

# *Gestalt Language:*

How we can better understand our  
Autistic children

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Keewaytinook Okimakanak Board of Education/HAEPI SLP Therapy Services

We acknowledge that the City of Thunder Bay has been built on the traditional territory of Fort William First Nation, signatory to the Robinson Superior Treaty of 1850. We also recognize the contributions made to our community by the Métis people. We strive as guests on these lands to honour our responsibilities to care for this land and uphold the Treaties that were signed therein.



# Disclosures:

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I own and operate HAEPI SLP Therapy Services, and one of my areas of focus is facilitating communication in gestalt language processors.

# Learning Objectives



1

## Differentiate - ALP versus GLP

Participants will differentiate between analytic language processing and gestalt language processing.



2

## Summarize - Stages of NLA

Participants will be able to summarize Stages 1-4 of the Natural Language Acquisition framework.

# Identity-First Language

**Identity-first language** reflects the belief that **being Autistic is an inherent part of a person's identity** (e.g., Autistic person).

**Autism is a neurodiversity** that results in a different way of seeing and interacting with the world, **and does not need to be pathologized.**

**Person-first language** (e.g., person with Autism, living with Autism) reflects **the idea that Autism can be separated from a person.**

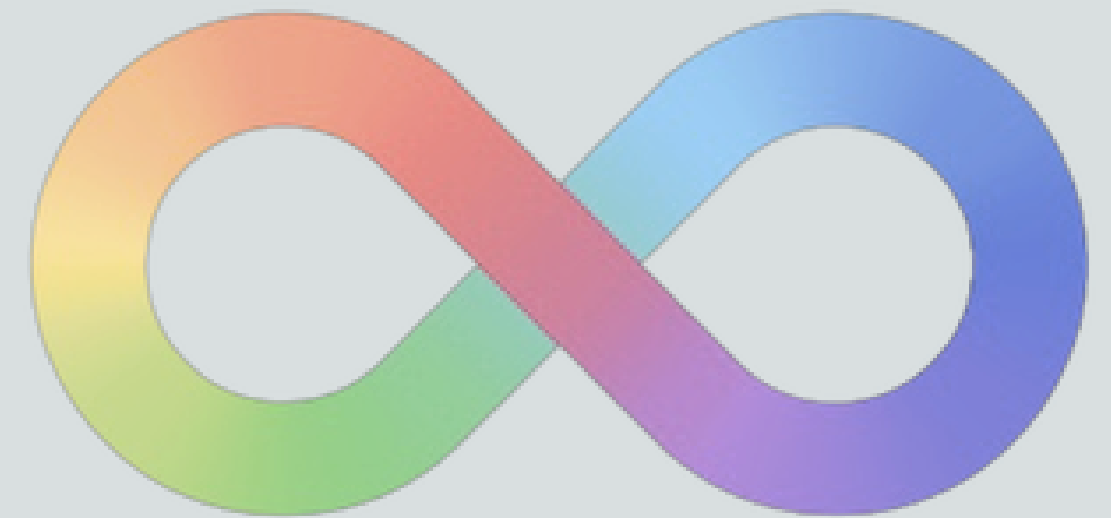
# Neurodiversity-Affirming Therapy

At HAEPI, we are committed to **connection over compliance**. This involves:

Using an individual's own **special interests** to guide therapy,

Encouraging the **movement of bodies (e.g., stimming)**, and

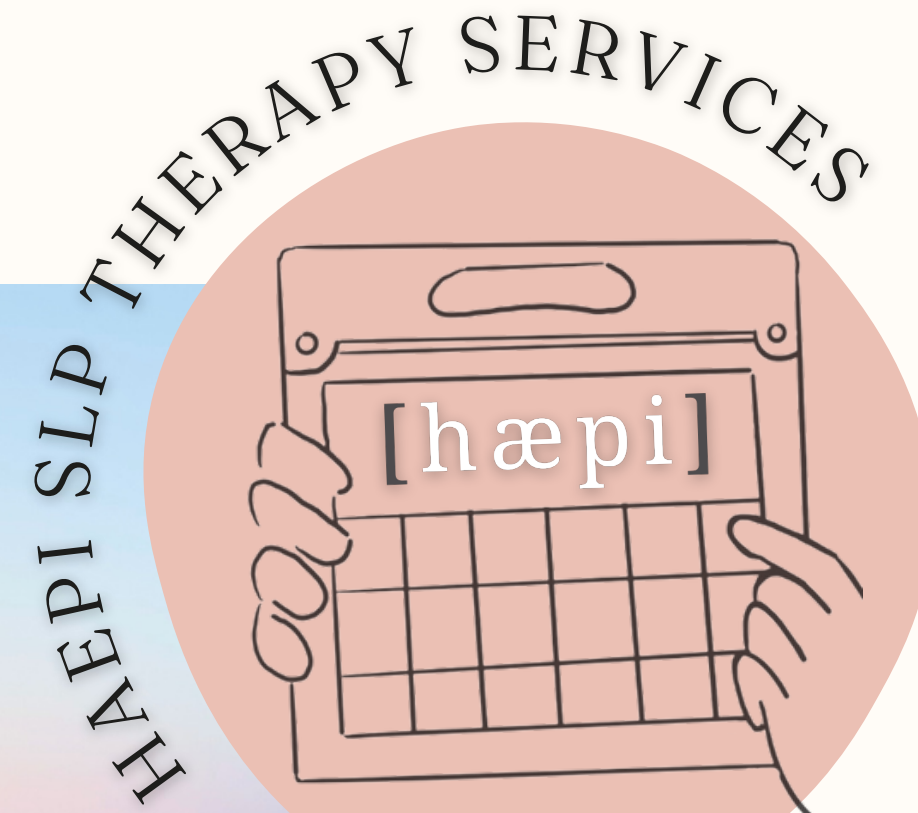
Creating goals that focus on **advocating for one's needs**.





