TOPIC 1: WHAT IS PHONOLOGY?

Examples of some of the diverse things that phonologists study

Example 1: CLAIM-the following words are composed of the same sounds \((i, l, p, s)\), simply arranged in different orders.

lips  slip  spill  Pils  lisp  plissé\(^1\)

Example 2:

| There was an old woman who lived in a shoe,  
She had so many children she didn’t know what to do,  
She gave them some broth without any bread,  
She whipped them all soundly and put them to bed. | Hickery dickery dock,  
The mouse ran up the clock,  
The clock struck one,  
The mouse ran down,  
Hickery dickery dock. |

| My professor is a dresser,  
Wears a coat and tie,  
But at home where there’s no pressure,  
What he wears, oh my! | My lit’rature professor is a very snazzy dresser,  
He wears a pricey coat and paisley tie,  
But when he’s at his home and he has no kind of pressure,  
The things that he will wear, oh me oh my! |

Phonetics (Linguistics 103) vs. Phonology (Linguistics 120A)

Phonetics: Focus on the physical mechanisms for the production of language sounds and the sounds themselves. Typical questions for our “lips, slip, …” data would be

- What is area of tongue contact for “light” vs. “dark” \(l\)’s? How do the sounds differ in terms of formant frequencies on a sound spectrogram?
- What is the voice onset time for vowels following aspirated vs. unaspirated stops?
- Are vowel duration differences before voiced consonants vs. voiceless consonants vs. consonant clusters statistically significant across tokens and across speakers?

Phonology: Focus on the system of sounds and patterns of sounds that can be stated in terms of precise rules (in contrast to observations and measurement of physical sound production and acoustic properties of the sounds). Typical questions for our “lips, slip, …” data would be

- Under what conditions do speakers pronounce “light” vs. “dark” \(l\)’s or aspirated vs. unaspirated stops?
- Can these conditions be generalized to larger classes of sounds, e.g. do the conditions for (non-)aspiration apply to a class of sounds rather than just \(p\)?
- Are the patterns for English unique or are they shared, at least in part, by other languages, suggesting deeper generalizations about language as an innate feature of human psychology?

\(^1\) Plissé is a type of cloth with chemically induced wrinkles. I would have liked a word pliss, with only the four sounds in question, but this is not a word of English. For that matter, plissé probably isn’t for most people either!
Speakers’ knowledge of their phonology is largely tacit

Phonology is “the grammar of sound”. As in syntax (“the grammar of sentences”), we cannot directly observe the underlying system and the rules governing the system. We arrive at hypotheses about the system and rules by inference through observation of data and through testing our hypotheses by seeking additional data that will allow us to test predictions that our hypotheses suggest.

Examples that we have seen:
- The existence of several phonetically distinct “l” and “p” sounds and their distribution.
- The underlying rhythmic patterns that govern the structure of metered verse.

Another example: adverbs ending in –ly:

For a large class of adjectives, one can add –ly to form an adverb meaning “in an [adjective] manner”, for example

She is a bold person. She does things boldly.

Make up adverbs for the following hypothetical English adjectives:

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<th>Adjective</th>
<th>Adverb</th>
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Another example from Bruce Hayes if we have time:

Two kinds of /o/ (data from Hayes 2000)²


Free Variation Words

holy [ˈhoʊli,ˈhɔli] moly [ˈmɔli,ˈmoli] colon [ˈkoʊlən,ˈkɔlon]  
linoleum [ˈlɪnəlɪəm,ˈlɪnəliəm] Roland [ˈroʊlənd,ˈroʊland] ravioli [ˈræviˈʊli,ˈræviˈoli]  
molar [ˈmɔrəl,ˈmɔlə] Nolan [ˈnɔlən,ˈnɔlən]  

Refining the Rule I

lowly [ˈlouli] slowly [ˈslɔulɪ]  
lowlands [ˈlɔulændz]  
toeless [ˈtɔəls]  

Some Further Forms To Fit In If We Have Time

goalie [ˈgoʊli]  
hole-y [ˈhɔli]  
rolling [ˈroʊlin]  
Pol-ess [ˈpɔləs] ‘a female Pole’

Crucial Points

- This knowledge is not obtainable by introspecting.
- Parallel behaviors extend to all tense back vowels.

Phonological Knowledge is (at least partly) Language-Specific

See the “free variation” words above: for British English these may only have [oʊ].