Ling 51/Psych 56L:
Acquisition of Language

Lecture 1

Introduction

Administrivia

Instructor:

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Office Hours: Thursdays 12:00pm-1:00pm in SBSG 2314

Administrivia

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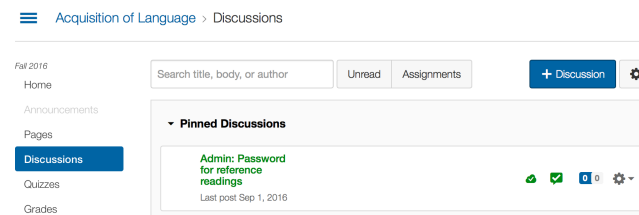# Administrivia

Message board (accessible via the website and EEE-Canvas)

https://canvas.eee.uci.edu/courses/2277/discussion_topics

Used to facilitate communication about the course administrivia and content. **Please go there first** to see if someone has already asked your question before emailing the TAs or instructor. It may be that your question is already answered there, and this will allow you to get a quicker response to your question.
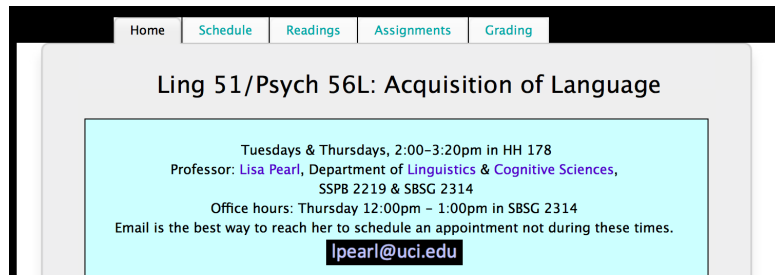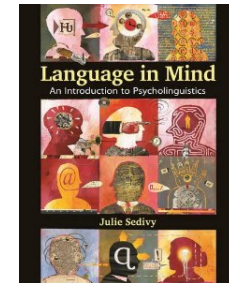
Administrivia

Class web page:

http://www.socsci.uci.edu/~lpearl/courses/acqoflang1_2016fall/index.html

Accessible from EEE, as well. Contains overview, schedule, readings, course assignment descriptions, and grading policies.

Home	Schedule	Readings	Assignments	Grading

Ling 51/Psych 56L: Acquisition of Language

Tuesdays & Thursdays, 2:00–3:20pm in HH 178
Professor: Lisa Pearl, Department of Linguistics & Cognitive Sciences,
SSPB 2219 & SBSG 2314
Office hours: Thursday 12:00pm – 1:00pm in SBSG 2314
Email is the best way to reach her to schedule an appointment not during these times.

lpearl@uci.edu

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Reference readings will primarily be from "Language in Mind" by Julie Sedivy

along with a few other book excerpts, articles, and video links:

Date	Topic	Notices & Assignments	Reference Material
9/22/16	**Introduction to Language Acquisition** *Podcasts* (1) Grammar (2) Learning by correction	Review questions available for intro HW1 available	• The Linguistic Genius of Babies, up through 10:07 • LingSpace: Grammatical conservatism • Sedivy 2014: pp.105–107 (acquisition intro) • Prescriptive & descriptive grammar • LingSpace: Prescriptive & descriptive grammar (youtube) • Common prescriptive grammar myths • LingSpace: Explicit corrections, recasts, &

Administrivia

Some reference readings (usually articles) will require a username and password to access.

Username = langacq
Password = models

Authentication Required

Enter username and password for "Linguistics Readings" at http://www.socsci.uci.edu

User Name:
langacq

Password:
******

Administrivia

Assignments

Homework:

Several throughout the quarter, available through EEE-Canvas as untimed "Quizzes". Collaboration is allowed and **highly encouraged**. In fact, take a minute to introduce yourself to some people around you who might **form a homework/study group** with. You may turn in one assignment per group of collaborators – just make sure the names and student IDs of all the collaborators are included in it.
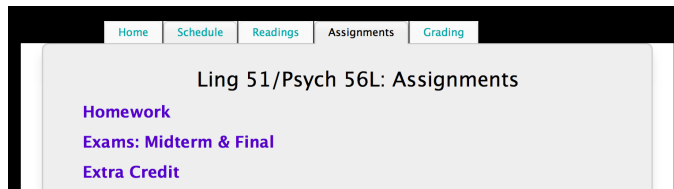
Review questions are also available for each topic, but you are not required to do them. They are just there to help you review the material (and are a great way to study for exams).

