**Neutralisation as integration: The case of Korean**

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I offer a novel and non-arbitrary account of the neutralisation of Korean consonants. The analysis is couched within Government Phonology (GP; references to follow).

**Problem.** Korean contrasts neutral, tense and aspirated obstruents before a vowel (_V). Elsewhere (_C, _#), all obstruents merge as (i) non-continuant and (ii) unreleased (Heo 1994; Chang 1996; Kim 1996; Lee 1999; Sohn 1999; Song 2005; Shin, Kiaer & Cha 2013), which leads to massive neutralization, illustrated for final position in (1), cf. Chang (1996: 16).

(1)

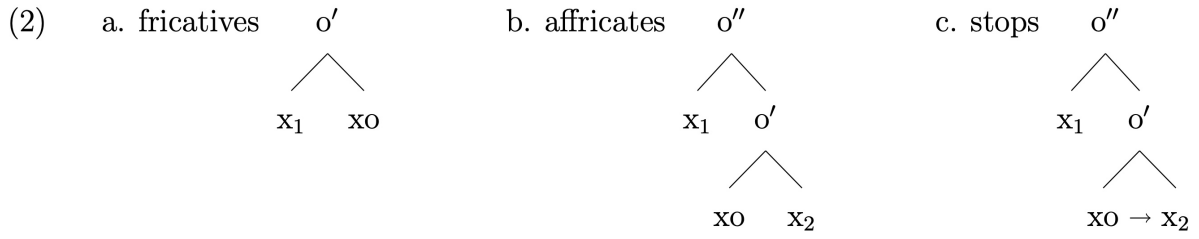
| [na**d**-il] | [na**tʰ**-il] | [na**s**-il] | [na**dʒ**-il] | [na**tʃʰ**-il] | _V |
|---|---|---|---|---|---|
| 'grain obj.' | 'piece obj.' | 'sickle obj.' | 'day obj.' | 'face obj.' | |
| | | [na**t˺**] (base for all five lexemes) | | | _# |

Neutralisation affects continuancy and phonation, but not place, with one exception: *Palato-alveolar* affricates [dʒ/tʃʰ] turn into *alveolar* stops. A full account should thus address: **Q1.** Why does *place* of articulation change in exactly this one case? **Q2.** Why is continuancy affected in _C/_#? **Q3.** Why is phonation affected?

GP takes final consonants as onsets (Kaye 1990; Harris & Gussmann 1998), followed by an empty nucleus (Ø); [na**t˺**] in (1) is really [na**t˺**Ø]. Final Ø is kept silent by parameter, as per the Phonological Empty Category Principle (ECP; Kaye, Lowenstamm & Vergnaud 1990, Charette 1991). Heo (1994) & Kim (1996) argue that Korean consonant clusters also contain an empty nucleus: CC is really CØC, with Ø trapped in an inter-onset domain and thus silent. Neutralisation uniformly applies before Ø and is argued to follow from Ø's inability to license too many elements (privative building blocks of melody, ~features) in its onset, e.g. **h** (noise/release). Yet Ø must also *add* the stop element **ʔ** to turn fricatives into stops, left unexplained. Thus, the alleged weak licensing power of Ø *cannot* explain neutralisation.

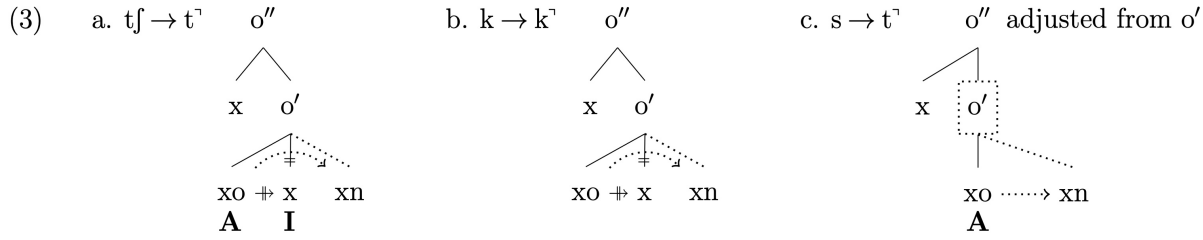
**Theory.** Following Pöchtrager (2006, 2021), stops, affricates, and fricatives have structures as in (2); xo represents a skeletal position that is an onset head, $x_1$/$x_2$ non-head skeletal positions, the arrow *control*. Control (as part of the ECP) keeps its sister silent. Lack of control (fricatives/affricates, 2a–b) encodes friction. Projection (o′/o″) follows the x-bar schema. The highest non-head position $x_1$ encodes laryngeal properties, cf. Pöchtrager (2006, 2021) and below. Attested lenition paths can be uniformly modelled as loss: Plosive > affricate implies loss of control. Affricate > fricative, loss of structure. Plosive > fricative, both.