# A Bit About Me

- HBSc Biology from Lakehead
- MSc(A) Speech-Language Pathology from McGill
- Work primarily with Autistic children
- Clinical interest in Augmentative & Alternative Communication
- Received formal training in Gestalt Processing and Natural Language Acquisition
- Provide virtual and fly-in services to 5 elementary schools in remote Indigenous communities
- Opened HAEPI SLP Therapy Services in April 2023!



LANGUAGE ACQUISITION AND COMMUNICATIVE BEHAVIOR  
IN AUTISM: TOWARD AN UNDERSTANDING OF THE  
“WHOLE” OF IT

BARRY M. PRIZANT

*Southern Illinois University at Carbondale*

Deviant language characteristics, deficits in social interaction, and ritualistic and compulsive behaviors are now considered to be among the definitive characteristics of the autistic syndrome. There have been few attempts to bring a sense of cohesion to the varied communicative symptomatology evident in autism, because much of the research literature has been product oriented rather than process oriented, and has focused on language structure rather than function. Therefore, behaviors such as immediate echolalia, delayed echolalia, and interactive rituals are often viewed as isolated, deviant phenomena, rather than as phenomena related to predominant cognitive processing modes and cognitive-linguistic development in autism. This discussion reviews symptomatology of autistic communication in reference to “gestalt” versus “analytic” modes of cognitive processing, language acquisition, and language use. Based on research on language behavior of normal and autistic children, specific issues are considered, including a reconsideration of echolalic behaviors, patterns of social interaction, and patterns of cognitive-linguistic development in autism.



# Immediate vs Delayed Echolalia

(Prizant & Duchan, 1981)

(Rydell & Prizant, 1984)

## *Interactive*

Turn Taking  
Declarative  
Yes Answer  
Request

## *Non-Interactive*

Non-focused  
Rehearsal  
Self-regulatory

## *Non-Interactive*

Non-focused  
Situation association  
Self-directive  
Rehearsal

## *Interactive*

Turn Taking  
Verbal Completion  
**Providing information**  
**Labeling** (interactive)  
**Protest**  
**Request**  
**Calling**  
**Affirmation**  
**Directive**

# Research on Gestalt Language Processing

“Gestalt language processing” vs “analytic language processing” proposed by Ann M Peters (1977)

“I gradually discovered that [...] whether a Gestalt or an Analytic approach was used, children must in general start out with whatever units they can acquire, whether large or small. Therefore, to understand early language acquisition, one must understand the language units that children are actually working with. There is no reason to assume that these are necessarily the same as the units of adult language.” (Peters, 1983)

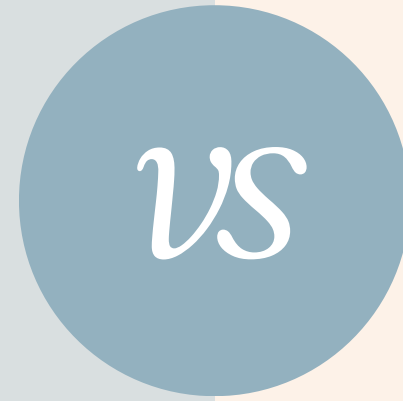
# *Analytic Language*

**Basic units are single words;** as learning progresses, ALPs move onto two words, then phrases, and so on.

**Intonation develops later** (with longer sentences), so they are known as '**word babies**'.

**Single words carry individual meaning.**

**Most common**, and what we often see as 'typical' language development.



# *Gestalt Language*

**Basic units are chunks or phrases** (word production is a later stage of language development).

**Intonation comes first**, so they are known as '**intonation babies**'.

**'Chunks'** (of one or more words) **carry individual meaning.**

Less talked about but **equally valid.**

(A. Wetherby, 1992)

# More Research on Gestalt Language Processing

Natural Language Acquisition (NLA) which is the process by which gestalt language processors move from delayed echolalia to self-generated language (Marge Blanc, 2000).

- Studied Autistic GLPs in her clinic since 1997
- Featured in Autism Asperger's Digest from 2004 - 2010
- Authored "Natural Language Acquisition on the Autism Echolalia: The Journey from Echolalia to Self-Generated Language" in 2012

Qualitative research took a backseat after 1980s.



"Bottom line: the inclusion of the children who sound echolalic in quantitative research is just too hard."  
(Marge Blanc, 2021, Foreward of Ann Peter's re-released book "The Units of Language Acquisition" from 1983)

# Semantic vs Episodic Memory

*Analytic → Semantic*



*Gestalt → Episodic*



# Overview of the 6 Stages

## Stage 1: Echolalia

Scripting gestalts or intonation patterns exactly as they were once heard (delayed echolalia).

## Stage 2: Mitigation

Mix-and-matching parts of gestalts.

## Stage 3: Single Word and 2-Word Combinations

Isolating single words and beginning to combine referentially with other single words.