Administrivia

Homework:

 Late homework will be accepted according to the late policy listed in the assignments section on the class webpage. If you cannot turn in the homework on time, take advantage of the policy to get some credit for your assignment. Seriously.

| Home | Schedule | Readings | Assignments | Grading |

Ling 51/Psych 56L: Assignments

Homework

Exams: Midterm & Final

Extra Credit

Administrivia

Exams

Midterm exam:

 There will be an online midterm exam on 10/27/16, available through EEE-Canvas. It will cover the material in weeks 1-4. Review questions will be available for each topic covered in class, and there will be a midterm review in class 10/25/16. Midterm exam questions will come from the homeworks and the review questions.

The midterm exam will be open-note, but non-collaborative.

If you are found collaborating with other classmates during the midterm exam, you will receive a 0.

For details of the online exam policy and procedure, see the course webpage. We will also go over these during the midterm review.

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Exams

Final exam:

 There will be an online final exam on 12/8/16, available through EEE-Canvas. It will cover the material in weeks 1-10, with a strong focus on the material in weeks 6 - 10. Review questions will be available for each topic covered in class, and there will be a final exam review in class on 12/1/16. Exam questions will come from the homeworks and the review questions.

The final exam will be open-note, but non-collaborative.

If you are found collaborating with other classmates during the final exam, you will receive a 0.

For details of the online exam policy and procedure, see the course webpage. We will also go over these during the final review.

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Grades

 Homework: 50%

 Midterm Exam: 20%

 Final Exam: 30%

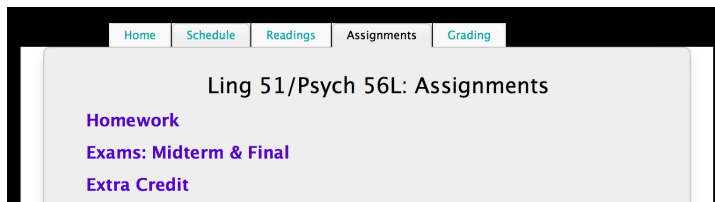Your grades will be determined by *approximately* this scale:

96.50-100.00: A+	83.50-86.49: B…
93.50-96.49: A	80.00-83.49: B-
90.00-93.49: A-	76.50-79.99: C+
86.50-89.99: B+	73.50-76.49: C

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You can earn up to 3 percentage points of extra credit two ways. (See the class web page under the "assignments" tab for more details.)

(1)   Participate as a human subject in a language science experiment webgame (30 items = half a percentage point).

(2)   Participate as a human subject in social science experiments for up to 3 hours (half an hour = half a percentage point).

Home	Schedule	Readings	Assignments	Grading

Ling 51/Psych 56L: Assignments

Homework

Exams: Midterm & Final

Extra Credit

Administrivia

Schedule

"This is our wonderful schedule. We usually keep to it, but it is subject to modification."

Topics:

Intro to Language Acquisition	(09/22 – 09/27)	[2]
Biological Bases of Language	(09/29 – 10/06)	[3]
Sounds	(10/13 – 10/20)	[3]
Words	(11/01 – 11/08)	[3]
Sentences	(11/10 – 11/17)	[3]
Language & Cognition	(11/22)	[1]
Language in Special Populations	(11/29)	[1]

What is language?

A language is a system of signals, such as voice sounds, gestures or written symbols, that encode or decode information.

Human languages are usually referred to as natural languages, and the science of studying them is linguistics.

The term "animal languages" is often used for non-human languages. Most researchers agree that these are not as complex or expressive as human language; they may better be described as animal communication. Some researchers argue that there are significant differences separating human language from the communication of other animals, and that the underlying principles are unrelated.

