

## Disorder vs. Difference vs. Delay?

- Language disorder - impaired ability to understand or use language as well as same-age peers of the same community
- Late talkers - young children whose language skills fall below 90% of age peers

## Rate of comprehension

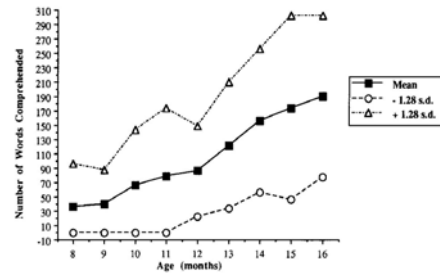


Figure 1. Word Comprehension on the MacArthur CDI Infant Scale Dale & Thal, 1995

## Rate of production

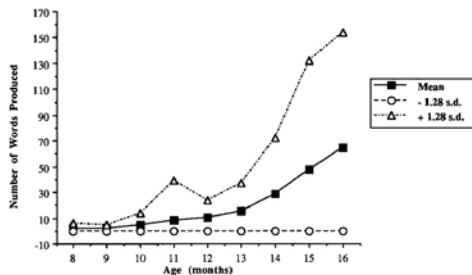


Figure 2. Word Production on the MacArthur CDI Infant Scale Bates, Dale & Thal, 1995

## Rate of production, cont.

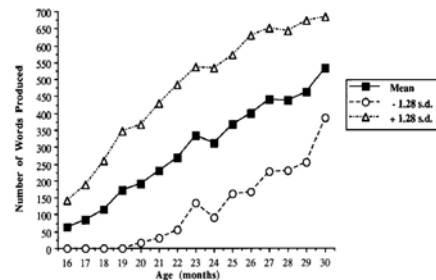


Figure 3. Word Production on the MacArthur CDI Toddler Scale Bates, Dale & Thal, 1995

## Grammatical complexity scores

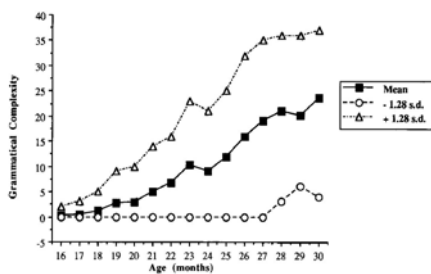


Figure 5. Grammatical Complexity Scores on the MacArthur CDI Toddler Scale Bates, Dale & Thal, 1995

## Estimated MLU

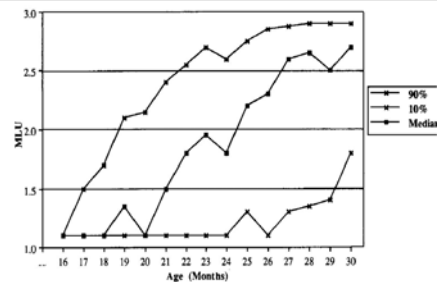


Figure 6. MacArthur CDI Toddler Form Estimated MLU (Observed) Bates, Dale & Thal, 1995

## Style differences

- Expressive/Holistic
  - Attention to the overall sound/rhythm of the language
- Referential/Analytic
  - Analyzes speech stream into individual phonetic elements and words
  - Tend to use isolated monosyllabic words
- Wait-and-see
  - Begin to speak late, but then have a large vocabulary and quickly acquire more words

## Child 1

- Where cup went?
- Where chair went?
- Teddy bear went?
- Baby doing?
- Wanna put it on.
- Wanna go ride it.
- Want mom get off.
- Daddy help her. [me]
- Can't get the teddy bear.
- Teddy bear the bath.
- Too much carrots on the dish
- Move it around.
- Clean e bottom.
- Put ne sofa.
- Put in eye.
- Mommy wear hat.
- Mommy smell it.
- Mommy read book.
- Find Becky.
- See Becky in the morning.
- Becky is nice.
- Saw Becky and goats.

## Child 2

- Pretty.
- Cute.
- Big.
- Round.
- Dry.
- Hungry.
- Wet.
- Different.
- Enough.
- Else.
- More.
- Minute.
- Brushing.
- Hiding.
- Baby crying.
- Hold.
- Hold it.
- Dropped it.
- Bring it.
- Falling.
- Fell.
- Talk.
- Talking.
- Wash'em.
- Shirt on.
- Teddy up.
- Mommy shoe.