## Stage 4: Original Phrases & Beginning Grammar

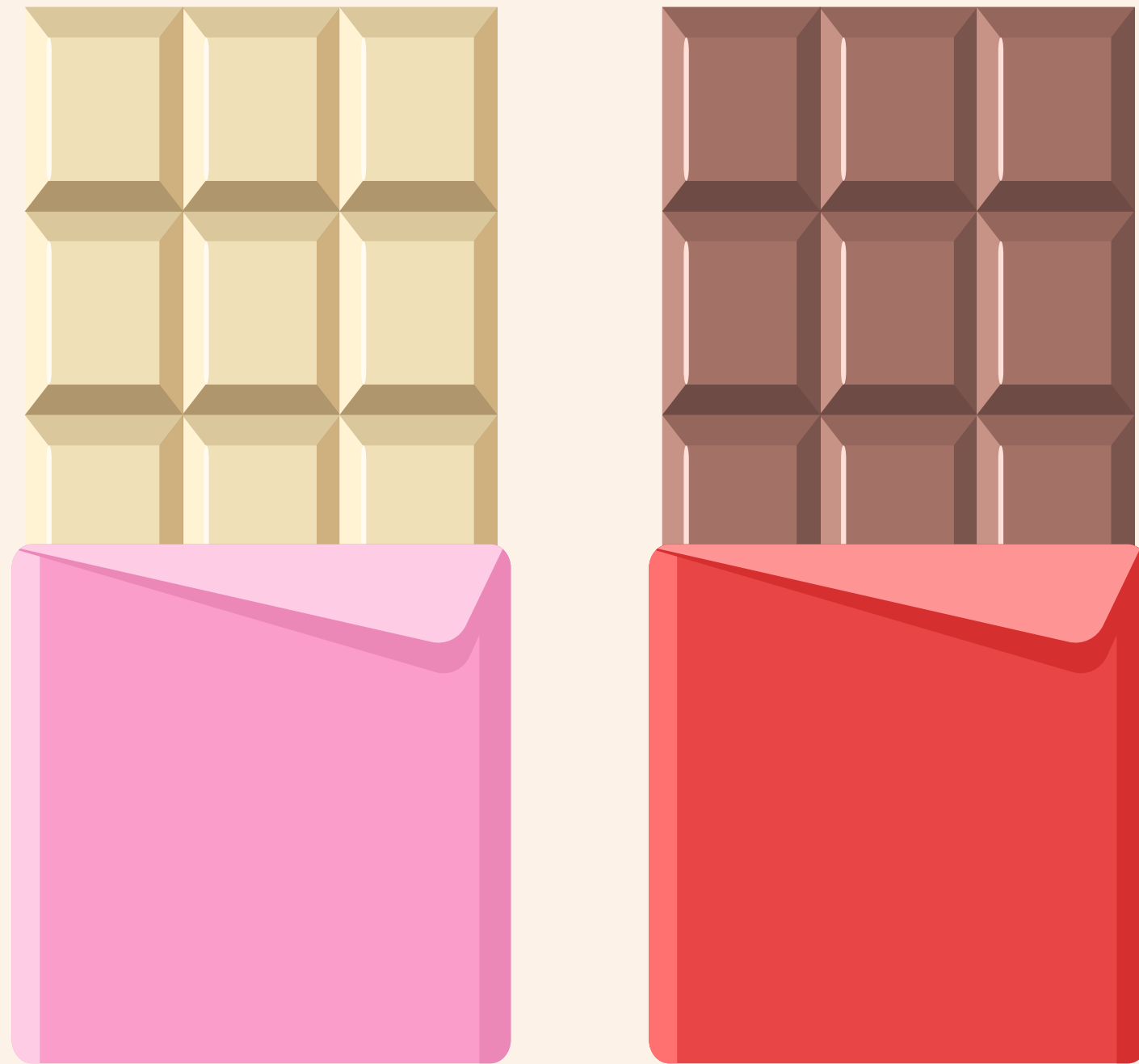
Combining single words to make new, self-generated sentences that use both nouns and verbs (beginning grammar).

## Stages 5 & 6: More Complex Grammar Acquired

Stages 1-6 of NLA:

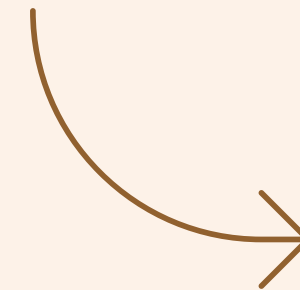
*The*  
*Chocolate*  
*Analogy*





These chocolate bars represent those whole gestalts.

In Stage 1 (echolalia),  
the child scripts  
**whole gestalts.**





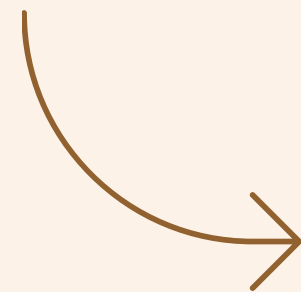
It's clean up  
time.

