

Language Acquisition ~ Introduction

Basic Contours of the Emergence of Language

In the new, four-volume, 5th edition of the *Handbook of Child Psychology* there are three chapters dedicated to reviewing the literature on language acquisition. In the first of the three, Lois Bloom—a well-known researcher in this field, working at Teachers College—writes the following:

“The literature is in general agreement that the first sounds of the newborn infant are the overt elements from which speech develops, that vocalizations are used as a means of communication before words proper are used; that comprehension appears before the use of words; that the normal child has a repertoire of a very few words by one year of age, that development is slow in the first months of the second year, but that towards the end of that year a great increase in the speed of progress appears; . . . that [use of words] for specific meanings is a developmental process; . . . that the first words have the force of a phrase or sentence, and combinations of words do not begin for some time.”

But Bloom then admits that she is quoting the first edition of the *Handbook* (then known as the *Manual of Child Psychology*), published in 1946. And then she notes that McCarthy, the author of that chapter, was quoting John Dewey, from 1935. And Dewey in turn was citing a French article published in 1934.

In other words, what we know now, in 2001, we already knew in 1935. Bloom continues:

“The basic contours of the emergence of language are agreed upon by most researchers.... However, beyond these broad descriptive strokes, we have less agreement on the details of early language and even less consensus on how best to explain its development” (Bloom, 1998, 320-321).

Description and Explanation

The distinction Bloom has drawn here between description and explanation is important, though potentially misleading. Researchers do generally agree when they are asked to *describe* the “basic contours” of what children do as they learn their first language. But the debate about how to *explain* these facts is still surprisingly polarized and antagonistic.

At the same time, when it gets to the *details* of description, what people see depends on their theoretical presuppositions.

Nativism and Environmentalism

Noam Chomsky, and the rest....

Twenty-seven years of the *Journal of Child Language*....

Language and Linguistics

Today we will stick with description, postponing explanation until later classes. Today we'll take an overview of the **different levels of language**, of the **problems** the child has to solve in order to learn language, and of the "**basic contours** of the emergence of language" as the child comes up with solutions to these problems.

We need to know something about language, and the ways linguists analyze it, for two reasons. First, we need to understand what it is that the child is learning (or acquiring, or developing). Second, developmental psychologists have applied some of the same analytical strategies to children's language that linguists have to adult language.

Levels of Language

Linguistics is talk about language. It calls for a metalanguage: a language which is used to describe language (cf. Lyons, 1995, p. 9). Some linguists choose a formal metalanguage, such as formal logic, or a computer programming language. Others prefer to use English (or another natural language), though they generally want to tidy it up by adding some technical terms and using other terms more precisely than the person in the street.

As the diagrams on the following page show, linguists have divided language into as few as two levels and as many as six levels. I draw your attention to this to emphasize (again) that a description of language is never simply a matter of reporting "the facts"; it is always the product of a specific theoretical and interpretive perspective.

For our purposes we can distinguish **four** different levels, plus an additional topic that doesn't fit too neatly with the others.

The level of **sounds** ~ the study of this is **phonetics** (and **phonology**)

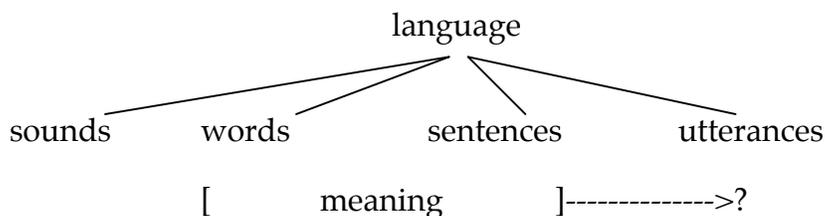
The level of **words** ~ the study of this is **morphology**

The level of **sentences** ~ the study of this is **syntax**

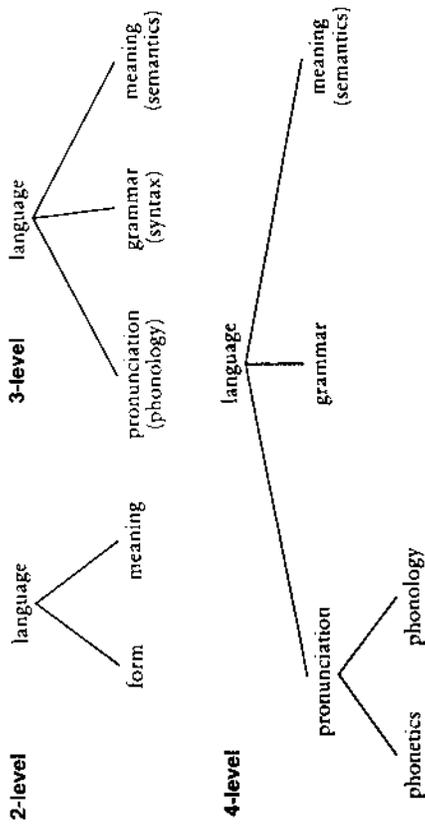
The level of **utterances** ~ the study of this is **pragmatics**

