

Coronality, syllable structure and government

Dominic Rubin

In English, there are well-known anomalies concerning the Place phonotactics of clusters (Fudge 1969, Yip 1991, Rubin 2000 *inter al.*). Here I will look only at these restrictions as they apply to obstruents, and only as they apply at right edge (where stricter phonotactics make testing one's syllable theory more challenging). Take the following examples:

1) a) (i) apt, act (ii) *atp, *atk b) (i) raft, *{rafk, rafp} (ii) rasp, last

1a shows that in a VC₁C₂# string where C is a stop in Manner, then C₂ must be coronal. 1bi shows that if C₁ is a fricative, C₂ must also be coronal. But one cannot conclude that for all right-edge (r.e.) obstruent clusters C₁ is non-coronal and C₂ is coronal: 1bii shows that C₁ can be coronal, and that if it is, C₂ can be coronal or non-coronal (which is almost the reverse of our intended generalization). These Place asymmetries also disrupt generalizations made using sonority; usually r.e. clusters are acceptable if C₁ is more sonorous than C₂.

I model these facts using Government Phonology (mainly as stated in Harris 1994 & 1997). But the following concepts must be added: (i) segments have internal structure: they consist of a Place phrase and a Manner phrase, and the Place phrase is head to the Manner phrase, and governs or licenses elements in it. (ii) the coronal element (which is [I], cf. Van der Weijer 1994, Rubin 2001) is the head of the Place phrase, able to s(subsegmentally)-govern adjacent Place phrases occupied by non-coronal Place elements; (iii) codas, aka post-rhymal complements/prc's (*pace* Kaye 1990a) are in fact nuclear complements: this means that consonantal material appearing in them must meet certain conditions. These conditions are (a) that the p.e. in the coda is s-governed by a following p.e.: s-gov't is fulfilled if the Place element *or* the Manner element of the coda p.e. is followed by a Place or Manner element stronger than it in the p.e. attached to the following onset (it is thus a disjunctive condition); and (b) that the Place element of the p.e. in the coda is licensed. The head coronal element licenses itself (heads are self-licensing); nonhead (non-coronal) Place elements are licensed if followed by a Place head stronger than themselves (i.e. the coronal element). This derives the following strings (GP syllable structure is assumed):

Key: [internal structure of p.e.: ({Place elements} {Manner Elements})]; ◀ : governs ; ∅ : empty nucleus; eg element government; (s-)gov't goes right to left between the p.e. in onset and the "coda" p.e.; E: headed element]

| word/syllables | internal structure of segments | e.g. ? | coda Place lic ? |
|----------------|-----------------------------------|--------|------------------|
| [ap] ◀ [t∅] | /p/ = ({U} {?}) /t/ = ({I} {?}) | I > U | Y |
| [ras] ◀ [p∅] | /s/ = ({I} {h}) /p/ = ({U} {?}) | ? > h | Y |
| [lap] ◀ [s∅] | /p/ = ({U} {?}) /s/ = ({I} {h}) | I > U | Y |
| *[raf] [p∅] | /f/ = ({U} {h}) /p/ = ({U} {?}) | ? > h | N |
| * [rat] [p∅] | /t/ = ({I} {?}) /p/ = ({U} {?}) | N | Y |

Finally, I look at subtle differences between English and Finnish coronal-noncoronal clusters. The stress rules of Finnish, the process of gradation and the fact that word-final consonants can only be coronal necessitate an interesting parameterization of the conditions for subsegmental government formulated for English above.