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*....

Handout for Psv 598-02. summer 2001
**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:

```
language
  /   \
/     \\sounds  words  sentences  utterances
/       \[    meaning    ]--------->?
```
Models of spoken language structure

2-level

- language
  - form
  - meaning

3-level

- language
  - pronunciation (phonology)
  - grammar (syntax)
  - meaning (semantics)

4-level

- language
  - pronunciation
    - phonetics
    - phonology
  - grammar
  - meaning (semantics)

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 stratalical 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 §§3. The remaining levels, including pragmatics, are dealt with in later sections of Part ii.

- language
  - structure
    - medium of transmission
      - phonetics
      - phonology
    - grammar
      - morphology
      - syntax
    - meaning (semantics)
      - lexicon
      - discourse
| sounds | **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 with dialect)  
  *pa* & *ba*; /p/ and /b/ differ only in voice onset time  
  */r/ & */l* are not different in Japanese  
  */o/, */p/, */t/, */sh/...  
distinctive features  
  *beak* & *book*; /b/ is quite different; /th/ in the v *theta* (but not in French) |
<table>
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<td>phonology phonetics phonemics</td>
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| words | **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, suffixes  
  word-boundaries  
| lexicon |  |
| semantics | **word-meaning**: sense & reference  
structure of the lexicon  
semantic categories; semantic features – lexical decomposition  
|  |  |
| sentences | **syntax, syntactic structure**: words in combination.  
*Put the book on the cup.*  
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  
| grammar syntax |  |
| semantics | **sentence-meaning**: truth conditions  
|  |  |
| utterances | **pragmatics**: functions of language  
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!"  
| use in context |  
|  | conversational conventions  
  - Grice ~ cooperative principles: quantity, quality (truth), relevance, clarity  
  - turn-taking  
|  |  |
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

| **Phonetics** | 0m. pref for L sounds  
3m: cooing, 4m: babbling  
9m: jargonning  
6m-8m: phonemic distinctions |
| Combining these sounds into utterances | 2y: phonological strategies (‘baby talk’: banana=’nana’)  
[simplifying]  
6y...: accent, stress |

| **Morphology** | 8m: imitated words  
9-12m: first words |
| What are the units of meaning? | 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)  
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...) |
| What are word boundaries? | 8m: imitated words  
9-12m: first words |
| How do words refer to things? | 9-12m: pointing  
14-18m: naming objects & pictures  
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| Build vocabulary? | 8m: imitated words  
9-12m: first words |
| How to put words together? | 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) |
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| **Pragmatics** | 3m: primary intersubjectivity  
9m: secondary intersubjectivity |
| How to do things with words? | ~12m: **conversational acts** (Bates)  
“panpapes!”  
proto-imperative  
proto-declarative  
[Stage 5: TCR] |
| What are the speech acts? | ~12m: **conversational acts** (Bates)  
“panpapes!”  
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[Stage 5: TCR] |
| Politeness? | 24m: indirect requests understood  
30m: indirect requests produced  
~2y6m: **cooperative principle** (Grice) |

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References


McCarthy was citing Dewey, J. (1935) , p. 251.

Dewey was citing a survey in French by Decroly, 1934.


Language Video #1


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?