ACQUISITION OF THE LEXICON

The following words have been observed in children’s speech:

<table>
<thead>
<tr>
<th>Word</th>
<th>First reference</th>
<th>Later reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sch</td>
<td>Sound of train</td>
<td>Music, noise of wheels, sound of rain</td>
</tr>
<tr>
<td>Row-we're</td>
<td>Dog</td>
<td>Sheep, rabbit fur, puppet</td>
</tr>
<tr>
<td>Baby</td>
<td>Baby</td>
<td>People in picture</td>
</tr>
<tr>
<td>Fireworks</td>
<td>Fireworks</td>
<td>Matches, light, cigarette</td>
</tr>
<tr>
<td>Strawberry</td>
<td>Strawberry</td>
<td>Grapes, raspberry</td>
</tr>
</tbody>
</table>

What is a word?

From comprehensible words to meaningful words:
- Consistent phonetic shape similar in many cases to the adult phonetic shape
- Consistent use in similar though not identical contexts
- Repeated production until an adequate response is achieved
- Use of gestures (in a schema)
- Consistent feedback

Meaningful words have similar meaning in the child and the adult lexicon

What is the lexicon?

- Is the lexicon the same as a dictionary?
- What is the internal/mental lexicon? How is it organized?

The internal/mental lexicon includes words with a permanent memory, which includes meaning, syntactic information, relations to other words, extra-linguistic information, pronunciation, and (for adults) spelling.

What influences lexical acquisition?

- Word frequency
- Word prosody
- Morphological structure
- Semantically related words
- Context

Are there only words in the lexicon?

- Rules about words: Inflectional morphology and derivational morphology
- Morphology – The system of rules involved in word formation and interpretation
- Inflectional morphology – used to indicate the grammatical subclass to which a word belongs
- Derivational morphology – forms a word with a meaning and or category distinct from that of its base through the addition of an affix
- Three criteria can be used to distinguish inflectional morphology from derivational morphology: category change, order, and productivity.
In class assignment

The following examples of productive application of morphological operations were recorded for three-year olds.

- Grammatical = Inflectional vs. Lexical = Derivational morphology
- Suppletives vs. genuine innovative - where suppletive means there is a (different) conventional term for that lexical slot
- Rote vs. Rule
- Grammatical vs. Ungrammatical
- Denominals vs. deverbals

In class assignment - Examples

1. kshe ani ehye gadol ani elex le-lamad o lamedet ve hem yeladmdu oli et ha'otiyot
2. taxbishi lo et hakova

3. ani mexetse et hakvish
4. ra'iti et hanyarot, ex hem medapdepim
5. ani gadan = 'gadol ve katan'
6. kafim = kapot
7. ima, ani egzoz lax et (ha-egozim) haktanin
8. M: ex kor'im la-perax ha-ze
   [al perax tsahov she hayeled lo makir]: tsehubit
10. ima, at mashka et Shay [little brother]?
    gam mi-bakbuk mashtim
11. taxceci li et ha-limon
12. nitba la habarvaz.

13. takumi oti [=ta'azri li lakum]
14. ani lo mekurav la-shulxan
15. tni li et ha-xotex'iparon [=mexased]
16. ima, galgal'ha'aca ze bishvil liclol?
17. ima, tafrshiti oti ve ani ehye pashut
18. ima, tegazezi li et ha-egozim
19. lo nizlag li
20. ali, alax, al yadax, karov elo [=elav]
21. ani yaxol lehaxlic ta naalayim
22. ha'or sheli kamut [qof-mem-waw-tet]

23. ani yaxol lehaxlic ta naalayim
24. xitsiti et hakvish
25. im ha'or me'axoren, az hatsel mikdimenu
27. nifray li
28. taxbitri li (et haxalalim bapazel) [=texabri li]
29. taslikli oti mipo [=tesalki]
30. hine ze hakol nikla [=hikalef]
31. anaxnu kaxa mizaharim
32. mimi = mimeni, minam ~ mimam = mehem, mimax

How is word meaning acquired?

Sources of information:
- Grammatical form/class, e.g., inflections
- Inference from communicative intent
- Meticulous (careful) caregiver
- Word learning constraints
Word learning constraints


- Taxonomic - terms refer to entities of the same kind (rather than to the thematic relation between objects)
- Whole object – a novel label refers to an object rather than its parts
- Mutual exclusivity – one label for each object – motivates reference to parts and properties and overrides the taxonomic assumption leading to proper names

- These constraints are modulated by nonlinguistic context, by children problem solving and processing abilities and by the pragmatics and syntax of the language.
- The constraints are default assumptions – probabilistic biases that provide a good first guess.
- These are constraints as part of a theory of learning rather than internal constraints a-la UG.
- As such they are not special purpose mechanisms.

