Lecture 18: Production & Perception

Kobey Shwayder
Ling 001, Fall 2011

University of Pennsylvania

Nov. 9, 2011
Outline

1. Introduction

2. Generative Competence

3. Performance (Production)

4. Performance (Perception)

5. Perceptual Competence

6. Conclusion
Outline

1. Introduction

2. Generative Competence

3. Performance (Production)

4. Performance (Perception)

5. Perceptual Competence

6. Conclusion
Thripshaw’s Disease

Why is the following clip funny?

Example: Monty Python’s Flying Circus, "Thripshaw’s Disease"

http://www.youtube.com/watch?v=pImWVCgEYQ
Goal

- Competence versus Performance
- Exemplify a variety of performance errors that are not competence errors
- Understand generativist view of production/perception flow:

  Speaker: Generative Competence → Production (Performance)

  Hearer: Perception (Performance) → Perceptual Competence
What is linguistic competence versus linguistic performance?
What is *linguistic competence* versus *linguistic performance*?

- **Competence**
  - Idealized capacity for language
  - Underlying grammatical architecture in the mind

- **Performance**
  - Actual production of utterances
Competence versus Performance

What is **linguistic competence** versus **linguistic performance**?

- **Competence**
  - Idealized capacity for language
  - Underlying grammatical architecture in the mind

- **Performance**
  - Actual production of utterances

Why might we think competence differs from performance?
de Saussure/Structuralism

Ferdinand de Saussure (1857-1913)

- Treated language as a formal system
- Especially interested in semiotics (division and structure of syntax, semantics, pragmatics)
- Words and meanings are arbitrarily linked
- Concerned with ideal speaker-listener
Chomsky/Generativism

Noam Chomsky (b. 1928)

"Linguistic theory is concerned primarily with an ideal speaker-listener ... unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of this language in actual performance." (Aspect of the Theory of Syntax 1965)
Chomsky differentiates competence and performance.

- (All?) Modern linguists are now generativists.
- Up until recently linguists more interested in studying the underlying (competence) system.
- Recently, there is interest in also studying the performance, competence/performance interface, and language acquisition despite performance errors. (Headed especially by Bill Labov and other sociolinguists)
Outline

1. Introduction

2. Generative Competence

3. Performance (Production)

4. Performance (Perception)

5. Perceptual Competence

6. Conclusion
What is Generative Competence?

Generative Competence

- Our internal grammar.
- A system of rules that assigns structure (Structural Subfields: Phonetics, Phonology, Morphology, etc.)
- Linguistic capability that exist in our minds that we use to generate speech.

Kobey Shwayder (Ling001)
Lecture 18: Production & Perception
Nov. 9, 2011
What is Generative Competence?

- Our internal grammar.
What is Generative Competence?

- Our internal grammar.
- A *system of rules* that assigns structure (Structural Subfields: Phonetics, Phonology, Morphology, etc.)
What is Generative Competence?

- Our internal grammar.
- A *system of rules* that assigns structure (Structural Subfields: Phonetics, Phonology, Morphology, etc.)
- Linguistic capability that exist in our minds that we use to generate speech.
What is Generative Competence?

Failure of Generative Competence

Can generative competence fail?
What is Generative Competence?

Introduction

Generative Competence

Performance (Production)

Performance (Perception)

Perceptual Competence

Conclusion

Failure of Generative Competence

Can generative competence fail?

- Certainly in a foreign language, you have an incomplete competence.
Outline

1. Introduction

2. Generative Competence

3. Performance (Production)

4. Performance (Perception)

5. Perceptual Competence

6. Conclusion
Under ideal conditions, production/performance is generally pretty good.

Sounds, words, sentences, and meaning are generally produced error free.
There are errors in production (not unfrequently).

These include:

- Spoonerisms
- Freudian Slips
- Malapropisms
Slips of the tongue: Spoonerisms

- Named for Reverend Wm. Spooner (1844-1930), Warden of New College, Oxford
- Swapping of consonants, vowels, or morphemes

Named for Reverend Wm. Spooner (1844-1930), Warden of New College, Oxford
Swapping of consonants, vowels, or morphemes
Slips of the tongue: Spoonerisms

- Named for Reverend Wm. Spooner (1844-1930), Warden of New College, Oxford
- Swapping of consonants, vowels, or morphemes

Famous Examples:

- "Three cheers for our queer old dean!" (dear old queen, referring to Queen Victoria)
- "Is it kisstomary to cuss the bride?" (customary to kiss)
- "The Lord is a shoving leopard." (a loving shepherd)
- "You have tasted the whole worm." (wasted the whole term)
Slips of the tongue: Spoonerisms

- Named for Reverend Wm. Spooner (1844-1930), Warden of New College, Oxford
- Swapping of consonants, vowels, or morphemes

Famous Examples:

- "Three cheers for our queer old dean!" (dear old queen, referring to Queen Victoria)
- "Is it kisstomary to cuss the bride?" (customary to kiss)
- "The Lord is a shoving leopard." (a loving shepherd)
- "You have tasted the whole worm." (wasted the whole term)

Why are these considered performance errors rather than competence errors?
Slips of the tongue: Freudian Slips

Sigmund Freud famously believed that slips of the tongue were from repressed desires.

