

Introduction and Developmental Stages

Meet the Expert: Oriana



Oriana

Oriana: Graham Paine (1999). Milton Champion.

Language Acquisition Stages

- Pre-Natal
- 0 – 2 months
- 2 – 5 months
- 4 – 7 months
- 6 – 12 months
- 9 – 18 months
- 18 – 72 months

standard categories



Hand: Noedelhap/iStock/Thinkstock; Baby: Logendra Naidoo "Tristan on the Scanner".

Language Acquisition Stages

- Pre-Natal
- 0 – 2 months
reflexive, vegetative
- 2 – 5 months
responsive cooing, laughing
- 4 – 7 months
babbling
- 6 – 12 months
reduplicative babbling
- 9 – 18 months
non-reduplicative babbling
- 18 – 72 months
all hell breaks loose



Hand: Noedelhap/iStock/Thinkstock; Baby: Logendra Naidoo "Tristan on the Scanner".

Prenatal to 7 Months

Pre-Natal

Native language discrimination.

0 – 5 months

Migration from expressive (indexical) noises.

↓
to communicative noises

↓

to vocal play

4 – 7 Months

A wide range of noises narrows down toward community speech sounds (phones).

Start off making all possible speech sounds



6 to 12 Months

Reduplicative Babbling

- Mama, gaga, baba
- Phonological practice, rather than communication.
Communicative intent?
- Increased control over articulators



Hand: Noedelhap/iStock/Thinkstock; Baby: Bullet_Chained/iStock/Thinkstock

9 to 18 Months

Non-Reduplicative Babbling

- Intonation and stress patterns of language.
- Sounds like Language X.
 - X = Swedish, Hindi, Basque, ...
 - Just more sophisticated practicing.
- Overlaps with word development and communicative intent.
- “Expressive jargon”



Oriana: Randy Harris

9 to 18 Months

Non-Reduplicative Babbling

Proto-words (Galen, 15 mo.)

Word	Pronunciation	Context
doh-eeee!	doo?iiiijj	Said with complete glee and concluding with a high-pitched squeal in response to a favoured, but until-recently-absent, object. It appeared to mean something like “I can’t wait to get my hands on this favoured object which has been missing from my life lo these many momentss.” Since favoured objects often included such things as toilet paper to run off with, chairs to climb on, and other parentally discouraged items, he soon became more circumspect in his use of this expression.

9 to 18 Months

Non-Reduplicative Babbling

Proto-words (Galen, 15 mo.)

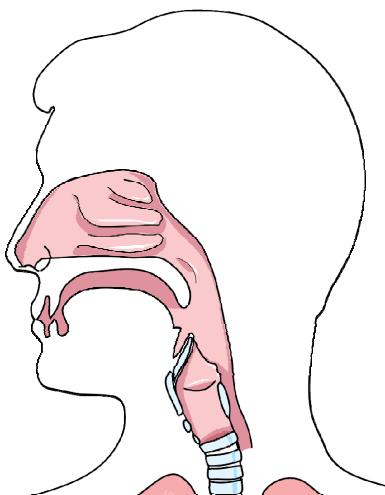
Word	Pronunciation	Context
thpthpthp	θpθpθpθp	Said with such conviction while pointing at various objects, forehead intensely puckered, or in private discussions with Doug or Teddy or big
beja-beja	bedʒbeʒ	Bird, that his father came to believe Galen was
beja-bwa	bedʒʌbwə	learning Urdu or Klingon or Hittite on the side, perhaps all three, and was probably teach them to his stuffed animals.
may-uh!	meʌ	
chebwe	tʃɛbwɪ	
moa	moʌ	
dubba-dubba	dəbədəbə	

Phoneme Acquisition

Cardinal Consonants and Vowels

Babbling

- The cardinal stops:
 - p b m
 - t d n
 - k g
- The cardinal vowels:
 - i
 - ə ʌ
 - u

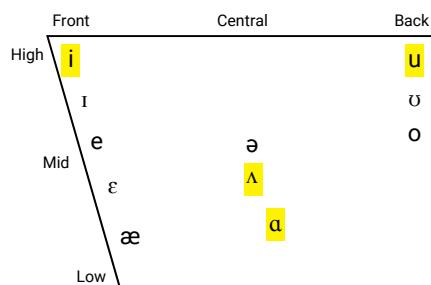


Hand: Noedelhap/Stock/Thinkstock; Side of Head: LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998.

