Elements

Liquids in elements

Liquids

- Liquids are glides

- Parallel to $[j, w]$

- One is simple, the other complex

Liquids

- What are liquids?

  - Laterals

  - Rhotics

- Phonetically diverse

- Phonologically uniform

Liquids

- Liquids in Feature theory

  - [±lateral]?

    - Descriptive label

Liquids

- Liquids in Feature Theory

  - [±Cons]

  - [±Son]

  - PoA?

  - [±Cont]?

Liquids

- Liquids in Feature Theory

  - Very difficult to classify

  - "none-of-the-above" category

    - Is there a "liquids" class in the first place?

Liquids

- Liquids as natural class:

    - Distributional observations

    - Phonological behaviour

Liquids

- Liquids as natural class: distributional observations

  - Banned from strong positions

    - Diyari, Mongolian

      - Word onset

Liquids

- Liquids as natural class: distributional observations

  - Liquids are often allowed in weak positions

    - Coda

      - Italian: per, il

Liquids

- Liquids as natural class: distributional observations

  - Liquids are often allowed in weak positions

    - Dependent position in clusters

      - C2 in onsets: *praat, blauw*

      - C1 in codas: *paard, balk*

        - *(but: French?)*

Liquids

- Liquids as natural class: distributional observations

  - Liquids are vowel-like

    - Prone to vocalization

      - "Non-rhotic" varieties of English, German

      - Loss of [l] in postvocalic context

Liquids

- Liquids as natural class: distributional observations

  - Liquids are vowel-like

    - If a language allows non-vocalic nuclei

    - And that language has liquids

    - That language will allow liquids nuclei

Liquids

- Processes:

  - Dissimilation (Latin)

  - Metathesis (diachronic, speech errors)

  - Variation/allophony

    - Papuan, Jita, Kikongo Kituba

Liquids

- Interim conclusion

  - Liquids are a class

    - But what are they?

Liquids

- Liquids in ET:

  - |A|

    - Rhotics are simple |A|

    - Laterals have complex resonance

Liquids

- Rhotics are |A|

  - Phonetically

    - Non-rhotic English

    - German

    - The Hague

Liquids

- Rhotics are |A|

  - Phonologically

    - Linking/intrusive-r

    - Vocalisation to low vowels

Liquids

- Laterals are |A I| or |A, U|

  - Phonetically

    - Liquids have "coronal" resonance

    - Sometimes supplemented by velar |U|-resonance

      - "Dark-L"

Liquids

- Laterals are |A I| or |A, U|

  - Phonological arguments

    - Clear-I, dark-I

      - |I|-vowels atract clear-L

Liquids

- Laterals are |A I| or |A, U|

  - |A I|

    - Laterals interact with alveolars

      - e.g. Setswana

Liquids

- Laterals are |A I| or |A, U|

  - |A U|

    - Post-vocalic [l] vocalises to rounds vowels

      - EN, BP, NL

Liquids

- Laterals are |A I| or |A, U|

  - Developmental evidence (Inkelas & Rose, 2007)

  - Positional Lateral Gliding

    - [l] is produced as [j]

      - Except in prosodically weak positions

        - Here, [l] is produced as [w]

Liquids & Glides

[j]	[w]	rhotics	Laterals
|I|	|U|	|A|	|A, I| or |A, U|

Liquids & Glides

- Non-resonance class?

- Can "negative classes" exist?

- Remember the two functions of primitives

  - Contrastive

  - Substantive

Liquids & Glides

- Non-resonance class?

- Can "negative classes" exist?

- Remember the two functions of primitives

  - ~~Contrastive~~

  - <u>Substantive</u>

Liquids & Glides

- Negative classes

  - "Approximants" have no non-resonance elements

  - "Laryngeals" have no resonance elements

Liquids & Glides & …

[h]	[ʔ]	[ɦ]
|H|	|ʔ|	|H, L|

Structural Classes

- De Kok, Botma, van 't Veer

  - "Phonological classes may be defined substantively or in terms of structural complexity"

  - Liquids, glides, laryngeals:

    - "Simplex" segments

Structural Classes

- De Kok, Botma, van 't Veer

  - Precedent

    - Vowel reduction

Structural Classes

- Simplex segments as hiatus fillers:

  - English
    fly [j]away   go [ɰ]away   Lisa [ɹ]is

  - Dutch (Collins & Mees 2003)
    "op eigen initiatief"   [ʔɔp ˈʔɛiɣə ʔinisjaˈtif]

  - Yavapai (Hokan), Slave (Athabaskan), Kisi (Bantu) (Mielke 2008 and references therein)
    Ø → [h] / #__V

Structural Classes

- Simplex segments interacting

  - Slave (athabaskan):
  $$/j\ w\ h\ ʔ/ \rightarrow \varnothing\ /\ V\ \_\ V$$

  - Koromfé (Gur)
  $$/j\ w\ h/ \rightarrow [+\text{nasal}]\ /\ \_V[+\text{nasal}]$$

  - Ao (Sino-Tibetan)
  C1 in medial CCC clusters is limited to $/j\ w\ ʔ/$

Antagonistic Elements

- Elements are acoustic targets

- Sometimes, targets conflict

Antagonistic Elements

- Conflicting Targets:

  - Resonance: |A| vs. |?|

  - Spectral concentration: |L| vs. |H|

  - Colour: |U| vs. |I|

Antagonistic Elements

- Resonance: |A| vs. |?|

  - |A| aims for full resonance

  - |?| aims for the opposite

    - Combinations occur but the more headed, the more exotic (retroflex ejective stop in Yawelmani)

Antagonistic Elements

- Frequency: |H| vs. |L|

  - |H| aims for high center of gravity

  - |L| aims for low center of gravity

    - Combinations are rare:

      - "voiceless" nasals

Antagonistic Elements

- Colour: |U| vs. |I|

  - Both aim for low F1

  - Goals for F2 are opposite:

    - |I|: High F2

    - |U|: Low F2

      - Combinations result in front rounded vowels

Next

- Licensing (Backley §5.2)

- Syllables (Harris & Gussmann 2002)