## Other style differences

- Nominal vs. Pronominal
  - Nominal: “Mommy sock”
  - Pronominal: “I eat”, “Get it”
- Phonological rule consistency

## Birth order influences

- First-born children get more individualized attention
- Parental speech in multi-child contexts tends to be more focused on activities and social exchanges
- Later-born children overhear speech to others more often, and are in noisier environments

## Birth order results

- First-born children are more advanced in
  - Lexicons
  - Grammatical development
- Later-born children are more advanced in
  - Conversational skill
  - Turn-taking & social skills
  - Pronouns

## Twins

- Early studies
  - Day (1932), Davis (1937)
  - Twins lag behind singletons in language development
  - Did not control for aspects such as birth order, birth weight, prematurity, disorders....
- Later studies attempted to explore reasons behind these differences - is it “twin-ness”, or the biological & environmental differences?

## Twins, more facts

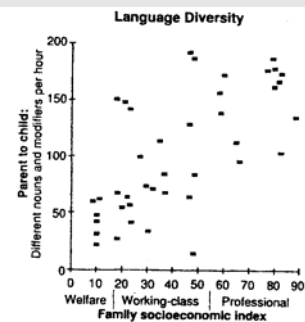
- Factors shown to predict language development:
  - Birth weight
  - Apgar scores
  - Time of gestation
  - Gender
  - Maternal speech to child

## SES?

- SES: Socioeconomic status
  - Combination of factors including income, education, occupation.
- High-SES children have more advanced lexical development
  - Hoff-Ginsberg
- Discussion: Why might this be, and how could we test those theories?

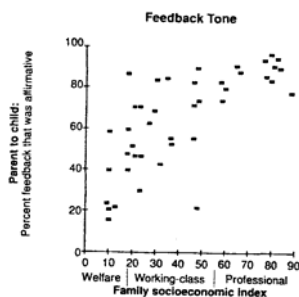
## SES, cont.

- Nouns, adjectives, and adverbs addressed to the child per hour



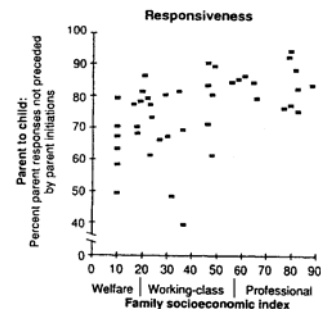
## SES, cont.

- Percentage of feedback that was positive: repetitions, extensions, expansions, confirmations, praise, approval



## SES, cont.

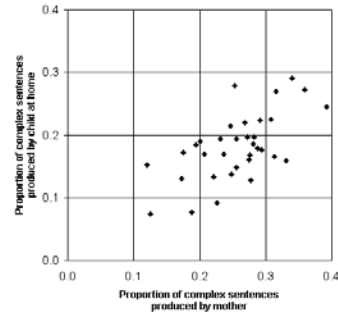
- % of responses not preceded by an initiation



## Other cultural differences

- Expectation of a quiet child
- Child status
- Labeling vs. social interactions

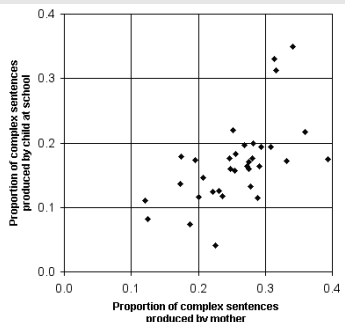
## Input complexity



If parents use more complex sentences, so do children, both when they are at home...

<http://www-news.uchicago.edu/releases/02/021114.huttenlocher.sht ml>

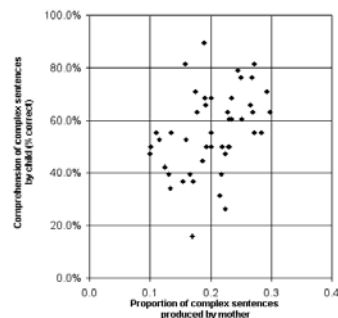
## Input complexity, cont.



...and when they are at school.

<http://www-news.uchicago.edu/releases/02/021114.huttenlocher.sht ml>

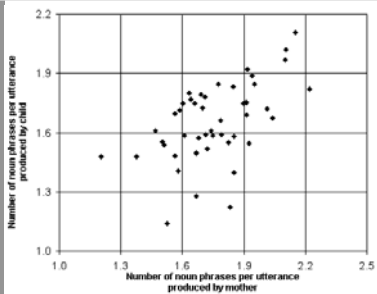
## Input complexity, cont.



They also comprehend more complex sentences...

<http://www-news.uchicago.edu/releases/02/021114.huttenlocher.sht ml>

## Input complexity, cont.



And they have more noun phrases per utterance.

<http://www-news.uchicago.edu/releases/02/021114.huttenlocher.sht ml>

## Tests

The lamp broke because it fell off the table.



The boy is picking up the baby who is holding a block.



## Tests

The boy is looking for the girl behind a chair, but she is sitting under the table.



The baby is holding the big ball and the small block.



## Input complexity, cont.

