saying 'banana' when this was not contextually appropriate) and repetitive, loud, unintelligible vocalizations (e.g., 'ahhh')" (p. 291)
Miguel et al. (2009)	"[A]ny instance of noncontextual or nonfunctional speech [including] sustained vowel sounds, varying pitches of a sound and spit swooshing at an audible level" (p. 884)
Rapp et al. (2009)	"[A] vocal response that was (a) not appropriate to the context (e.g., reciting phrase from movies while in school) or (b) indistinguishable (i.e., could not be identified as a word or phrase) or repetitive (more than three repetitions of a word or phrase within 10 s)" (p. 89)
Liu-Gitz & Banda (2010)	"[A]ny instance of vocalization that was non-contextual or non-functional" (p. 80)
Anderson & Le (2011)	"[T]he non-contextual emission of laughter and repetitive sounds and words, excluding all vocalizations during crying or tantrums" (p. 136)
Cassella et al. (2011)	"[N]oncontextual vocalizations, as well as contextual vocalizations repeated within 3 s of a similar vocalization (e.g., saying 'ball' repetitively when seeing a ball)" (p. 170)
Lanovaz et al. (2011)	"[A]contextual audible sounds or words produced by the vocal apparatus (e.g., tongue, lips, nasal cavity, vocal cords)" (p. 648)
O'Connor et al. (2011)	"[N]on-communicative vocalizations (e.g., saying 'horse' repeatedly in a high-pitched voice)" (p. 234)
Rapp et al. (2012)	"[T]he emission of acontextual audible sounds or words for 2 s or longer" (p. 545)
Enloe & Rapp (2014)	For subject 1: "[A]ny audible vocalization including humming, whistling, and partial phoneme utterances"; for subject 2: "[A]ny vocalization including whispers and 'sound effects'" (p. 377)

Stiegler, 2015

Ideas for Educating Family Members and Professionals

*** Explain the concept of gestalt language processing (Blanc, 2012)**
*** Explain the process of mitigation of utterances using clear metaphors (Roulakis, 2019)**
*** Use the passages/resources on echolalia from Hanen's More Than Words guidebook, online videos**
*** Provide academic literature when appropriate (e.g., Stiegler, 2015)**
*** Insist that even Stage 1 utterances (unmitigated gestalts) can be communicative and quite valuable.**

Final "Go Dos"

*** Listen to your client with echolalia/gestalt language**
*** Write down what he/she says**
*** Respond to immediate echolalia conversationally, with salient information**
*** For delayed echolalia, try to determine the stage of gestalt language development using Blanc's stages**
*** Redundantly and playfully model useful gestalts at the current level, plus the next level up**

Final "Go Dos" (continued)

*** Try to make therapy interesting enough to compete with animated media.**
*** Encourage the family and others to provide as many opportunities for language practice as possible.**
*** Educate others on the child's team about gestalt language development and discourage abatement treatments.**
*** Keep the conversation going and don't give up!**

Where you can find more:

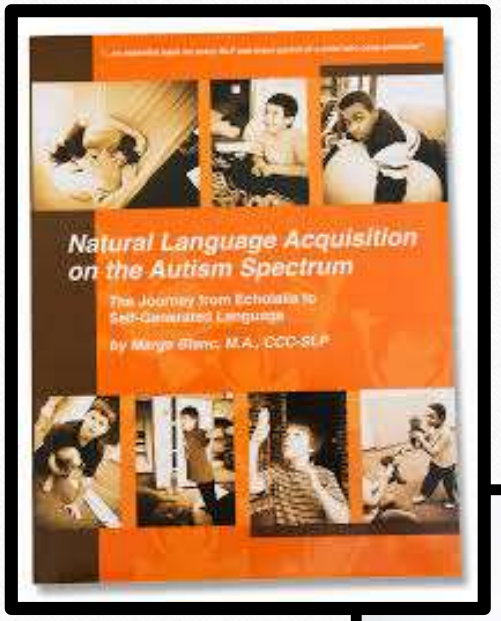
* Follow on social media:
NLA Study Group on Facebook

* Meaningfulspeech on Instagram

* Check out Marge's book and
3 courses on Northern Speech
Services: northernspeech.com

* Marge's Articles:
communicationdevelopmentcenter.com/articles.html
* Alex's website and videos of treatment:
www.meaningfulspeech.com

* Email me at stieglerlillian@gmail.com



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