Knowledge of language

It's so natural for us to produce and comprehend language that we often don't think about what an accomplishment this is.

Or how we learned language
in the first place.

Babies are amazing at learning language

http://www.qwantz.com/index.php?comic=2479

"The Linguistic Genius of Babies"

(up through 10:07, but especially through 7:55)

About language

Language is a complex system of knowledge that all children learn by listening to native speakers in their surrounding environment.

It includes sound structure, word structure, word meaning, sentence structure, mapping from sentence structure to meaning, unspoken rules of conversation…

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Stress pattern → go blins

Individual sounds (in IPA) → g a b l ɪ n z

About language

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goblin (plural) = goblin + s

go blins

g a b l ɪ n z

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goblins

goblin (plural) = goblin + s

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About language

Language is a complex system of knowledge that all children learn by listening to native speakers in their surrounding environment.

Goblins like children.

It includes sound structure, word structure, word meaning, sentence structure, mapping from sentence structure to meaning, unspoken rules of conversation…

goblins

goblin (plural) = goblin + s

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g a b l ɪ n z

About language

Language is a complex system of knowledge that all children learn by listening to native speakers in their surrounding environment.

Don't goblins like children?

Goblins like children.

It includes sound structure, word structure, word meaning, sentence structure, mapping from sentence structure to meaning, unspoken rules of conversation…

goblins

goblin (plural) = goblin + s

go blins

g a b l ɪ n z

Some terminology

Phonology: sounds and sound system of the language

g a b l ɪ n z   go blins

Lexicon & Lexical Semantics: Words and associated knowledge (word forms, word meanings, etc.)

goblins =

(not koblins)

Morphology: system for combining units of meaning together

(goblin + [plural] = goblins)

Some terminology

Syntax: system for combining words into sentences

Goblins like children.

Pragmatics: knowledge of language use

Don't goblins like children? = surprise if the answer is 'no'
(expectation is that the answer is 'yes')
Use this question format to show expectation of a 'yes' answer.

Another example: "Do you want cake or ice cream?"
Expected: "Cake", "Ice cream"
Weird answer: "Yes"

Kids do amazing things

Much of the linguistic system is already known by age 3.

…when kids can't tie their own shoes or reliably recognize "4".

What kids are doing: extracting patterns and making generalizations from the surrounding data mostly without explicit instruction.

Terminology: Patterns or "rules" of language = grammar

How do we know they're not only imitating or being taught?

Imitation certainly *is* useful for learning some aspects of language, such as learning that the sequence of sounds "*cat*" refers to a furry, purring pet.

However, children can't learn how to understand and produce full sentences by imitating what they hear and repeating it word for word.

Why not?

One reason: Most sentences are novel – you understand and produce them on the fly, and may never have heard them before.

How do we know they're not only imitating or being taught?

Also, it turns out that children are bad at imitating sentences where they don't know some of the words (so how could they learn those words by imitating them?):

"The cat is hungry" becomes "Cat hungry."
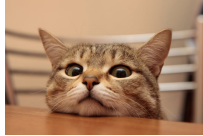
In addition, children don't often repeat word-for-word what adults around them say.

How do we know they're not only imitating or being taught?

(From Martin Braine)

Child: Want other one spoon, Daddy.
Father: You mean, you want the other spoon.
Child: Yes, I want other one spoon, please Daddy.
Father: Can you say "the other spoon"?
Child: Other…one…spoon.
Father: Say "other".
Child: Other.
Father: "Spoon."
Child: Spoon.
Father: "Other spoon."
Child: Other…spoon. Now give me other one spoon?

More imitation problems

https://www.youtube.com/watch?v=a7Un06tDOn0&feature=youtu.be
5:31-6:27

How do we know they're not only imitating or being taught?

It's also unlikely children learn by being explicitly taught. This is because once we go beyond the most superficial things (like "cat" is a furry, purring pet), most of our knowledge is subconscious. We know it – but we don't know *how* we know it or why it's so.

Knowledge of language & hidden rules

Some examples from language:

You know that…

…*strimp* is a possible word of English, while *stvimp* isn't.