Cardinal Consonants and Vowels

Babbling

- The cardinal stops:
 - p b m
 - t d n
 - k g
- The cardinal vowels:
 - i
 - ʌ ʌ
 - u
- Other sounds:
 - s h w j
- Rare and/or late:
 - f v θ ð ʃ tʃ dʒ l r ɳ



Hand: Noedelhap/iStock/Thinkstock; Side of Head: LifeArt Super Anatomy Collections 1-9. Williams & Wilkins 1998.

Consonant Progression

stops → fricatives → glides → liquids → affricates

Hand: Noedelhap/iStock/Thinkstock

Consonant Progression

She can say:

- Oriana: [ɔri'ʃna]
↑
pronounces this phoneme clearly
- Car: [kaw]
- Truck: [twʌks]

What do people drive in?



kawz and twʌks

stops → fricatives → glides → liquids → affricates

Hand: Noedelhap/iStock/Thinkstock; Oriana and Randy: University of Waterloo

Consonant Progression

Consonant Cluster Aversion

- Drop most problematic consonant
 - fricatives
 - liquids
 - nasals
- Use easiest consonant
 - stops



Baby: Bullet_Chained/iStock/Thinkstock

Substitutions

stops → fricatives → glides → liquids → affricates

fricatives

liquids

nasals



Hand: Noedelhap/iStock/Thinkstock; Baby: Bullet_Chained/iStock/Thinkstock

Substitutions

- Proto-words (Galen, 15 mo.)

Word	Pronunciation	Context
oh-hoh	o?ho	said when something mysterious happened
fffff	fffff	said when food needed cooling
ow!	auw	said when his anatomy encountered hard objects
whoosh!	wʌʃ	said when sneezes and flushing toilets
Oh?	?o	said when humouring parents
num-num	nʌm nʌm	said of gastronomic pleasure
thank-you	ʌm	said in receipt of object
Uh-huh	ʌhʌ	said in bored agreement
wow!	wauw	said in appreciation of the wonders of the universe

Suprasegmentals and Iconicity

- He's b-a-a-A-A-A-a-a-d, papa. That beetle's b-a-a-A-A-A-a-a-d! (23 mo.)
- I want to go outs-i-i-i-l-l-i-i-i-de! (22 – 25 mo.)
- I want Strawbe-e-e-e-E-E-E-e-e-e-ries! (24 mo.)
- No-o-o-O-O-o-o-o! (a lot, c20 – 26 mo.)
- DeedeedeadeededeadeededeetABLE (22 mo.)
- L-I-l-et's go outside (24 mo.)

Indexical: In the sense that intonation patterning is caused by emotional state

Iconic: In the sense that intonation is exaggerated to convey emotional state

Lexical and Morphological Acquisition

Kids Are Highly-Motivated Lexical Acquisitionists

The Poverty of Stimulus

- Kids get degenerate input:
 - false starts
 - strange intonations
 - don't get corrected often
- Effectively, they don't get the right stimulus.
- So, they must have some internal mechanism that disposes them for language.



Galen, 27 mo.

Galen: Randy Harris

Kids Are Highly-Motivated Lexical Acquisitionists

The Poverty of Stimulus

- Kids get degenerate input:
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- Effectively, they don't get the right stimulus.
- So, they must have some internal mechanism that disposes them for language.

And you brought GARBAGE BAGS! GREEN ONES! These are BIG GREEN GARBAGE BAGS! And LIGHTBULBS!