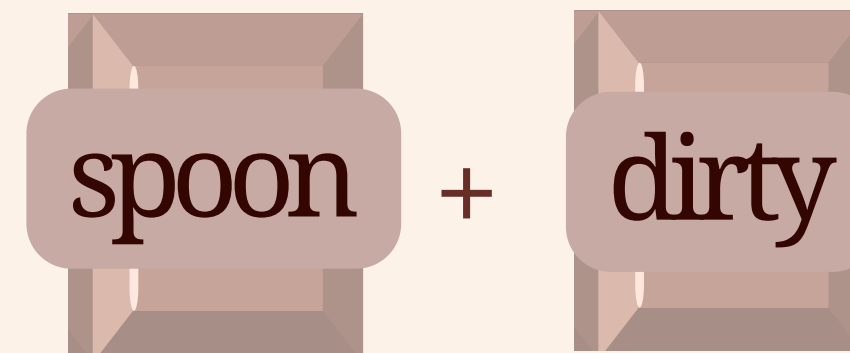
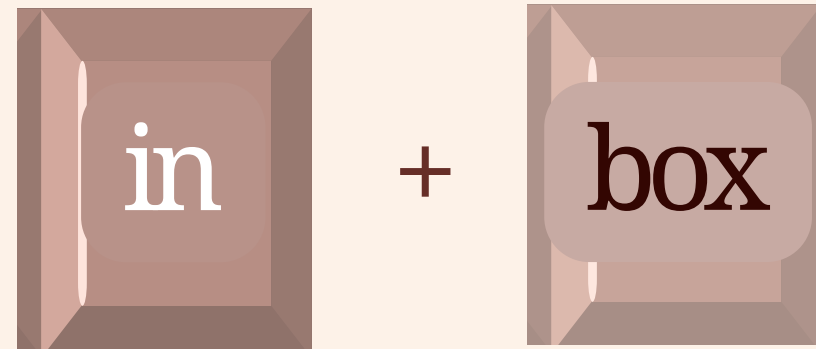
Let's find  
it!

In Stage 2 (mitigation), the child begins **taking parts of gestalts and combining them in new ways** to create more flexible language.

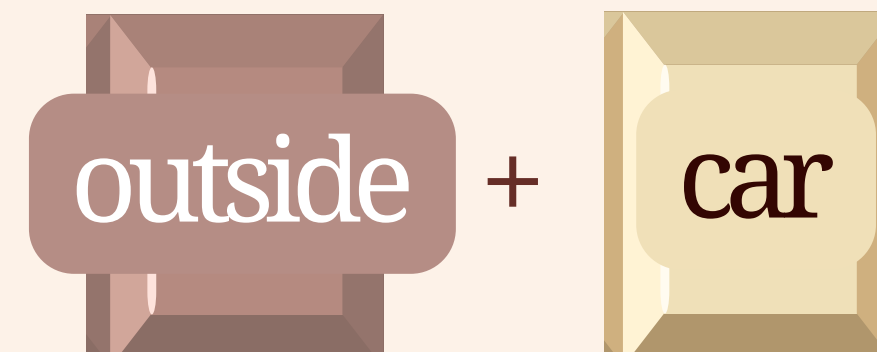
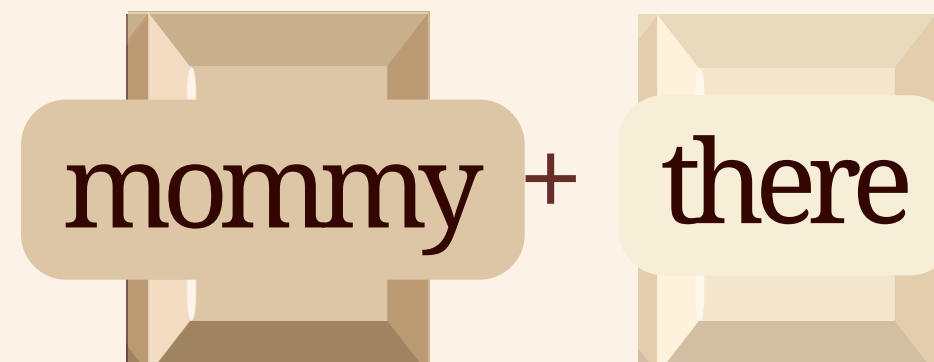


In Stage 3, the child will be able to **isolate single words** that are referential, and **combine two single words**.





Word order is not important at this stage.



Starting in Stage 4, the child can **combine isolated single words** to form novel phrases and sentences, such as:



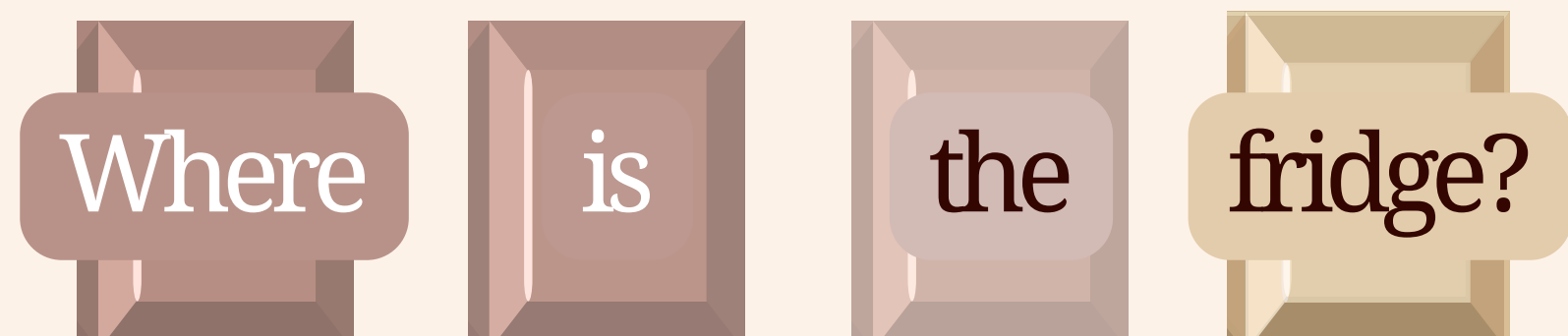
During this stage, the child will acquire grammatical concepts in levels 1-3 of Laura Lee's Developmental Sentence Scoring (DSS).

