Today’s topics

- Introduction to psycholinguistics
  - what is it
  - psychological reality
  - competence vs performance
- Overview of our 8 psycholinguistics lectures
- Website
  - [http://www.ling.cam.ac.uk/li2/](http://www.ling.cam.ac.uk/li2/)
  - syllabus, topic-specific online readings, suggested background readings, lecture slides, supervision topics, old exam papers…
What is psycholinguistics?

- **Competing definitions:**
  - the branch of cognitive psychology that studies the psychological basis of linguistic competence and performance
  - study of the psychological and neurological factors that enable humans to acquire, use, and understand language
  - Use of psychological/scientific/experimental methods to study language acquisition, production and processing
  - **Scientific study of mental processes and elements employed in language**

Introduction

- “neither the phoneme nor any other aspect of linguistic structure is intrinsic to utterances...but is rather something that is attributed to them by speakers and hearers...the only conception of linguistic structure that makes any scientific sense is one that is intrinsically psychological in its own right...if linguistic structure is inherently psychological, then psychological reality is the sine qua non of any linguistic theory worth its salt.”
  - Derwing and de Almeida 2004
- “the questions that generative grammar seeks to answer are fundamentally psychological questions” (Kiparsky 1972)
- Like what?
- How so? Why is this important?
Generative grammar and Chomskyan linguistics

- Central tenets
  - Language = a grammar (lexicon + set of rules and constraints) in the mind of an individual
  - A grammar is a mental/psychological entity rather than a social/behavioral one

- Central questions
  - What knowledge is inside a speaker's head when s/he knows a language?
  - How is this knowledge acquired?
  - How can we get at answers to these questions reliably?

Why is this important?

Psychological reality

- Basic problem: how do we know that linguistic behavior doesn’t just involve one of the following?
  - connectionist network
  - memorization + analogy

- Can/do speakers extract generalizations from:
  - alternations (divine:divinity)
  - static distributions (no word-final lax vowels)

- Examples:
  - English plural (Derwing and de Almeida 2004, from Dennis 1988)
  - English vowel shift…
Why is this important?

**Psychological reality**

- Is the Great English Vowel Shift real, or just a historical relic?
  - NB divine : divinity, etc.

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Importance of psychological reality

- Take the example of English [pʰ]it vs. s[p]it
  - We are led by formal economy to postulate a single underlying representation /p/ + an aspiration rule
  - Anti-abstractionists could object that this is just a formal trick and doesn’t say anything about what goes on in our mind
    - For them, we would at best store a note that pit and spit are related in some way
  - The anti-abstractionist position cannot explain native speakers’ intuition that pit and spit contain the same sound (= phoneme); Sapir’s and Chomsky’s positions can
L1 competence : performance

“by the time infants are starting productive use of language they can already discriminate almost all of the phonological contrasts of their native language. While they cannot yet produce adult-like forms, they appear in many respects to have adult-like representations, and to be capable of ‘correctly identifying phonemes’ only if they have had prior exposure to them” (Faber and Best 1994:266-7).

“Preferential Looking” paradigm (Hirsh-Pasek and Golinkoff 1993)

- 19-month old infants’ comprehension of sentence like “Big Bird is hugging Cookie Monster. Where is Big Bird hugging Cookie Monster?”
- Infants (who can’t speak yet) looked longer at correct video

Did you say θηκ?

Cruttenden 1985

No!!

competence vs. performance

- Cleft palate speech
  - /t/k and avoidance
  - bilinguals in San Diego
- Johnson, Pisoni, and Bernacki (1990) report on the intoxicated speech of the captain of the Exxon Valdez around the time of the accident at Prince William Sound, Alaska. (669)
- Observed effects:
  - misarticulation of /r/ and /l/
  - final devoicing
  - Deaffrication
- Performance problem, not different grammar
- Cf. mimicking Cree sentences doesn’t mean that one has acquired Cree grammar (Hale and Reiss)
- attempts at producing adult [phɛn] pen collected from a 15-month-old child in a 30-minute period (Ferguson 1986):
  - [mɑː], [v], [dɛd̚], [hɛn], [mbɔ], [pʰɛn], [tʰɛn’tʰɛn], [bɑː], [dhaʊ̯], [buɑ]
- Kids who can’t speak yet but can accurately identify subject and object of sentence, distinguish phonemes, etc. (Hirsh-Pasek and Golinkoff 1991)
competence vs. performance

- Bedore, Leonard, and Gandour 1994
  - 4 yr old girl substitutes dental click for \( \{s \, z \, ʒ \, tʃ \, dʒ\} \)
  - She can initially imitate the fricatives, but not produce them on her own
  - After a short training session, she starts to produce \([s]\) correctly
  - She then immediately gets all the others right
  - “the rapid rate of change observed in the child’s phonological system seems consistent with a phonological learning model in which the child has adult-like underlying phonological representations” (283)

Hale and Reiss’s Competence-Performance model

(14) Underlying representation

Output of grammar

Output of body
Conclusions

- Language is a mental/individual entity, and hence its study belongs to cognitive science.
  - What you see is not what you get
  - Relevance of scientific methods
- Next time:
  - how to get at what is going on in the mind

Overview of our 8 lectures

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References