Processes in meaning development

- Regular extension
- Under-extension
- Over-extension
- Unclassified – context bound

Pragmatic principles in using the mental lexicon (Clark 1994)

- Conventionality – For each meaning, there is a conventional expected word or form that speakers use.
- Contrast – Different words or forms mark different meanings.

>>> Homonymy assumption – Two different meanings shouldn’t be carried by the same word. This doesn’t hold for mature adults.

>>> Words contrast in meaning - even synonyms are used by the same speaker on different registers/different occasions.
- Established words have priority – word search is conducted. If it fails – circumlocution or innovations are used.
- Innovative words fill lexical gaps – lexical innovations must contrast in meaning with lexical gaps.

Pragmatic principles and acquisition

- The fis phenomenon
- Unfamiliar words fill gaps (superordinates and subordinates)
- Coinages fill gaps

Mapping meaning onto word forms – transparency and simplicity

- One-to-one: agglutinative languages where each affix carries one meaning
- One-to-many: homonyms
- Many-to-one: synonyms, allomorphy
- Many-to-many

Slobin (1985): children show preference for one form – one function/meaning

>>> Overregularization
## Transparency of meaning – words that are based on known roots and affixes

- Sky-car, baby-bottle, to flag, to cello, to dust, brightly, brusher, hider

## Simplicity of form - preference for simpler forms for new words

- Car-smoke < wagon-puller, soref < sarfan

## Productivity - speakers prefer the most productive option with the appropriate meaning. Accessibility in the input (measured by frequency) determines productivity.

### Denominals (derived verbs) in English and Hebrew

**English:** Zero derivation (as early as 1;10 for Damon). Affixation (-ate, -ify, -ize) hardly ever occurs.

**Examples:**
1. 1:10 I noised (made noise)
2. 2:5 I’m flagging around (waving a toy animal)
3. 3:0 Make it bell (ring the doorbell)
4. 3:5 He prayers with it (with a prayer book)
5. 4:9 Can I type writer on your typewriter?
6. 6:0 Will you nut these? (crack these walnuts)
7. 9:0 Who camera-ed it?

Many novel verbs are causatives (transitive), with less intransitive verbs. Why is it so productive?

### Words for things

- English forms new words mostly by compounding and derivation (with or without affixes):
  - Conversion: zero-affix which changes the category (cook, attempt)
  - Prefixes: rarely change the category (unhappiness, relocation)
  - Suffixes: often alter the category (mover, washing, loudness)

**Predictions:**
- Conversion (& compounding) < affixation (transparency & simplicity)
- More frequent < less frequent (productivity)

### Findings

- Damon - from age 2 and on:
  - 60-75% compounds, 25-40% derived
  - 20-35% derived (+affix), 5% derived (+affix) -er, -ie, -ing & ness < -ist, -ment (after 4:0)

- soccer-man, money-man < cooer (primary marker of agency after 3:0)

Other children: teaser, presser < angriess

Why are –tion and –ity acquired (= used productively) only after children start to read?

### Who is doing this job?

- How do you call a person who washes cups?
- Who breaks bottles?
- Who is moving boxes?
- Who pulls wagons?
- Who drinks only water?
Words for things: compounds

- Root compounds = noun + noun (house-key)
- Synthetic compounds = noun + verb / verb + noun (push-chair)

Compounds are identified by phonological, structural and semantic criteria

- Phonologically: novel compounds carry main stress on the first element and secondary stress on the second.
- Structurally: compounds act like single words.
- Semantically: their meaning relates to their parts but is not automatically inferable. This relation has to be learnt for established compounds and computable for novel ones.

Compounds are favored for noun formation by two- and three-year-olds.

- Damon’s compounds: from bare compounds to affixed ones.
- Compounds have a contrastive function of differentiating objects within the same category: moon flag vs. star flag
- Children favor noun-noun combinations (88%) over noun-verb or verb-noun combinations (12%) – most of which are ungrammatical

Stages in the acquisition of compounds with verbs (Clark, Hecht and Mulford 1986)

- Verb+noun (wash-man) < verb+noun (break-bottle), verb-ing+noun (moving-box), verb-er+noun (puller-wagon) < noun + verb-er (water-drinker)

- Other Germanic languages behave like English. Compounding does occur in Romance but it is less productive. When used it is used for instruments and for contrast. Compounding is relatively unproductive in Slavic.

- Hebrew: compounds (baba-ca’acua vs. babat-ca’acua) are a later acquisition. Why?