In Stage 5, the child will **acquire grammatical concepts in DSS levels 4-6**, including advanced pronouns, verb forms, negatives, wh- questions, conjunctions 'but', 'so', 'if', 'because', etc.

*e.g. 1*



*e.g. 2*





*e.g. 1*

Didn't you know she'd be there?

*e.g. 2*

I should've been studying but went  
there for dinner instead.

In Stage 6, the child **acquires grammatical concepts in DSS levels 7-8**. This results in a full grammar system characterized by multiple embedded clauses.

# Stage 1: Delayed Echolalia

1

## *What is it?*

Child is using verbatim utterances (stage 1 gestalts) to express how they feel, what is happening, etc.

2

## *What is our goal?*

More stage 1 gestalts that are easily mitigable; understand what their gestalts mean; acknowledge their gestalts.

3

## *What do I do?*

Choose easily mitigable gestalts to model during PLAY; listen, acknowledge, and model; focus on redundancy.

# Examples of Stage 1 Gestalts to Model

Example interaction with gestalts “Let’s go”, “We did it”, and “Do it again”:

SLP: **Let’s go!** I got my paw patrol pups

Child: Chase to the rescue!

SLP: Chase to the rescue! Yes. **We did it!**

Child: Sky, fly!

SLP: Sky! **Let’s go!**

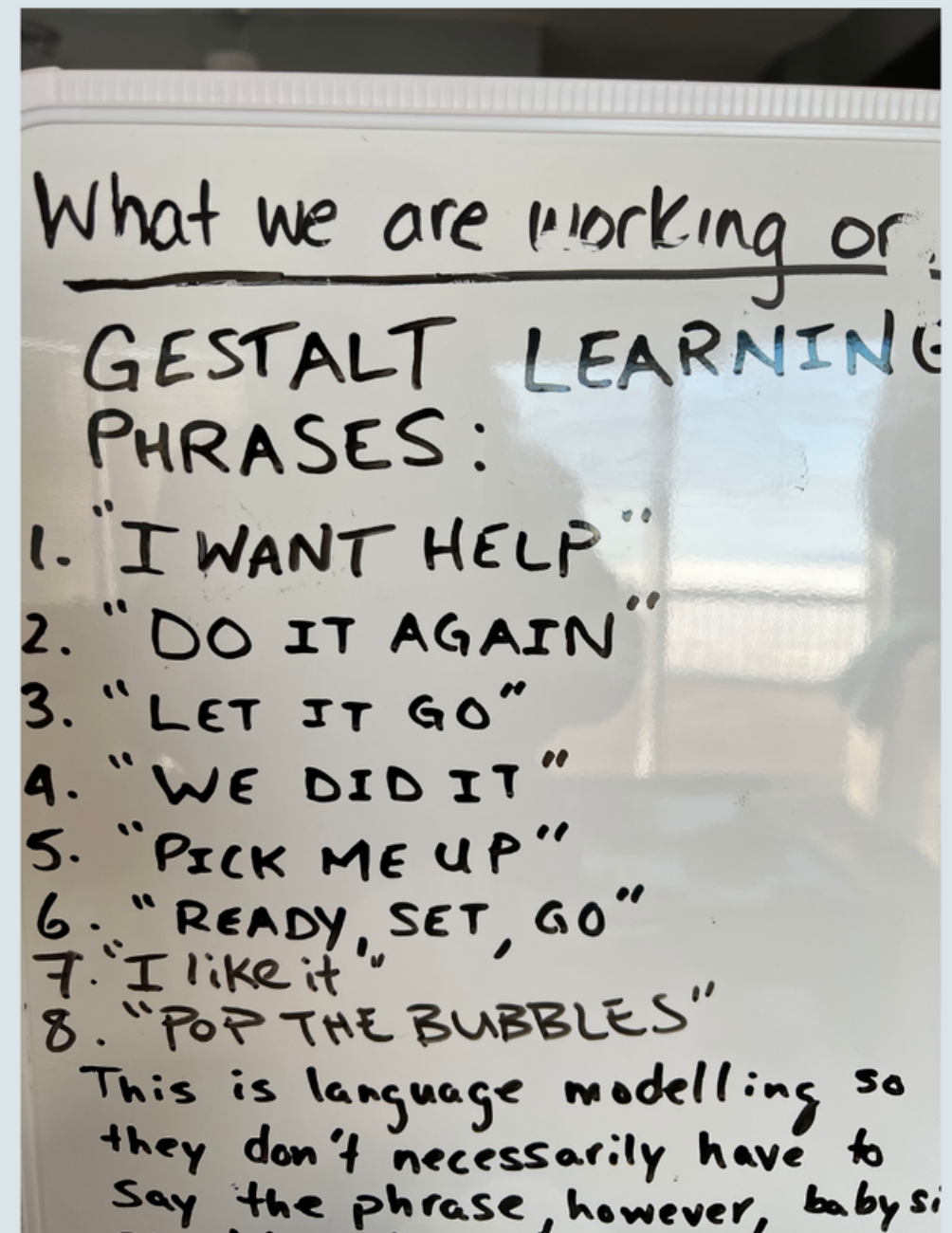
Child: \*Unintelligible gestalt\*

SLP: Yeah. **Do it again!**

Child: \*Unintelligible gestalt\*

SLP: Come on pups. **Let’s go!**

SLP: **We did it!**



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# Stage 2: Mitigation

1

## *What is it?*

Child uses mitigated (mix-and-matched) gestalts. These can be shortened gestalts or adding a new phrase to the end of an existing gestalts.