The topic of **meaning** ~ the study of this is **semantics**

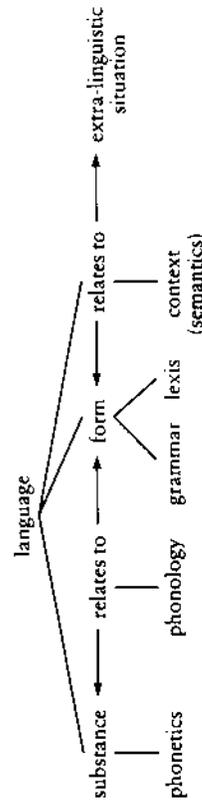
Arranged roughly like this:



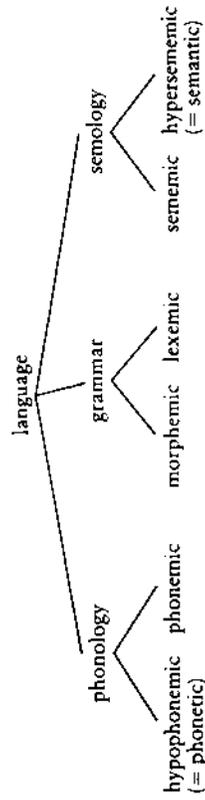
Models of spoken language structure



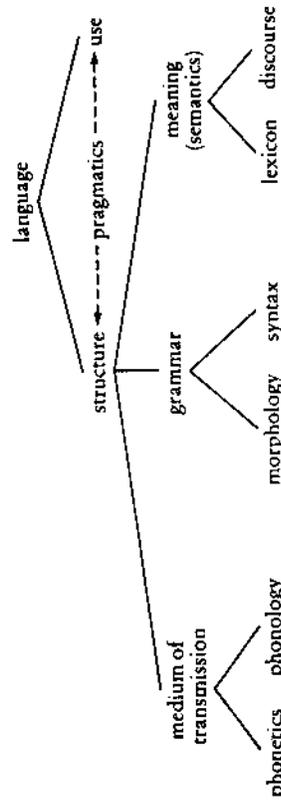
5-level This model (after M. A. K. Halliday, 1961) recognizes three primary levels (substance, form, context); substance and form are related by the 'interlevel' of phonology; form is divided into grammar and lexis.



6-level In this approach (after S. M. Lamb, 1966), the various levels are referred to as *strata*, and the model as a whole is known as *stratificational grammar*.



The present work In this encyclopedia, we shall be making most use of a 6-level model of structure which uses three basic notions (*transmitting medium, grammar, semantics*), each containing a twofold division. The model also incorporates the dimension of language *in use*, which is related to the concerns of language structure through the notion of *pragmatics*. The diagram gives only the distinctions required for the spoken medium of transmission: these are reviewed in detail in Part iv. The properties of the written medium are reviewed in Part v, and of the signing medium in Part vi. The various facets of language in use are discussed in Part ii and §63. The remaining levels, including pragmatics, are dealt with in later sections of Part iii.



