Voiced and voiceless plosives: Word-final position

- Observe the consonant at the end of the following words:
  - /bæk/
  - /bæg/
- Then compare them with the consonant at the beginning of the following words in French:
  - /ba找回 (« bac »)
  - /bag找回 (« bague »)

Clipping: shortening of the preceding vowel
- /bæk/
- [bæk]

Devoicing (no clipping)
- /bæg/
- [bæg (or ŋ)]
Voiced and voiceless plosives: Word-final position

• In English, a vowel is **clipped** (shortened) when followed by a **voiceless** plosive (/p t k/) in the same syllable: /bæk/ [bæk].

N.B. Clipping and long/short vowels

What happens to the following words?

• /biːd/
• /biːt/
• /bɪd/
• /bɪt/

Voiced and voiceless plosives: Word-final position

• In English, **voiced** plosives /b d g/ are **devoiced** totally or partially in word-final position (especially in utterance-final position) [b̥ d̥ g̥ (or g̥)], as in /bæg/ [bæg̥ (or g̥)].
• But the explosion noise tends to be smaller than that of voiceless ones (/p t k/) in the same position.
• The preceding vowel is **not clipped**.
2. Voiced and voiceless fricatives

Voiced and voiceless fricatives: Word-final position

- Observe the consonant at the end of the following words:
  - /feɪs/
  - /feɪz/

- Then compare them with the consonant at the beginning of the following words in French:
  - /fas/ (« face »)
  - /faz/ (« phase »)

Clipping: shortening of the preceding vowel

- /feɪs/ 
- [feɪʃ]

Devoicing (no clipping)

- /feɪz/ 
- [feɪz]
Voiced and voiceless fricatives: Word-final position

- In English, a vowel is **clipped** (shortened) when followed by a **voiceless** fricative (/f θ s ʃ/) in the same syllable: /feɪs/ [fɛɹs].

Voiced and voiceless fricatives: Word-final position

- In English, **voiced** plosives /v Ʌ z ʒ/ are **devoiced** totally or partially in word-final position (especially in utterance-final position) [v Ʌ z ʒ (or ʒ)], as in /feɪz/ [fɛɹz].
- But they tend to be shorter, and the friction noise tends to be smaller than that of voiceless counterparts (/f θ s ʃ/) in the same position.
- The preceding vowel is not clipped.

3. Voiced and voiceless affricates

Voiced and voiceless affricates: Word-initial position

- Observe the consonant at the **beginning** of the following words:
  - /tʃeɪn/
  - /dʒeɪn/
Voiced and voiceless affricates: Word-initial position

**Aspiration**
- /tʃeɪn/
- [tʃʰeɪn]

**Devoicing: (partial) absence of voicing**
- /dʒeɪn/
- [dʒ̊eɪn]

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Voiced and voiceless affricates: Word-initial/medial position

- As in plosives, the **voiceless** affricate /tʃ/ is **aspirated** [tʃʰ], (/tʃeɪn/ [tʃʰeɪn]).
- The **voiced** affricate /dʒ/ is totally or partially **devoiced** [dʒ̊] in word-initial position.

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Voiced and voiceless affricates: Word-final position

- Observe the consonant at the end of the following words:
  - /eɪtʃ/
  - /eɪdʒ/
Voiced and voiceless affricates: Word-final position

- As in plosives and fricatives, a vowel is clipped (shortened) when followed by a voiceless affricate /tʃ/ in the same syllable: /eɪtʃ/ [eɪtʃ].

Voiced and voiceless affricates: Word-final position

- As in plosives and fricatives, the voiced affricate /dʒ/ is devoiced totally or partially in word-final position (especially in utterance-final position) [dʒ], as in /eɪdʒ/ [eɪdʒ].
- But the friction noise tends to be smaller than that of the voiceless counterpart /tʃ/ in the same position.
- The preceding vowel is not clipped.

Voiced and voiceless fricatives: Word-final position

- As in plosives and fricatives, the voiced affricate /dʒ/ is devoiced totally or partially in word-final position (especially in utterance-final position) [dʒ], as in /eɪdʒ/ [eɪdʒ].
- But the friction noise tends to be smaller than that of the voiceless counterpart /tʃ/ in the same position.
- The preceding vowel is not clipped.
4. Approximants

Approximants:
After a word-initial plosive

- Observe the palato-alveolar (post-alveolar) approximant in the following words:
  - /kræb/
  - /græb/

- Then compare them with the consonants at the beginning of the following words in French:
  - /kʁæb/ (« crabe »)
  - /ɡʁa/ (« gras »)
Approximants: After a word-initial plosive

- Observe the lateral approximant in the following words:
  - /klaːs/
  - /glæs/

Then compare them with the consonants at the beginning of the following words in French:

- /klas/ (« classe »)
- /glas/ (« glace »)

Approximants: After a word-initial plosive

- Observe the approximants in the following words:
  - /kjʊt/
  - /twɪn/
Approximants: After a voiceless plosive

- In English, approximants /l r j w/ are often partially devoiced after a voiceless plosive, especially in a word-initial stressed syllable: [l̥ r̥ j̊ w], as in /klæs/ [kl̥ æs], /kræbb/ [kr̥æb], /kju:t/ [kju̥t], /tẘın/ [tẘın].

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<th>after /s/ word-initial stressed</th>
<th>others</th>
<th>word-final</th>
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<td>no aspiration</td>
<td>strongly aspirated</td>
<td>aspirated (prec. V)</td>
<td>clipping</td>
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<tr>
<td>/b d g dz/ voiced plosives and affricate</td>
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<td>can be devoiced</td>
<td>devoicing no clipping</td>
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<tr>
<td>/f θ s s/ voiceless fricatives</td>
<td>voiceless</td>
<td>(prec. V) clipping</td>
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<td>/v ð z ʒ/ voiced fricatives</td>
<td>voiced</td>
<td>devoicing no clipping</td>
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</tr>
<tr>
<td>/l r j w/ approximants preceded by a plosive</td>
<td>partially devoiced</td>
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