2

## *What is our goal?*

Show the child that language is flexible by modelling mitigated gestalts. It is the beginning step in a GLP using language flexibly.

3

## *What do I do?*

Model mitigations naturally when a child uses a gestalt. It is often easier to mitigate stage 1 gestalts that we introduced versus gestalts they may have picked up from one targeted instance (e.g., a TV show) that carry a lot of emotion and specific meaning.



Example interactions with mitigating gestalts  
“Let’s go,” “We did it,” “Do it again”:

Child: We did it!

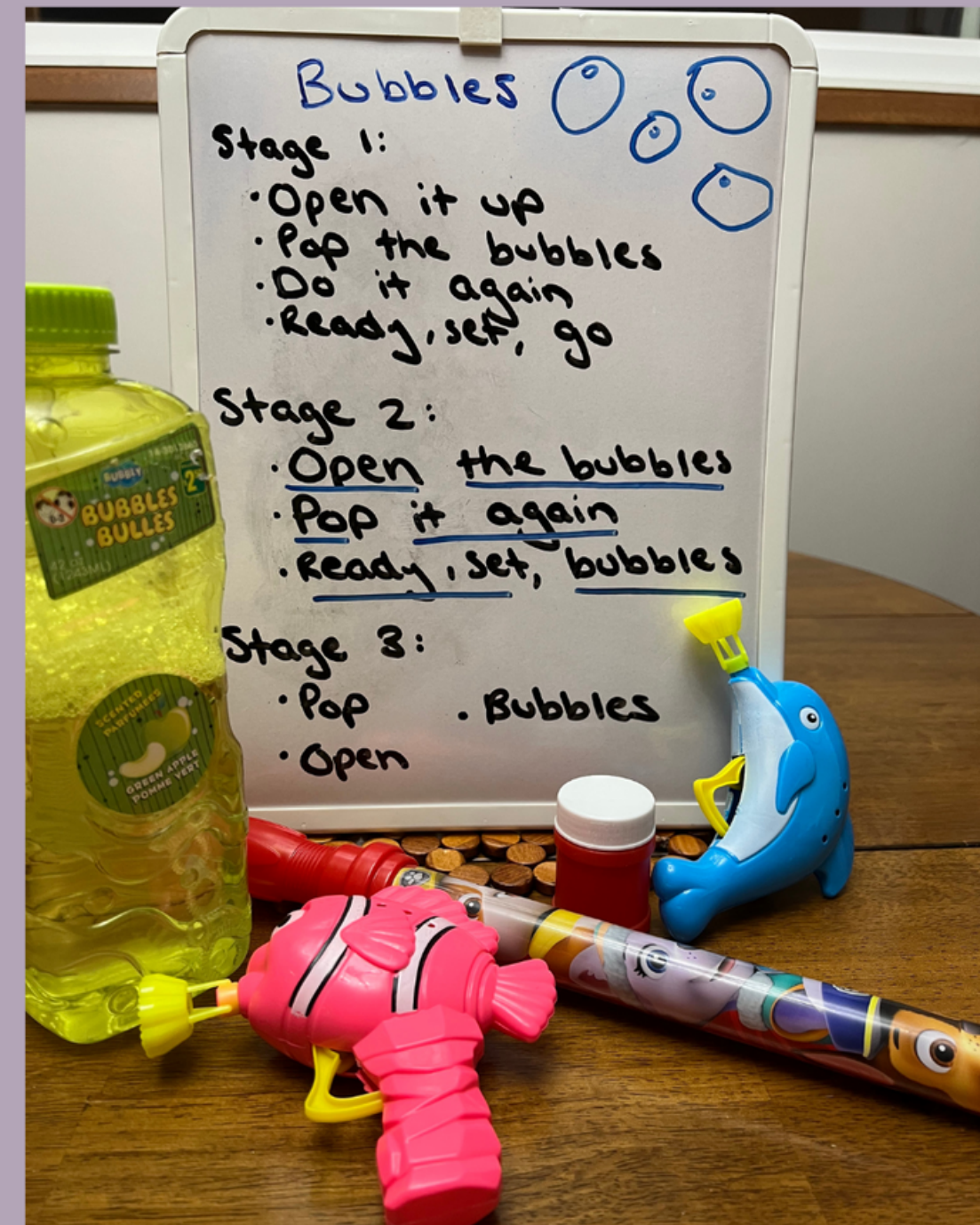
Adult: We did it! **We did** our colouring together. **We did** a lot today.

Child: Let’s go!

Adult: **Let’s go** eat. **Let’s** get a spoon. **Let’s go** to the fridge.

Child: Do it again!