Knowledge of language & hidden rules

Some examples from language:

You know that…

…to ask about "someone" in the sentence
"You think that [someone] did it",
you can't ask it this way:

"Who do you think that did it?" ☹

(Instead: "Who do you think did it?") ☺

Knowledge of language & hidden rules

Some examples from language:

You know that…

…In "She ate the peach while Sarah was reading", *she* ≠*Sarah*

but *she* can be *Sarah* in all of these:

Sarah ate the peach while she was reading.
While she was reading, Sarah ate the peach.
While Sarah was reading, she ate the peach.

Knowledge of language & hidden rules

Some examples from language:

You know that…

…the 's' in 'cats' sounds different from the 's' in goblins

Knowledge of language & hidden rules

Some examples from language:

You know that…

… contracted forms like "wanna" and "gonna" can't always replace their respective full forms "want to" and "going to".

You get to choose who you will rescue.
"Who do you want to rescue?"
"Who do you wanna rescue?"

Knowledge of language & hidden rules

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You get to choose who you will rescue.
"Who do you want to rescue?"
"Who do you wanna rescue?"

You get to choose who will do the rescuing.
"Who do you want to do the rescuing?"
* "Who do you wanna do the rescuing?"

Knowledge of language & hidden rules

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Knowledge of language & hidden rules

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You get to choose who you will rescue.
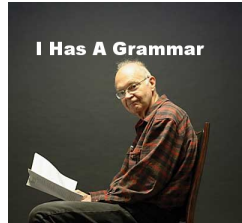"Who are you going to rescue?"
"Who are you gonna   rescue?"

"I'm going to the witch's lair to rescue her."
* "I'm gonna   the witch's lair to rescue her."

What's being learned:

Patterns or "rules" of language = grammar

A distinction:
prescriptive vs. descriptive grammar rules

Prescriptive: what you have to be taught in school, what is prescribed by some higher "authority". You don't learn this just by listening to native speakers talk.

"Don't end a sentence with a preposition."
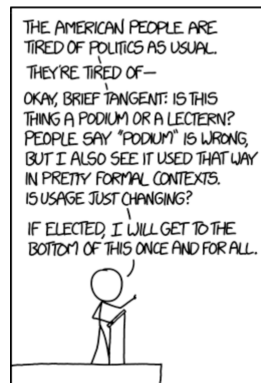" 'Ain't' is not a word."

A distinction:
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Word choice:
lectern vs. podium

"People say 'podium' is wrong…"

http://xkcd.com/1661/

A distinction:
prescriptive vs. descriptive grammar rules

Prescriptive: what you have to be taught in school, what is prescribed by some higher "authority". You don't learn this just by listening to native speakers talk.

Some of the grammar rules you learned in school could be messing up your writing. Flickr / Patrick Gage Kelley

http://www.businessinsider.com/harvard-steven-pinker-debunks-10-grammar-myths-2015-8

A distinction:
prescriptive vs. descriptive grammar rules

Descriptive: what you pick up from being a native speaker of the language, how people actually speak in their day-to-day interactions. You don't have to be explicitly taught to follow these rules.
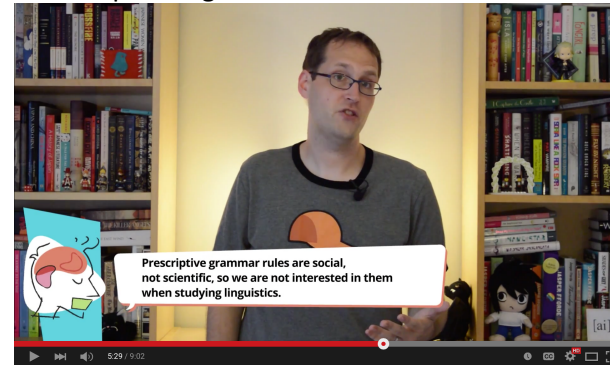
The dwarf is who Sarah first talked *with*.

"You're horrible!" "No, I *ain't* - I'm Hoggle!"

