Language Acquisition

Outline:
- What is language?
- How does language develop?
- Lexical acquisition:
  - the sequences of acquisition
  - the problem
  - the theories
- Learning outcomes

What is language?
- Language is not the same as communication
  - bees, dolphins, monkeys communicate
  - humans use language
- Differences:
  - in language different elements can be identified (e.g. words)
  - arrangement of these elements influences meaning of the message
    - e.g. John kissed Mary vs. Mary kissed John
  - language relies on STRUCTURAL DEPENDENCY between different elements
    - e.g. subject verb agreement - I am, you are

How does language develop? (1)
- 2 categories of theories:
  - Nativist theories:
    - children are born with innate KNOWLEDGE that helps them make sense of the world
  - Constructivist/emergent/empiricist theories:
    - language is LEARNED by building up knowledge from the environment

How does language develop? (2)
- 3 distinct streams of research:
  - PHONOLOGICAL DEVELOPMENT
  - LEXICAL DEVELOPMENT
  - GRAMMATICAL ACQUISITION
    - Only going to discuss lexical development

Lexical development - Word learning
- The study of how children build up a vocabulary (LEXICON) of words (LEXEMES)
- Children start with ‘one word utterances’ = ‘one word stage’
- When occur?
  - About age of 1 year (though range = 9 months - 24 months)

Sequence of acquisition (1)
- Beginning of 1 word stage marked by:
  - emergence of systematic, repeated productions of phonologically consistent forms
  - 1st words:
    - ‘comprehensible words’ e.g. [uːdɅ] (Halliday, 1975) [məɾməɾ] (Dore, 1985)
    - ‘meaningful words’: approximate to adult form (e.g. raffe)
    - highly context bound
Sequence of acquisition (2)

- Then:
  - children come to use words in more adultlike ways
  - words start to be used in wider range of contexts
  - children use wider range of word types:
    - referential words (ball, doggie, chair)
    - proper names (Mummy, Spot)
    - actions (open, wash, tickle)
    - properties, states, qualities (more, gone, up, on, dirty)
    - social-pragmatic words (no, please)
    - few 'frozen' phrases (all gone, what's that)

Very first words of 1 child

<table>
<thead>
<tr>
<th>Age 12 months</th>
<th>Reference words: Dog Teddy Fish</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Proper names: Charlie Daddy</td>
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<tr>
<td></td>
<td>Sound word: Woof</td>
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<tr>
<td></td>
<td>Social pragmatic words, Ta</td>
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<tr>
<td></td>
<td>Phrases: All gone what's that</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Age 13 months</th>
<th>Reference: Mummy Lauren</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sound words: Quack Uh oh</td>
</tr>
<tr>
<td></td>
<td>Social pragmatic words: Hello</td>
</tr>
<tr>
<td></td>
<td>Phrases: All fall down.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Age 14 months</th>
<th>Reference: that</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sound: Grrr Tick tock Mieow</td>
</tr>
<tr>
<td></td>
<td>Social pragmatic: Bye Boo</td>
</tr>
<tr>
<td></td>
<td>Adjective: Cold Hot</td>
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</table>

How do children learn words?
The problems (1)

- 1. The problem of reference:
  - a word may refer to a number of referents (real world objects)
    - 'smotri sinonichk'
  - a single object or event has many objects, parts and features that can be referred to

How do children learn words?
The problems (2)

- 2. The scale of reference
  - What is the difference between a cup and a glass?
  - Child has to learn which particular class of things a word refers to

How do children learn words?
Constructivist solutions

- children learn word meanings with no innate knowledge to help them
- Semantic feature theory (Clark, 1973, 1975)
  - each word has a list of semantic features:
    - e.g. DOG = +OBJECT +ANIMATE +FOUR-LEGGED +FURRY +WHISKERS +WOOFS
    - a referent (object) must be characterised by all these features for the word to be applicable
    - children start with more general features (e.g. +OBJECT +ANIMATE) then extend to include more specific features (+WOOFS) later on

Semantic features theory (1)

- Good points:
  - explains OVEREXTENSION errors
  - e.g. daddy = all adult males
  - explains why overextension tends to apply to perceptually similar shapes
Semantic features theory (2)

- Bad points:
  - overextension not as frequent as Clark thought. Barrett (1996) - 7-33% of words
  - overextension occurs late in the developmental history of a word (Dromi, 1987)
  - underextensions more common early on (Golinkoff et al, 1994)
  - it’s proven impossible to define the relevant sets of semantic features
  - how does this work for verbs and other words (e.g. close)

Prototype theory (1)

- Widely supported
  - Meaning of a referential word is initially acquired in the form of a prototypical referent for that word
  - e.g. meaning of word dog 1st applies only to a typical dog
  - child then generalises to other objects on basis that they share common features with the prototype: then:

Prototype theory (2)

- Good points:
  - explains overextension
    - e.g. clock -> bracelet AND sound of dripping water
  - explain underextension

- Bad points:
  - no one agrees as to what is prototypical
  - can’t explain acquisition of non-referential words
  - can’t explain why initial words occur in restricted range of contexts (Barrett, 1986)

How do children learn words?

Nativist solutions

- Children have innate knowledge that enables them to learn words
  - built-in assumptions direct mapping of words onto meanings - CONSTRAINTS:
    - WHOLE OBJECT CONSTRAINT
    - TAXONOMIC CONSTRAINT
    - CONTRAST CONSTRAINT
  - similar constraints for actions (Clar, 1993)

Constraints theory

- Good points:
  - explains speed at which new words learnt (8-10 words per day during 1st year, Carey, 1978)
  - Upheld in Markman’s lab (Markman, 1989, 1992, 1993) in studies on 3-5 year olds

- Bad points:
  - how do children decide whether to apply object or action constraint?
  - Why are so many first words parts of objects (leg, eye, head)
  - how do children learn one object may have more than one name (e.g. dog, Rover, animal)

Learning Outcomes

- Outline the sequence of acquisition of word learning
- Describe the problems that language acquisition researchers face
- Critically compare and evaluate the nativist and constructivist views of language acquisition
Developmental Psychology: Lecture 8: Reading

Items marked with a * are on my restricted loan list.

Books

Journals
The Journal of Child Language is in the library. We’ve got issues from 1974-1994 and then from 2000 onwards. Should be loads of articles in there.
Child Development: we’ve got 19651984 and 2000-.
Cognition: we’ve got 1993 onwards

Andersen, E.S. (1975) "Cups and glasses: Learning that boundaries are vague." Journal of Child Language 2 79-103.