Lecture6

Producing speech

The speaker: producing speech. P.134

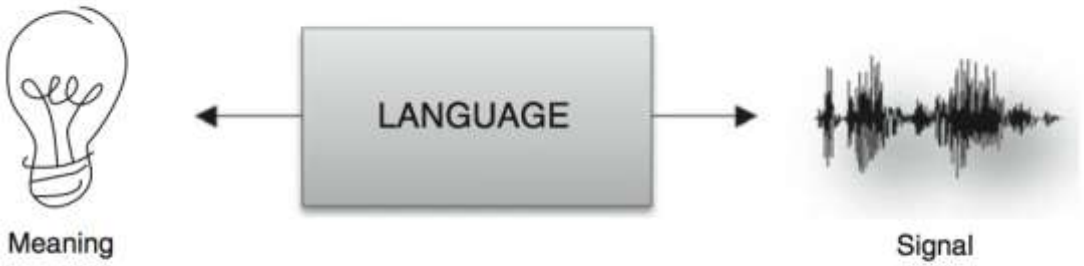


Figure 1.1 Language is a system that connects signals (the sound wave on the right, symbolizing speech) and meanings (the light bulb on the left, symbolizing an idea). In the figure, the signal is acoustic, a speech sound. The signal could take on other forms (it could be written, it could be gestural).

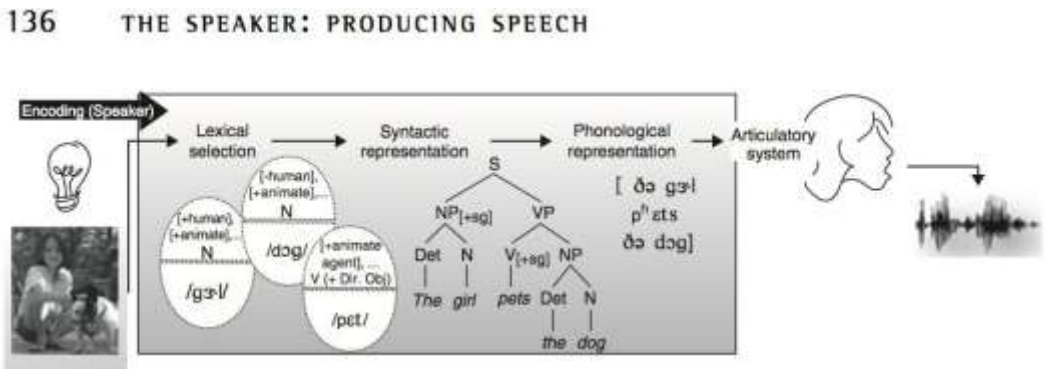
A model for language production

Figure1.1

What do we call the idea before it is verbalized?

- Preverbal message

The girl pets the dog



A)How this word pronounced
(B) information about part speech
(C) information semantic feature
human +animate + Noun gɜːl
human +animate - Noun dɔg
+animate +agent Verb pɛt

Message and acoustic signal vs. language

L1 vs. L2 speech production

<u>Production in bilinguals and SLLs</u>
Unilingual mode : when a bilingual is speaking in a unilingual mode, only one of the grammars is consulted to build structural representations.

Bilingual mode: when in bilingual mode (when the bilingual‘s two languages are being used in the same conversation), access to both grammars and lexical items from both languages must be possible. p.138

<u>Any results of knowing two languages?</u>
Intentional switching from one language to another •
Occasional **unintentional** slips into a language not active in the conversation. p.13 8

E.g. **<u>Code switching:</u>** switching between two codes (languages), or two distinct dialects of the same language within the same discourse. p.139

<u>One type of switching is **tag-switching:**</u> the insertion of frequently used discourse markers, like so, you know, I mean, etc. p.139

Planning speech before it is produced. p.140

Producing a sentence involves a series of distinct operations and representations: lexical, syntactic morphological, and phonological. p.140

1-Accessing the lexicon

Lexical retrieval. A lexical entry carries information about the meaning of the word, its grammatical class, the syntactic structure into which it can enter, and the sounds it contains. p. 141

How can a word be retrieved?

1-meaning 2- sound. p.141

How quick is lexical retrieval?
The speed of conversational speech varies by many factors, including **age** (younger people speak faster than older people), **sex** (men speak faster than women), **nativeness** (native speakers are faster than second language speakers), **topic** (familiar topics are talked about faster than unfamiliar ones), and **utterance length** (longer utterances have shorter segment durations than shorter ones); on **average**, though, **people pro-duce 100 to 300 words per minute** (Yuan, Liberman, and Cieri 2006), which, at the slower end**, is between 1 and 5 words** (or 10 to 15 phonetic elements) **per second**. (Notice that this includes the time it takes to build syntactic and phonological representations and to move the articula-tors, not just time actually spent in lexical retrieval.) Clearly, the process of accessing words is extremely rapid

How many words do adults with high school education know ?

Around 40.000 words

+ 40.000 people names, places and proper names

retrieving 1 word from 80.000 words in less than a second (remember 1-5 words per second)

must be extremely efficient. p.142

Frequency and lexical retrieval. (e.g. knife vs. dagger)

Lecture 7

Speech production

lexical retrieval errors. p. 142

(3) a. I just feel like whipped cream and mushrooms.

{I just feel like whipped cream and strawberries.}

b. All I want is something for my elbows.

{All I want is something for my shoulders.}

c. Put the oven on at a very low speed.

{Put the oven on at a very low temperature.}

d. I hate ... I mean, I love dancing with you

(4)a. If you can find a gargle around the house ...
{If you can find a garlic around the house ...}

b. We need a few laughs to break up the mahogany.

{We need a few laughs to break up the monotony.}

c. Passengers needing special assistance, please remain com-fortably seated until all passengers have complained ... uh, deplaned

Tip of the tongue phenomenon

Occurs when the speaker knows the word needed but cannot quite retrieve it. p. 143

2- Building simple sentence structures. p.144
Grammatical encoding = consulting the internalised grammar to construct structures. p.144 -
-Speech errors provide information about some of the characteristics of the representations that are constructed

E.g. Exchange errors. p.144
(5)a. I left the briefcase in my cigar.
{I left the cigar in my briefcase.}

b. ... rubber pipe and lead hose ... {... rubber hose and lead pipe.. }

3- Creating agreement relations. p.147
The *bridge* **closes** at seven -
The *bridges* **close** at seven

4- Building complex structure . p.148

Syntactic priming. (e.g**.what time do you close?** Seven — **At what time do you close?** at seven).

5- Preparing a phonological representation. p.151

a. ha**ss** or gra**sh**
b. {ha**sh** or gra**ss**}
c. b. I **c**an't **c**ook worth a **c**am.
d. {I can't cook worth a damn.}
e. c. **t**addle **t**ennis
f. {paddle tennis}

Segment exchange error - perseveration error - Anticipation error

Those errors give evidence that there is a level of lexical, syntactic, morphological and phonological processing before speech is produced.