- A Freudian slip is when you say one thing but mean your mother. (another)

(Fake) example from Colbert Report 5/10/10 (23s)
http://www.colbertnation.com/the-colbert-report-videos/309249/may-10-2010/intro—05-10-10
Slips of the tongue: Malapropisms

- Replacing a word with a similar sounding word

Shakespeare uses these frequently in comic relief characters:

- Constable Dogberry in Much Ado About Nothing: "Our watch, sir, have indeed comprehended two auspicious persons." (i.e., apprehended, suspicious; Act 3, Scene V)

A real example from Former Chicago Mayor Richard Daley:

- "Let’s get this straight. The police don’t cause disorder. The police are here to preserve disorder."
Contrepét: Error waiting to happen

In French literature/jokes, there are frequently "slips waiting to happen", called contrepét.

For example:

Il y a deux espèces de gendarmes,
There are two types of policemen,
    les courts et les longs
the short and the long
"There are two kinds of policemen, short ones and tall ones."

If you "spoonerize" the end:
    les lourds et les cons
the heavy and the stupid
"There are two kinds of policemen, fat ones and stupid ones."
Outline

1. Introduction

2. Generative Competence

3. Performance (Production)

4. Performance (Perception)

5. Perceptual Competence

6. Conclusion
Slips of the ear: Mondegreens

- "Kiss this guy"
Slips of the ear: Mondegreens

- "Kiss this guy"
  Jimi Hendrix "Purple Haze" – actual lyrics "kiss the sky"
Slips of the ear: Mondegreens

- "Kiss this guy"
  Jimi Hendrix "Purple Haze" – actual lyrics "kiss the sky"
- Famously, "José can you see" instead of "O! say, can you see"
Slips of the ear: Mondegreens

- "Kiss this guy"
  Jimi Hendrix "Purple Haze" – actual lyrics "kiss the sky"
- Famously, "José can you see" instead of "O! say, can you see"
Slips of the ear: Mondegreens

- "Kiss this guy"
  Jimi Hendrix "Purple Haze" – actual lyrics "kiss the sky"
- Famously, "José can you see" instead of "O! say, can you see"

Steven Pinker: "The interesting thing about mondegreens is that the mishearings are generally less plausible than the intended lyrics." (The Language Instinct, 1994)
Slips of the ear: Mishearing

Common mishearings are also slips of the ear.

As in the following joke:

- Three old guys are out walking. First one says, "Windy, isn’t it?"
- Second one says, "No, its Thursday!"
- Third one says, "So am I. Let’s go get a beer."
Outline

1. Introduction

2. Generative Competence

3. Performance (Production)

4. Performance (Perception)

5. Perceptual Competence

6. Conclusion
Forward Processing

Our brains/minds do quite a bit of unconscious processing.

This is especially clear when processing the forward sound stream (as compared to backwards).

http://languagelog.ldc.upenn.edu/nll/?p=1853
Our brains/minds do quite a bit of unconscious processing.

This is especially clear when processing the forward sound stream (as compared to backwards).

http://languagelog.ldc.upenn.edu/nll/?p=1853

We’ve told you that English /o/ is actually [oʊ].

When you hear is backwards, you can really hear the [ʊ] (or perhaps [w])
Perception competence

- People recognize words very fast
- About 250ms from among about 50,000 words in memory
- Automatic
- Process the word online (don’t wait for entire word)
### Uniqueness Point

How does this work?

<table>
<thead>
<tr>
<th>/s/</th>
<th>/st/</th>
<th>/steɪ/</th>
<th>/steɪp/</th>
</tr>
</thead>
<tbody>
<tr>
<td>sad</td>
<td>staple</td>
<td>staple</td>
<td>staple</td>
</tr>
<tr>
<td>psychology</td>
<td>stay</td>
<td>stay</td>
<td></td>
</tr>
<tr>
<td>staple</td>
<td>student</td>
<td>student</td>
<td>...</td>
</tr>
<tr>
<td>snake</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
Gating Responses
Gating Responses

The graph illustrates the gating responses for the sounds /p/ and /k/ in the word "SHARP." The x-axis represents time in milliseconds, and the y-axis represents the gating responses. The waveform shows the intensity over time for these sounds, highlighting the differences in their production and perception.
Failure of Perceptual Competence

What would be an example of a failure in perceptual competence (and not performance)?
What would be an example of a failure in perceptual competence (and not performance)?

- Foreign Language
Interesting Problems

- Aphasia – Brain damage resulting in problems in processing language
- Broca’s Aphasia: Difficult speech, but with meaningful words
- Wernicke’s Aphasia: Fluid speech but no meaning

Competence or Production Problem?
Interesting Problems

- Aphasia – Brain damage resulting in problems in processing language
- Broca’s Aphasia: Difficult speech, but with meaningful words
- Wernicke’s Aphasia: Fluid speech but no meaning

Competence or Production Problem?

The answer is unclear.
Conclusion

- Competence versus Performance
- Exemplify a variety of performance errors that are not competence errors
- Understand generativist view of production/perception flow:

Speaker: Generative Competence → Production (Performance)

Hearer: Perception (Performance) → Perceptual Competence