A distinction:
prescriptive vs. descriptive grammar rules

The LingSpace: Word Crimes & Misdemeanors
~0.26 up through ~8:26

Prescriptive grammar rules are social, not scientific, so we are not interested in them when studying linguistics.

http://www.thelingspace.com/episode-3 (+ commentary)
https://www.youtube.com/watch?t=85&v=eFlBwBwL_iU

In a nutshell:
prescriptive vs. descriptive grammar rules

Prescriptivism: You can't say that!

Descriptivism: Can you say that!?
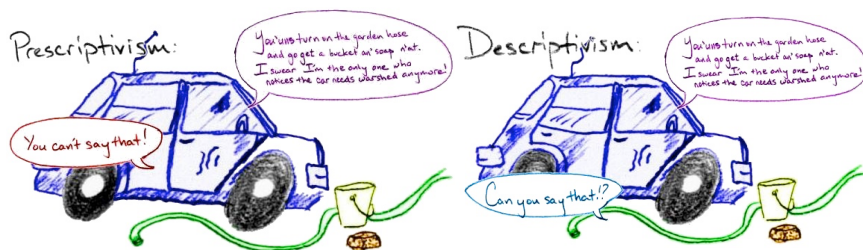
"You can't say that!"   vs.   "Can you say that!?"

http://specgram.com/CLIV.3/04.phlogiston.cartoon.xi.html

What about learning by explicit correction?

Even if the knowledge is subconscious, couldn't parents teach children these rules of language by explicitly correcting them when they say something wrong?

What about learning by explicit correction?

Even if the knowledge is subconscious, couldn't parents teach children these rules of language by explicitly correcting them when they say something wrong?

The problem: parents don't correct their children that often about the form of the language. Instead, they tend to correct when the meaning is incorrect.

Child: "Her curl my hair."
Parent: "Uh huh."

Child: "There's an animal farmhouse."
Parent: "No, that's a lighthouse."

Explicit correction problems

1:33-4:33

What about learning by implicit correction?

Parents may provide implicit correction by offering alternative language forms when a child has said something incorrect. In effect, the parents provide a good example of language use for children without explicitly correcting them. This is called a recast.

Child: The dog runned really fast, Daddy.
Parent: Yeah, he ran really fast, didn't he?

Recasts?

4:33-5:31

What about learning by implicit correction?

However, parents don't provide recasts all the time or all that consistently. One study looking at interactions between 2-year-olds and their mothers showed that they only made recasts after 26.3% of incorrect sentences. The rest of the time, they didn't bother.

Also, sometimes parents will repeat children's incorrect utterances if they agree with the meaning of them! This would seem to reinforce the incorrect language usage.

Child: Read book.

Mother: Alright, you read book.

(instead of *read the book*)

What about learning by implicit correction?

Still, recasts can be very helpful when they offer a direct and immediate contrast between the child's way of saying something and the correct way. Saxton et al. (1998) found that children learned more quickly when they were given recasts.

Taumoepeau 2016: The percentage of utterances caretakers expanded (and recast) when their children were between the ages of 24 and 33 months had a strong impact on children's vocabulary development.

Recasts may help speed up learning, but probably aren't responsible for learning all knowledge about language.

Why study language development?

The big picture, theoretically speaking:

"The study of language acquisition still plays a central role in the debate over how to characterize human cognition, for the same reason that language acquisition played a central role in the cognitive revolution. That is, it is so difficult to explain how language acquisition is possible that accounting for language acquisition is a test not likely to be passed by inaccurate cognitive theories." – Hoff (2008), p.8

Why study language development?

More on the big picture:

"…there is the challenge of explaining why language has the particular properties that it does (the problem of language design) and how those properties emerge so reliably in the course of early childhood (the problem of language acquisition). It is the search for answers to these two problems that makes work in linguistics central to the larger enterprise of cognitive science." – O'Grady (2012)

Why study language development?

More practically speaking, applications of language development research:

(1) Understanding how normal language development proceeds so that we can help children who have problems with their language development (language pathology)

(2) Understanding how learning more than one language works, and how to best teach children who are learning multiple languages simultaneously (language pedagogy)

The interaction of theory & practice

These two areas aren't always separate - insights from one can help understanding in the other.

