The Linguistic Environment

The context of language

Topics
- Language input (baby talk)
- Culture; parental speech styles
- Development of Conversation
- Methods to Study Input
- Research Findings

Cultural Attitudes

Piaget:
“…very rarely have I been able, in America, to expound any aspect of my stage theory without being asked ‘How can I speed up development?’”

K’iche’ (Pye)
- children are at risk
- protection of the ‘soul’
- parents direct little speech to children
- parents speak for their children
- no language games or songs

Sample Transcript
Adult to Child: “Do you know what you are holding?”
Mother to Adult: “he says ‘girl’”
Mother to Child: “You say little horsie” (2x)
Mother to Adult: “Play. He says little horsie play”

Cultural Attitudes Towards Infants
Mohave: the fetus is born capable of understanding the adult language
Samoan: rules of etiquette restrict parents from speaking to young infants
Javanese: infants are not yet human

Baby Talk
The language used by anyone in the linguistic community when addressing a child

Baby Talk Features
1. Prosodic: higher pitch, more varied intonation
2. Lexical: special words like ‘nana’, ‘tummy’
3. Complexity: shorter sentences, fewer auxiliaries
4. Redundancy: more immediate repetition, and repetition of words & phrases
5. Content: topics in child’s world
**Snow’s Hypothesis**
- Infants are conversational partners:
  e.g. Mother and Ann at 0;3
    (Ann burps)
    What a nice wind as well!
    Yes, that’s better isn’t it? Yes. Yes.
    (Ann vocalizes)
    Yes! There’s a nice noise.

- Infant units of conversation:
  Smiles, laughs, burps, yawns, sneezes,
  coughs, coos, looking at objects.
    M: What can you see?
    M: What are you looking at? (4 times)
    (Ann says ‘haaa’)
    M: Haaa.

**Kaye Hypothesis**
- Parents may vary in their expectations:
  Mother 1:
  Come on. Talk. Talk to me.
  Can you talk to me? Say something. Come on.
  Talk. Can you talk?
  Can you say something?
  Well, talk.

  Mother 2:
  Is that a burp? Huh?
  Or are you going to get the hiccups? Huh?
  You going to get the hiccups? Huh?
  Yeah. Hi there.
  You look like you are concentrating too hard.
  Roseann.

**Summary**
- Cultural attitudes influence child directed speech
- Western parents see children as conversational partners
Onset of Conversation

Lewis’s 3 Stages of Conversation
1. Earliest months: child responds to adult acts with acts, some vocalization
2. 1;0: child responds to adult speech with acts; and to his/her own acts with speech
3. 1;6: responds to speech with speech

Halliday
- Study of his son Nigel
- Children’s response to Speech is restricted to certain patterns, mostly responses
- Before 1;6 “proto-dialogues” (e.g. Answer “do you want?” questions; say “yes” or “no” to information questions such as “Did you see a car?”)

K Examples
- K Used proto words to keep people speaking to her, e.g. “Huh?
- 1;2(5) used 61 ‘huh’s in 199 utterances

E: What are those? (buttons in the jar)
K. Huh?
E. What are those?
K: Huh? Huh? (pause). Huh?
E: Tata please (3 times)
E. Can’t get them out?
K: Huh? Huh?
E: You do it?
K: Huh?

Methods
- How to study effects of environment?
- 3 Approaches
  1. Experimental studies
  2. Time 2 studies
  3. Time 1 vs. Time 2 studies

Experimental Studies
Problem: how to control for input?
  1. Artificial languages, e.g. nonsense words
  2. Rare constructions, e.g. passives

Control:
  1. Frequency of presentation
  2. Rate of presentation
  3. Generalization
**Time 2 Studies**
- correlate adult usage with child usage at a single point in time (e.g. do parents who use more pronouns have children who use more pronouns?)
- correlation may be positive, negative, or none
- problem: cannot conclude causality from correlations

**Time 1 vs. Time 2 Studies**
- correlate adult language at Time 1 with child’s language at Time 2

**Research Findings 1**

- Topic: ‘massed’ vs ‘distributed’ presentations
- Study: Schwartz & Terrell
- Subjects: 12, 1;0 to 1;3
- Method: 16 nonsense words, 10 sessions, 16 weeks; 2 exemplars for each word
- IP once each session; FP twice each session

**Results**

<table>
<thead>
<tr>
<th>Measure</th>
<th>FP</th>
<th>IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>% exemplars named</td>
<td>44%</td>
<td>29%</td>
</tr>
<tr>
<td># presentations before named</td>
<td>12.5</td>
<td>7.5</td>
</tr>
<tr>
<td># named in 1st 10 presentations</td>
<td>4.3</td>
<td>9.4</td>
</tr>
</tbody>
</table>

Which condition was more effective?
Rate is initially more important, and then frequency.

**Research Findings 2**

- Topic: Referential vs Expressive mothers
- Study: Della Corta et al.
- Subjects: 5 mothers in each group
- Method: Time 2 study of selected measures in language samples during different care taking events (bathing, dressing, etc.)

**Results**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Ref</th>
<th>Exp</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLU</td>
<td>4.3</td>
<td>4.0</td>
</tr>
<tr>
<td># Utterances per event</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>Descriptives</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Prescriptives</td>
<td>7</td>
<td>13</td>
</tr>
</tbody>
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What can we conclude from these?
Referential mothers talk more, and use more descriptive language.
Research Findings 3

- Topic: Which aspects of language are most affected by differences in input?
- Study: Furrow et al.
- Subjects: 7, 1;6 & 2;3
- Method: Time 1 vs. Time 2 study, wide range of language measures

**Results**

*Facilitative Effects*
Adult Yes/no questions, nouns lead to more auxiliaries, verbs, longer MLU

*Prohibitive Effects*
Adult pronouns, verbs and & different words leads to fewer verbs & shorter MLU

How do you interpret these results?

**Results**

- Adult speech needs to be at some intermediate level of complexity
- If too simple, children won’t acquire all aspects of the grammar
- If too complex, child may not be able to extract grammar

Research Findings 4

- Topic: Can increased input lead to early acquisition of late acquired structures?
- Study: Nelson & Baker
- Subjects: 6, 2;6 – 3;2; MLU 3 to 4
- Method: Exposure to relative clauses, passives, ‘may’ ‘could’ over 3 weeks

**Results**

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Passives</th>
<th>Rel. Cl.</th>
<th>May,Could</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>5-12</td>
<td>13</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>10</td>
<td>19</td>
</tr>
</tbody>
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Conclusion: Later structures can be acquired earlier if exposure is increased.
Some Other Factors

- Child style of learning, e.g. imitators vs non-imitators
- Child readiness, e.g. ‘rare events
- Adult response patterns, e.g. recasts: repetitions with changes in form
  C: ‘broke’
  A: ‘Yes, the truck broke’

Summary

- Frequency and rate
- Different parental speech styles
- Level of complexity
- Style of interaction

Epilogue

- Topic: early word learning in late talkers
- Study: Jeanne Wilcox, ASU
- Subjects: 82 children, late talkers
- Method: Time 1 vs Time 2
  - 3 conditions: 1. Caretaker training, 2. Classroom only 3. Combination
  - 15 weeks, 90 minutes per week

Results

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Words</th>
<th>Rate (weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>Caretaker</td>
<td>8</td>
<td>5.4</td>
</tr>
<tr>
<td>Combination</td>
<td>17</td>
<td>4.2</td>
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Conclusion: Strong contextual effect
Question: How does the rate compare to Schwartz & Terrell?