

Head accessibility and complex segments

This paper discusses the structure of the onset constituent, focusing on the question of the proper structural analysis of complex phonetic events.

Assuming the framework of Government Phonology (Kaye, Lowenstamm and Vergnaud 1990), three analyses are possible for complex consonantal events: the complex onset analysis (1a), the complex segment analysis (1b) and the “double onset” analysis involving two onsets separated by an empty rhyme (1c).

I propose a diagnostic test which, for a given complex consonantal phonetic event in the onset, determines if it has complex onset structure. We will say that the *head of a phonetic event is accessible* if there is a lexical phonological rule that affects its head. The test requires that the head of the complex consonantal event under analysis be accessible.

(2) The Complex Onset Criterion

For a given phonetic event E, if (i) E respects the Sonority Sequencing Principle, and (ii) there is a lexical phonological rule that affects E’s head without affecting E’s dependent then E is a *complex onset*. If (i) is not satisfied but (ii) is, then E is a *double onset*.

The Complex Onset Criterion leads to the classification in (3), which provides the basis for the constraint on complex segments stated in (4):

(4) The Head Constraint

If a given phonetic event is a complex segment, then its head is not accessible by a lexical phonological rule.

Thus, complex onsets differ from complex segments with respect to Vertical Locality (the *vertical accessibility* of the head): the structural depth at which lexical rules are allowed to operate varies depending on the type of unit. (On the relation of locality to the accessibility at a specific level, see Dresher and van der Hulst 1998). In this way, (5b) shows that the head of a complex segment is “protected” from the application of a lexical rule.

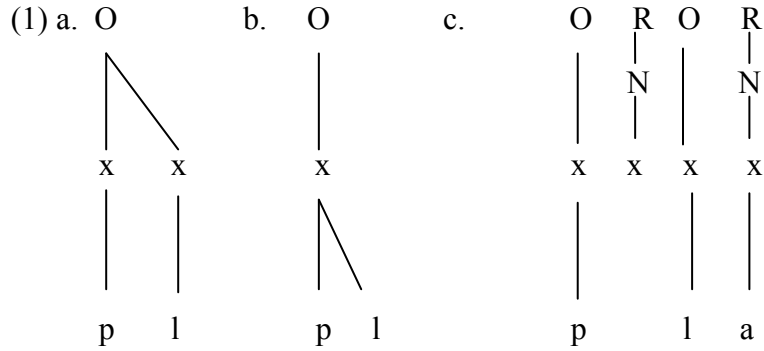
This suggests the perspective that a complex segment may only be accessed by a lexical rule as a *whole*. That is, complex segments are characterized by *Segmental Integrity*:

(6) Segmental Integrity

All the rules that have access to the internal structure of segments are postlexical rules.

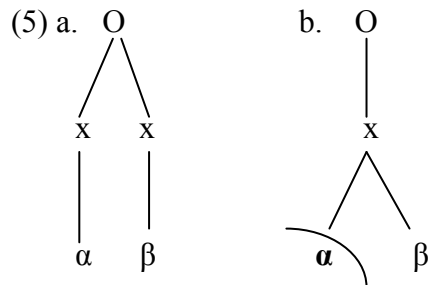
These claims are supported by the phonological behavior of complex events under reduplication in Gothic, Sanskrit and Klamath. As I will show, in these languages, the complex events fall into two classes: those events that undergo full copy and those that undergo partial copy. In partial copy, the head alone is copied while the dependent is not. Accordingly, the independent variation of the event’s head under the effect of a lexical rule reveals the structural status of the unit.

I provide independent support for the Complex Onset Criterion from other processes (Gorgia Toscana in Florentine Italian, velar deletion in Leon Spanish). The proposed approach allows for the structural analysis of phonetic events in these five languages.



(3) The analyses depending on the Complex Onset Criterion

| | | | |
|--------------------|-----|--------------------|---------|
| | | Sonority increases | |
| | | Yes | No |
| Head is accessible | Yes | CO | O-O |
| | No | CO, O-O, CS | O-O, CS |



References

Dresher B. Elan and H. G. van der Hulst (1998). Head-dependent asymmetries in prosodic phonology: visibility and complexity. *Phonology* 15 (3), 317-352.

Kaye, J., J. Lowenstamm and J.-R. Vergnaud (1990). Constituent structure and government in phonology. *Phonology Yearbook* 7, 193-231.

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