Overview

1) Course Business
   a) Names
   b) Website

2) Last Class
   a) Why we think there are syllables: metalinguistic and linguistic evidence
   b) Residual thought: what about linguistic evidence for underlying syllabification?

3) Today
   a) Theories of the syllable (from last time)
   b) Experiments generally (from last time)
   c) Not just a linguist’s dream: Syllable monitoring (new)
      i) Mehler et al 1981
      ii) Cutler 1997

Theories of the Syllable

4) Role of sonority
   a) Syllables as sonority peaks
      b) Well-known and not so well-known exceptions
         i) English initial s-clusters: s+{p,t,k,f}
         ii) Welsh initial w-clusters: {k,g,x}+w+{r,l,n}

5) Role of constituency
   a) Flat structure (Cs and Vs - or Xs – group together)
   b) Hierarchical Structure (Onset-Rhyme, Mora)
   c) Demi-syllables

Experiments

6) What is an experiment?
   a) Is traditional phonology/syntax an experiment?
   b) If a method is not an experiment, is it empirical?
Not Just a Linguist’s Dream

7) Background
   a) What is speech perception?

   b) What is “speech segmentation”?

   c) What is lexical access?

   d) Why would the syllable be a good candidate as a unit of perception?
      i) Lexicon organized syllabically (at least initially)
      ii) Possibly universal; all languages perceived in same way

   e) Why would the syllable be a bad candidate?
      i) Liaison, enchainement; word and syllable boundaries not identical

Mehler et al (1981)- Experiment 1

8) Hypotheses
   a) Hypothesis 1: subjects parse by syllables
   b) Hypothesis 2: subjects parse by segments
   c) Hypothesis 3: layering hypothesis (Foss & Swinney)

9) Method:
   a) Syllable monitoring in French, e.g. monitor for pa vs. pal at the beginning of palace vs. palmier

10) Results
    a) Huge interaction supporting Hypothesis 1
b) Mean Reaction Times

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Mehler et al 1981 – Experiment 2

11) Purpose
   a) To further test syllable segmentation but monitor for V or VC (e.g., a vs. al in palace vs. palmier)

12) Hypothesis
   a) RTs for VC targets should be faster in CVC words than CV (because in the latter, the C of the VC will be in the second syllable: pa.lace)
   b) RTS for V targets should not differ because V contained in both word-types

13) Results
   a) As expected: big effect for /al/; nothing for /a/

\[\text{Graph showing mean reaction times for V and VC targets.}\]

i) Mean Reaction Times

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**Mehler et al Design**

14) Subjects: 42 subjects in two groups

15) Stimuli
   a) 5 pairs of words like *palace-palmier, balance-balcon*, etc.
      i) each appear with CV target and with CVC targets, balanced by group
   b) 10 in first half, 10 in second half plus 10 distracters in each half
   c) 20 experimental items per subject, 40 responses total per subject

16) Procedure
   a) Subject saw targets written on flash-cards (numbered 1-45) and presented binaurally
   b) Pressed a button when they heard an item that began with the target

17) Analysis
   a) Simple ANOVAs *without* repeated measures for interactions
   b) *t*-tests for simple effects

**Cutler et al 1997**

18) Purpose: review of syllable effects (or not) in various languages

19) French
   a) Robust fragment detection effects with French speakers
      i) ...even when materials come from other languages!
      ii) English, Japanese
   b) Supported by other tasks

20) English
   a) No effect in English
      i) Monitoring for *ba-bal* in *balance-balcony* shows nothing! (Bradley et al, 1993)

21) German and Dutch
   a) Other stress languages like German and Dutch also don't show an effect: why?

22) Ambisyllabicity in English à la Kahn 1976
   a) Kahn claims that medial pre-stressless consonants are ambisyllabic (in two syllables at the same time)
b) Aspiration argument
   i) Aspiration word-initially: *toe, tip, ten*, etc.
   ii) No aspiration after [s]: *stow, sting, sty*, etc.
   iii) No aspiration word-finally: *oat, lit, cat*, etc.
   iv) Aspiration medial pre-stress: *attack, atone, antenna*, etc.

c) Flapping argument
   i) Flapping medial pre-stressless: *pity, vanity, catamaran*, etc.

23) Relevance for Cutler
   a) English syllable boundaries are "murky"

   b) Cutler's surmise: perhaps speech segmentation in English is stress-based not syllable-stressed

   c) Some evidence for (23b)
      i) Kiparsky (1979) excursus: aspiration is foot-based
         1) Aspirate foot-initially
         2) [toe], [stow], [oat], [at]tack], [pity], [catama[ran]
         3) Problematic per Hammond, 1982