Galen, 27 mo.

Galen: Randy Harris

Proto-Words: Semantically Meaningful Utterances?

Proto-words (Oriana, 16 mo.)

Word	Pronunciation	Context
negative	nej, now, mm	said when declining; often accompanied by, or substituted with, vigorous head shaking
affirmative	mmmm	said when accepting; sometimes accompanied with one, slight, upward jerk of the head
gone	ga	said when something is gone
uh-oh	ʌ?ɔ:w	said when something is unaccountable assaulted by gravity
get-your-ass-in-gear	ʌ?ʌ?ʌ?ʌ?	said when something is desperately required (being carried; getting out of the crib; getting lifted over a barrier)
there you are	ejʌa	said during exchanges of objects

Proto-Words: Semantically Meaningful Utterances?

Oriana: Randy Harris

Pardon me?

dudawa dej
ʌtʌ dudijdij

dudawa dej
ʌtʌ dudijdij

Proto-Words: Semantically Meaningful Utterances?

Oriana: Randy Harris

Is that right?

ʌwʌ ʌm wapʌ
wapʌ

mm hmm

First Words Serve in a Range of Functional Roles

Words (Galen, 15 mo.)

Word	Pronunciation	Accompaniment/Substitute
cat	tæt	"mrroww"
cow	tao	"mooo"
lamb	læm	"baaa"
monkey	mənti	"eh-eh-eh-eh"
duck	dʌt	a trilled, lateral, tongue, against- inner-cheeks flapping
whale	wejʌ	
lion	lajn	
bird	br	none
bear	be	(non-totemic)
yak	jæt	
owl	auw	
otter	ata	

Hand: Noedelhap/iStock/Thinkstock

First Words Serve in a Range of Functional Roles

Words (15 – 17 mo.)

- mostly "nouns"
- some "verbs"
- a few "prepositions"
- a few "adjectives"
- some "greetings"

Word

chair	button
man	train
truck	pizza
hat	fan
horn	light
vegetables	bath
night-time	diaper
baby	hospital
medicine	paper
shampoo	submarine
belt
watch	
mail	
sleep	

First Words Serve in a Range of Functional Roles

Conversing with Oriana (14 mo.)

Oriana: bapa! bapa!

IR: Yes, Oriana?

Oriana: wu baktijn matsa mowΛ

IR: Juice?

Oriana: gjij (affirmative intonation, nod)

Oriana: bapa! bapa!

IR: Yes, Oriana?

Oriana: hæmij wu tə wu

IR: Juice?

Oriana: wu (affirmative intonation, nod)



Hand: Noedelhap/iStock/Thinkstock; Oriana: Randy Harris

Early Morphological Processes

Well, papa.

I don't want you to do no
more jokeness.

You did jokeness. Why did
you do that? That jokeness.



Oriana: Randy Harris

Early Morphological Processes



Those are ambulances, Papa: ambulanc~~E~~S! (21 mo.)
I'm digest~~ING~~ my penne, mommy. Digest~~ING~~. (28 mo.)
Wol~~F~~S, papa, wol~~F~~S. Not wol~~V~~E~~S~~, wol~~F~~S. (28 mo.)
I'm up-pleased. (c 27 – 29 mo.)
I need a ball to tennis. (26 mo; upon picking up a tennis racket)
What's it for tanking? (27 mo; of a tanker truck)
This is an other-nose, and this is an other-nose. (pointing to nostrils, 28 mo.)

Galen: Randy Harris

Syntactic and Semantic Acquisition

Formulaic Nature of Early Syntactic Acquisitions

Syntax is usually picked up in terms of patterns in which something is inserted.

Taxi – Jim Ignatowski:

burned out acid head

I'm insert name here, but you can call me nickname.



Paramount Television (1978) "Taxi" Christopher Lloyd, Judd Hirsch C. 1978". Retrieved from http://www.imdb.com/media/rm1346803712/ch0035982?ref_=chmd_md_pv#.