Adult: **Do it** more. **Do it** fast! **Let’s go again!**



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# Stage 3: Single Word & Two-Word Combinations

1

## *What is it?*

The “lightbulb moment” where the child recognizes single words as units and begins to use referential language for single words and two single words (no use of grammar).

2

## *What is our goal?*

Before grammar can occur, child needs to isolate single words and make two-word combinations. We want to allow them to stay in this stage for as long as possible, and avoid reverting back to relying on gestalts (stage 1/2).

3

## *What do I do?*

Continue using declarative language and use concepts that you can ‘refer’ to with your eyes or gesture – nouns, attributes, locations. Avoid grammar when possible. Focus on nouns and adjectives.



"big ... planet"

"there ... rock"

"astronaut"

"star"

"rock ... two"

"planet ... blue"

"alien ... up"

"there ... alien"

"up ... astronaut"

"down ... star"

"rock"

"blue ... rock"





# Stage 4: Original Phrases & Beginning Grammar

1

## *What is it?*

Child begins to use original language with beginning grammar. This stage is marked by “poor grammar” as children are just beginning to use grammar rules.

2

## *What is our goal?*

To model grammar in developmental progression. Child will likely sound “younger” than earlier stages when they were using gestalt and not self-generated grammar.

3

## *What do I do?*

Model and teach language rules, following the levels of Developmental Sentence Scoring (Laura Lee, 1970). Stage 4 looks the most like traditional analytic language processing therapy as we are modeling different. Focusing on Levels 1-3 of DSS.

Score	Indefinite Pronouns or Nouns	Personal Pronouns	Main Verbs	Secondary Verbs
1	it, this, that	1st & 2nd person, I, me, my, mine, you, your(s)	A. uninflected verb: I see you B. copula, is or 's: it's red C. is + verb + ing: he is coming	
2		3rd person, he, him, his, she, her, hers	A. -s and -ed: plays, played B. irregular past: are, saw C. copula: am, are, was, were D. auxiliary: am, are, was, were	Five early developing infinitives:  I wanna see (want to see) I'm gonna see (going to see) I gotta see (got to see) Lemme [to] see (let me [to] see) Let's [to] play (let [us to] play)
3	A. no, some, more, all, lot(s), one(s), two (etc.), other(s), another B. something, somebody, someone	A. plurals, we, us, our(s), they, them, their B. these, those		Non-complementary infinitives:  I stopped to play I'm afraid to look It's hard to do that

Score	Negatives	Conjunctions	Interrogative Reversals	WH-Questions
1	<p>is, this, that + copula or auxiliary is, 's, + not:</p> <p>It's not mine This is not a dog This is not moving</p>		<p>Reversal of copula:</p> <p>Isn't it red? Were they there?</p>	
2				<p>A. who, what, what + noun: who am I? what is he eating? what book are you reading?</p> <p>B. where, how many, how much, what ... do, what ... for: where did you go? how much do you want? what is he doing? what is a hammer for?</p>
3		and		

# Developmental Sentence Analysis: A Grammatical Assessment Procedure for Speech and Language Clinicians

*Reprinted from Laura Lee (1974)*

Developmental Sentence Analysis: A Grammatical Assessment Procedure for Speech and Language Clinicians  
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Score	Indefinite Pronouns or Noun Modifiers	Personal Pronouns	Main Verbs	Secondary Verbs
1	it, this, that	1 <sup>st</sup> & 2 <sup>nd</sup> person: I, me, my, mine, you, your(s)	A. Uninflected verb: I see you. B: copula, is or 's: It's red. C: is + verb + ing: He is coming.	
2		3 <sup>rd</sup> person: he, him, his, she, her, hers	A. -s and -ed: plays, played B: irregular past: are, saw C: Copula: am, are, was, were D: Auxiliary am, are, was, were	Five early developing infinitives: I wanna see. (want to see) I'm gonna see. (going to see) I gotta see. (got to see) Lemme [to] see. (let me [to] see) Let's [to] play. (let [us to] play)
3	A. no, some, more, all, lot(s), one(s) two (etc.), other(s), another. B. something, somebody, someone	A. Plurals: we, us, our(s), they, them, their B. these, those		Non-complementing infinitives: I stopped to play. I'm afraid to look. It's hard to do that.
4	nothing, nobody, none, no one		A. can, will, may + verb: may go B. Obligatory do + verb: don't go C. Emphatic do + verb: I do see	Participle, present or past: I see a boy running. I found the toy broken.
5		Reflexives: myself, yourself, himself, herself, itself, themselves		A. Early infinitival complements with differing subjects in kernels: I want you to come, Let him [to] see. B. Later infinitival complements: I had to go, I told him to go, I tried to go, He ought to go. C. Obligatory deletions: Make it [to] go. D. Infinitive with wh-word: I know what to get, I know how to do it.
6		A. Wh-pronouns: who, which, whose, whom, what, that, how many, how much B. Wh-word + infinitives: I know what to do, I know who(m) to take.	A. could, would, should, might + verb: might come, could be B. Obligatory does, did + verb C. Emphatic does, did + verb	
7	A. any, anything, anybody, anyone B. every, everything, everybody, everyone C. both, few, many, each, several, most, least, much, next, first, last, second (etc.)	(his) own, one, oneself, whichever, whoever, whatever: Take whatever you like.	A. Passive with get, any tense Passive with be, any tense B. must, shall + verb: must come C. have + verb + en: I've eaten. D. have got: I've got it.	Passive infinitival complement: With get: I have to get dressed. I don't want to get hurt. With be: I want to be pulled, It's going to be locked.
8			A. have/had been + verb + ing B. modal + have + verb + en: may have eaten C. modal + be + verb + ing: could be playing D. Other auxiliary combinations: should have been sleeping.	Gerund: Swinging is fun. I like fishing. He staring laughing.

