**Basque Vowel Assimilation: A Direct Interface Approach**

Bridget Samuels // University of Maryland - College Park // bridget@umd.edu

**Goals**

- To provide evidence from Basque for “phonological derivation by phase” (PDRP), which combines elements of Lexical Phonology, Distributed Morphology, and Derivation by Phase.
- To pursue a direct reference conception of the PF interface: syntactic domains directly define phonological ones.
- Larger goal of Samuels (2009a), following Chomsky (2007): “how little can be attributed to LG while still accounting for the variety of languages attained?” Contra Pinker & Jackendoff (2005), very few (if any) phonological operations/representations are unique to humans or to language (Samuels 2009b).

**Phonological Derivation by Phase**

- Chomsky (2004:107): “Assume [syntax, semantics, & phonology] are cyclic, a very natural optimality requirement and fairly conventional. […] In the best case, there is a single cycle only: […] it is greatly simplified if it can forget about ‘what has been transferred to it at earlier phases; otherwise, the advantages of cyclic computation are lost’” — Marvin (2002)
- **PHASE IMPENETRABILITY CONDITION** (Chomsky 2001)
  - For [Z'-Z] [HP] [HYP] \[Z \Rightarrow Z']
  - The domain of H is not accessible to operations at ZP, but only H and its edge.
  - Marantz (2001) and Marvin (2002) establish \( \{n, n, a\} \) as phase-heads. Marvin (2002) and Di Sciullo (2004, 2005) argue on multiple independent grounds that the PIC holds for these ‘morphological phases.’
  - The ‘clause-level’ inventory: C, \( \alpha \) D, HAppl...
  - All phonological rules obey the PIC, but in two different ways:
    - Lexical rules obey at both the morpheme and clausal levels. The relevant notion is accessibility according to PIC\(_{\alpha} \) — accessible unis overlap, hence cyclicity of lexical rules.
    - Post-lexical rules apply to a single clausal domain as per PIC\(_{H} \) — no interaction between domains, hence no cyclicity at this level.

**Lexical Rule Application**

  1. VOWEL RAISING: (obligatory). \( V_{\alpha} -[hi] -> [hi] / V \)
  2. VOWEL ASSIMILATION (optional, fed by raising): \( V_{\alpha} - V_{\alpha} / V_{\alpha} \) when \( V_{\alpha} -[hi] \)
- Huale & Elordieta (1992) note assimilation behaves in many respects like a lexical rule, yet it can apply across (some) word boundaries and appears sensitive to morphosyntactic information.
- Elordieta (1997, et seq.) claims these rules apply within a feature-checking chain: \( C, T, (T, _{-}), (T, D), (D, D), \) or \( (D, N) \). Relevant here: T-\( \alpha \) and D-\( N \) chains.
- 1 argue both rules are lexical, so their application is restricted to morphemes which are accessible to each other under PIC\(_{H} \) (all phase heads count).
- One application context is between a noun and an inflectional affix:
  - \( V_{\alpha} -[hi] \) unmin.
  - \( V_{\alpha} -[hi] \) alt\( \alpha \)-ak
    - D, HAppl.
    - Following Exteberria (2007) for Basque, Johns (1987) and Compton & Pittman (2007) on Latin: two Ds are present, but only one is pronounced in this dialect.

**Conclusions**

- All the application and non-application environments of the Lekeitio Basque vowel raising and assimilation rules are compatible with a PDRP analysis.
- Both rules are lexical: carried on D and Aux, plus derivational suffixes (subject to a few exceptions). More case studies of lexical and post-lexical rules can be found in Samuels (2009a).
- To the extent PDRP succeeds, phonological and syntactic domains converge: “best-case scenario”

**References**