Formulaic Nature of Early Syntactic Acquisitions

Syntax (Galen)

Sentences	Period	Context
Hellooo X!	c17 mo.	Hellooo Papa! Hellooo cat! Hellooo pitzy truck! said to everybody and everything, with devout conviction that an answer would come back.
More X!	c17 mo.	More books! More banana! More sticks! ...
Want some juice now, for Galen.	19 mo.	
Go! Go! Go!	c18 mo.	said while running full tilt in no specific direction
Let's go!	c18 mo.	said just before running full tilt in no specific direction
Run! Run! Run!	c18 mo.	see "Go! Go! Go!"
I'll take it!	c19 mo.	of anything that took his fancy
Must take it!	c20 mo.	this one often had a noun in place of the pronoun, as in "must take tractor!"
Go this way!	18 – 22 mo.	Let's go this way! said, usually in the car but sometimes when being carried, while pointing in any direction you're not going
Maybe X!	19 mo.	Maybe sit down! Maybe read a book! Maybe sit down right here!

Formulaic Nature of Early Syntactic Acquisitions

Syntax (Oriana)

Sentences	Period	Context
I want some pineapple	13 mo.	a telephone conversation-game, after "tell them what you want"
Papa! It banged it!	14 mo.	after her head collided with the table
That is supper! That there!	15 mo.	she wanted toast; I was providing soup

Formulaic Nature of Early Syntactic Acquisitions

Galen's first passive constituent-question (27 mo.)

Galen: What are they doing there? (He had seen some potato chips in a store)

IR: Waiting to be bought and eaten, I guess.

Galen: What are they going to be eaten for ... with ...

What are they going to be eaten for ... by ...

Who are they going to be eaten by?

child treats both as agents
The car hits the truck.
(agent) (patient)
The car was hit by the truck.
(patient) (agent)



Child: lenm/iStock/Getty Images; Car, Truck: Kolopach/iStock/Getty Images

Interpreting Semantic Intent

You've got a freckle.



What's a freckle called?

No.
What are freckles called?

No, don't jump at me. I'm a bit sore today.



I don't want you to be sore. I want you to be clean. I want you to be clean in your diaphragm.

Oriana, Galen: Randy Harris



Kids' Philosophy of Language

Language as a System of Functional Resources

Early conceptions regarding the power of language.

Oriana

- 19 mo.
Hello cat. I'm fine. I'm fine. You're fine.
- 26 mo.
No! Don't say that! Don't say it, Papa!
- 32 mo.
Don't blow! Wind! Don't blow!

Galen

- 27 mo.
Don't be noisy, wind! I'm talking, wind! Don't be noisy! That's rude!
Don't be rude, wind!
- 28 mo.
I'm pretending you didn't tell me that. You pretend too, Papa!

Language as a System of Functional Resources

Galen

(27 mo): I want some salt, please, Mommie.

M: Just a minute, Darlo.

Galen: Some salt please, Mommie.

M: ... no response ...

Galen: Some of that white stuff there.



Galen: Randy Harris

Review

Language Acquisition Stages Review

Pre-natal
0 – 2 mo.
reflexive, vegetative
2 – 5 mo.
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4 – 7 mo.
babbling
6 – 12 mo.
reduplicative babbling
9 – 18 mo.
non-reduplicative babbling
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all hell breaks loose

Phoneme acquisition
Lexical acquisition
Morphological acquisition
Syntactic acquisition

Hand: Noedelhap/iStock/Thinkstock

Review

L1 Acquisition

- stages:
 - prenatal learning – syntactic acquisition
- phonology:
 - cardinal consonants & vowels
 - consonant progression
 - substitutions
- lexical acquisition:
 - responsive cooing – “noun” gathering
- kids’ philosophy of language:
 - power and omnipresence of language



Galen, Oriana: Randy Harris

Review



Oriana: Randy Harris; Toy Dinosaur:TopVectors/iStock/GettyImages;