Developmental Sentence Analysis: A Grammatical Assessment Procedure for Speech and Language Clinicians  
*Reprinted from Laura Lee (1974)*

Score	Negatives	Conjunctions	Interrogative Reversals	Wh-Questions
1	it, this, that + copula or auxiliary is, 's, + not: It's not mine., This is not a dog., That is not moving.		Reversal of copula: Isn't it red? Were they there?	
2				A. who, what, what + noun: Who am I? What is he eating? What book are you reading? B. where, how many, how much, what...do, what...for: Where did it go? How much do you want? What is he doing? What is a hammer for?
3		and		
4	can't, don't		Reversal of auxiliary be: Is he coming? Isn't he coming? Was he going?	
5	isn't, won't	A. but B. so, and so, so that C. or, it		When, how, how + adjective: When shall I come? How do you do it? How big is it?
6		because	A. Obligatory do, does, did: Do they run? Does it bite? Didn't it hurt? B. Reversal of modal: Can you play? Won't it hurt? Shall I sit down? C. Tag question: It's fun isn't it? It isn't fun, is it?	
7	All other negatives: A. Uncontracted negatives: I can not go. He has not gone. B. Pronoun-auxiliary or pronoun-copula contraction: I'm not coming. He's not here. C. Auxiliary-negative or copula-negative contraction: He wasn't going, He hasn't been seen, It couldn't be mine, They aren't big.			Why, what if, how come, how about + gerund: Why are you crying? What if I won't do it? How come he is crying? How about coming with me?
8		A. where, when, how, while, whether (or not), til, until, unless, since, before, after, for, as, as + adjective + as, as if, like, that, than: I know where you are, Don't come til I call. B. Obligatory deletions: I run faster than you [run], I'm as big as a man [is big], It looks like a dog [looks]. C. Elliptical deletions (score 0): That's why [I took it], I know how [I can do it]. D. Wh-words + infinitive: I know how to do it. I know where to go.	A. Reversal of auxiliary have: Has he seen you? B. Reversal with two or three auxiliaries: Has he been eating? Couldn't he have waited? Could he have been crying? Wouldn't he have been going?	Whose, which, which + noun: Whose car is that? Which book do you want?

# We can assist in moving kids through the NLA stages by...

1

Naturally modelling the stage that they are in/working towards

2

Not expecting or forcing a certain answer (it may become 'stuck' as a script and will not help in creating flexible, self-generated language)

3

Focusing on declarative language first

4

Including gestalts on AAC devices

# Adapting AAC *for* GLPs

*Things to consider when adding gestalts to AAC systems:*

Is the language meaningful/important to the user?

Are the gestalts needed for advocacy/safety (e.g., "I'm finished," "my name is ...")?

Will the auditory output be synthesized speech, recorded speech, original audio?

Do the gestalts interfere with the system's set up/motor plan?

Is the language easily mitigable and versatile?

Are there gestalts for a variety of communicative functions (e.g., self advocacy, repairing communication breakdowns, protesting, etc.)?

*Credit: Meaningful Speech (AAC for Gestalt Language Processors Course)*

# Key Takeaways

1

Echolalia is meaningful and children are communicating with it!

2

Gestalt language processing is another natural way of processing language and is supported by evidence.

3

Natural Language Acquisition (NLA) is the process by which GLPs move from delayed echolalia to self-generated language.



# Further Reading

## NLA Courses:

1. <https://naturalcommunication.net/>
2. <https://www.meaningfulspeech.com/>
3. <https://www.northernspeech.com/echolalia-autism/natural-language-acquisition-in-autism-echolalia-to-self-generated-language-level-1/>

## Web Resources:

1. <https://communicationdevelopmentcenter.com/>
2. <https://www.haepislp.ca/>
3. <https://www.instagram.com/haepislp/>



# Resources

1. Blanc, M. (2012). Natural language acquisition on the autism spectrum: The journey from echolalia to self-generated language. Madison, WI: Communication Development Center.
2. Lee, L. L. (1970). Developmental Sentence Scoring: A Method of Quantifying the Development of Syntax and Morphology in Children's Language. Final Report.
3. Peters, A. M. (1977). Language learning strategies: does the whole equal the sum of the parts?. *Language*, 560-573.
4. Peters, A. M. (1983/2021). The units of language acquisition (Vol. 1). CUP Archive.
5. Prizant, B. M. (1983). Language acquisition and communicative behavior in autism: Toward an understanding of the "whole" of it. *Journal of speech and hearing disorders*, 48(3), 296-307.
6. Prizant, B. M., & Duchan, J. F. (1981). The functions of immediate echolalia in autistic children. *Journal of speech and hearing disorders*, 46(3), 241-249.
7. Prizant, B. M., & Rydell, P. J. (1984). Analysis of functions of delayed echolalia in autistic children. *Journal of Speech, Language, and Hearing Research*, 27(2), 183-192.
8. Wetherby, Amy M (1992). *Communication and Intervention for Preschool Children*. Buffalo, NY: Educom Associates Inc.