Example: Research on children with autism (Tager-Flusberg, 1994, 2007)

Autistic children have severe communicative deficiencies. However, they still acquire language structure.
Implication: Learning language involves more than learning how to fulfill a need to communicate.

What this means: applied language development research influences understanding of the process of language development

Recap: Big picture

Knowledge of language includes knowledge of many different systems.

Our language knowledge consists of many implicit rules (which we call a grammar), which means we probably can't explicitly teach children these rules.

In language acquisition, we care about the acquisition of descriptive rather than prescriptive rules of grammar.

Children do get some help on what the correct forms are by listening to recasts in the input.

Studying language development can help us understand cognition in general, as well as issues in language pathology and language pedagogy.

Questions?

Start looking over the review questions and HW1 (due 9/29/16). You should be able to do up through 7 on the introductory review questions and up through 5 on HW1.

Extra material

A little more about pragmatics

http://www.ted.com/talks/steven_pinker_on_language_and_thought.html
10:34-11:38 = indirect speech acts
14:14-15:22 = unspoken rules about literal vs. inferred meaning

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A little more about pragmatics:
Rules of conversation

LingSpace: Pragmatics & Gricean Maxims
https://www.youtube.com/watch?v=rzxyjFHh-y8
http://www.thelingspace.com/episode-2 (with commentary)

Possible objections to
a mental rule set

"Why should I believe I store a set of rules unconsciously in my mind? I just understand sentences because they make sense."

Possible objections to
a mental rule set

"Why should I believe I store a set of rules unconsciously in my mind? I just understand sentences because they make sense."

But why do some sentences make sense and others don't?

Hoggle has two jewels.
*Two Hoggle jewels has.

Possible objections to
a mental rule set

Why can we recognize patterns even when some of the words are unknown?

'Twas brillig, and the slithy toves
did gyre and gimble in the wabe...

Possible objections to
an unconscious rule set

"When I talk, the talk just comes out - I'm not consulting any rule set."

Possible objections to
an unconscious rule set

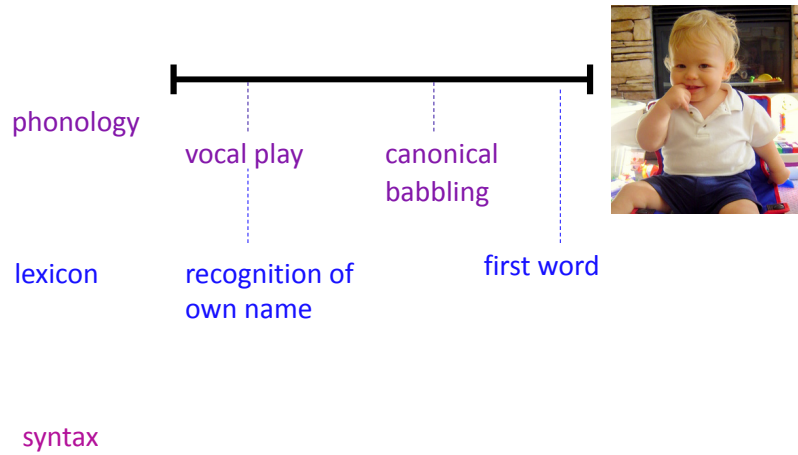"When I talk, the talk just comes out - I'm not consulting any rule set."

Analogy: wiggling your fingers

When you want to wiggle your fingers, you "just wiggle them".

But your finger-wiggling intention was turned into commands sent by your brain to your muscles, and you're never conscious of the process unless something interferes with it. Nonetheless, there *is* a process, even if you're not aware of it.

Timeline of Language Development: Year 1

phonology

vocal play   canonical
              babbling

lexicon   recognition of   first word
           own name

syntax

Timeline of Language Development: Year 2

phonology

reorganization
& consolidation of sound system

lexicon   50 word productive vocabulary

vocabulary "spurt"

syntax   first word combinations

Timeline of Language Development: Year 3-3.5

phonology

lexicon   500 word productive vocabulary

increasing length of word combinations
adding grammatical morphemes
complex multi-clause utterances
negatives and questions

syntax