(2)




**Proposal.** I concur with Heo (1994) and Kim (1996) on the distribution of Ø's, but disagree on what keeps them silent. I propose that *Ø, in order to be silenced, must be controlled by a preceding onset head.* As in stops (2c), control silences a position. Control always happens

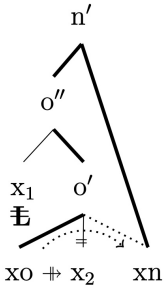
(3)



under sisterhood, thus Ø (represented by a nuclear head xn) needs to be the sister to xo. Since heads project maximally twice, structures with complement *and* specifier (stops, affricates) jettison the original complement along with the (palatality) element **I** it hosts. (That position of **I** is supported by evidence from Japanese and Brazilian Portuguese; Pöchtrager 2021). The nuclear head is integrated as complement, and the formerly *palatoalveolar* consonant ends up as *alveolar* (3a, previous page), with **I** now lost. (The element **A** represents alveolarity.)

Control of xn thus leads to a change in manner *and*, crucially, place of the preceding consonant. (Lack of release is concomitant with the integration of xn.) Stops like [k] in (3b) fare the same, but since there is control to begin with, little will happen except that the original empty $x_2$ is replaced by an empty nuclear head xn in need of being silenced, and thus the release is lost. The account makes two further predictions, both correct: (i) In fricatives like *s*, xo projects only once (2a). Thus, a following xn can be integrated/controlled *without* giving up any positions; this is shown by o′ in a dotted box (3c). No positions are added; the bar level of o′ is simply adjusted to o″ when xo and xn form a projection. Instead of being an afterthought, occlusion follows directly from the representation. (ii) Laryngeal distinctions, whose precise nature for Korean keeps being debated (Kim & Duanmu 2004), all merge as neutral before Ø. Integration of xn (to make it a sister to xo) requires a search that traverses the (more detailed) tree in (4), where onset and nucleus form a constituent (n′, left out in (3) for simplicity). Assume that this search path, bold in (4), must be cleared (no elements in dominated positions like $x_1$); we predict laryngeal properties (**L** in $x_1$) to be given up in favour of neutral (no laryngeal element; crossed out). Questions 1–3 above all receive the same answer: xn needs to be silenced. The proposal *links all changes* (palatoalveolar → alveolar; occlusion; laryngeal neutralisation) *to the same environment* (Ø) *in a non-arbitrary fashion.*

(4) ŋ̊ → k˺




**Further issues. F1.** The analysis extends beyonds obstruents: Korean [l] only occurs before Ø, [r] never does. [l] patterns with stops (as in Aitken's Law in Scots), while [r] can be given a structure similar to [s]; their affinity is supported by (diachronic) rhotacism. [r~l] thus parallels [s~t˺]. Nasals are stops in any case, thus licit finally. **F2.** Korean palatoalveolar affricates are sometimes referred to as palatal stops (Kim 1996; Sohn 1999; Song 2005). Lee (1999) and Shin, Kiaer & Cha (2013) argue for affricate status since the fricative release is audible and visible in spectrograms. Both camps agree that palatality is lost, so Q1 remains unaffected, while Q2 will be simplified (but not obviated) if indeed there are no affricates. **F3.** That an empty *nucleus* should integrate into a preceding *consonant* might seem surprising, but Heo (1994) also shows that the silencing of (internal) Ø's depends on the preceding onset, also suggesting a close connection between consonant and following xn.

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