<p>sounds</p> <p>phonology phonetics phonemics</p>	<p>phonology: study of phonetics and phonemics. phonetics: the system of speech sounds of a language. phonemics: the structure of a language in terms of phonemes. categorical perception phonemes: basic sound units. ~40 (varying w dialect) <i>pa & ba</i>; /p/ and /b/ differ only in voice onset time /r/ & /l/ are not different in Japanese /o/, /p/, /t/, /sh/... distinctive features voicing, plosion, labial, dental... context effects <i>beak & book</i>; /b/ is quite different; /th/ in <i>the</i> v <i>theta</i> (but not in French)</p>
<p>words</p> <p>lexicon</p>	<p>morphology the structure of words basic units of meaning: morphemes. 100,000 in English -> 500,000 words book, -s, put, -ing plural, tense, inflections - prefixes, suffices word-boundaries</p>
<p>semantics</p>	<p>word-meaning sense & reference structure of the lexicon semantic categories; semantic features – lexical decomposition</p>
<p>sentences</p> <p>grammar syntax</p>	<p>syntax, syntactic structure words in combination. <i>Put the book on the cup.</i> An infinite number grammar: morphology + syntax (Noam Chomsky) noun, verb, subject, object, adjective You didn't go, did you? You didn't go, didn't you? surface structure v deep structure John is easy to please; John is eager to please transformations Bill hit John; Bill was hit by John active, passive, declarative, interrogative, possessive</p>
<p>semantics</p>	<p>sentence-meaning truth conditions</p>
<p>utterances</p> <p>use in context</p>	<p>pragmatics functions of language</p> <p>speech acts: basic unit of communication (John Austin; John Searle) order, promise, demand, object, apologize, warn, remark (1000 in English) politeness indirect speech acts: "Is your daddy there?" "Yes!" conversational conventions Grice ~ cooperative principles: quantity, quality (truth), relevance, clarity turn-taking</p>

Problems the Child Must Solve

We can now begin to appreciate the problems the child has to solve as they start to learn language. We can list these problems in terms, again, of the four levels:

Phonetics

What are the basic sounds of my particular language?

How to:

- (1) recognize them?
- (2) produce them?
- (3) combine them?

Morphology

What are the units of meaning in my language?

Where are the word boundaries when people talk to me?

What things, people, actions, events, and properties in the world do these words refer to?

How can I build a working vocabulary?

Syntax

How do I put words together into complex utterances?

What are the hierarchical structures within a sentence?

What counts as a grammatical sentence?

What do word combinations mean?

What are the transformations?

How to:

- (1) recognize them?
- (2) produce them?

Pragmatics

How to do things with words?

What are the speech acts?

Politeness?

A description of the child's solutions to the problems of language

<p>Phonetics Making the basic sounds</p> <p>Combining these sounds into utterances</p>	<p>0m. pref for L sounds 3m: cooing, 4m: babbling 9m: jargoning 6m-8m: phonemic distinctions</p> <p>2y: phonological strategies ('baby talk': banana='nana') [simplifying] 6y...: accent, stress</p>
<p>Morphology What are the units of meaning? What are word boundaries?</p> <p>How do words refer to things?</p> <p>Build vocabulary?</p>	<p>8m: imitated words 9-12m: first words</p> <p>9-12m: pointing 14-18m: naming objects & pictures over- and under-extension (man='daddy'; bottle=hers) (intermediate level of abstraction: flower, not rose or plant)</p> <p>18m: vocab spurt: Action words (open, out) Outcomes of actions (dirty, wet) Attributes (size, color) Organization: functional/contextual -> 5y logical/formal 2y6m - 5y: grammatical morphemes added (-ing, on, in, -s...)</p>
<p>Syntax How to put words together?</p> <p>What are the hierarchical structures?</p> <p>What are the transformations?</p> <p>How to: (1) recognize them? (2) produce them?</p>	<p>9-12m: holophrase "panpapes!" 18-24m: two-word utterances telegraphic speech ('see boy'; 'water off') 3y: MLU > 3.0 overregularization of grammatical rules 'goed,' 'runned' [simplifying] deep structure ~6y -> (Carol Chomsky) John is willing to please. John is eager to please (Bill). 'Is this doll easy to see or hard to see?' (blindfolded)</p>
<p>Pragmatics How to do things with words?</p> <p>What are the speech acts?</p> <p>Politeness?</p>	<p>3m: primary intersubjectivity 9m: secondary intersubjectivity</p> <p>~12m: conversational acts (Bates) "panpapes!" proto-imperative proto-declarative [Stage 5: TCR]</p> <p>24m: indirect requests understood 30m: indirect requests produced ~2y6m: cooperative principle (Grice)</p>

References

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Crystal, D. (1987). The Cambridge encyclopedia of language. Cambridge, England: Cambridge University Press.

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Language Video #1

Deborah Tannen, David McNeil, Paul Ekman, Thomas Sebeok, Alvin Liberman, Morris Halle, Ursula Bellugi, Peter Ladefoged, Philip Lieberman, Stephen Jay Gould

Oral language is just part of the semiotic behavior of humans. There is also:

Body language

Codes

Gesture

Facial expression

Language links sound and meaning

But why speech?

Speech articulation is a three-ring circus, with six dancers

A syllable is made from consonants and vowels

Universal syllable types

Co-articulation

Biological factors

Brain

Larynx

The average language has 40 different sounds

What makes all this possible?

