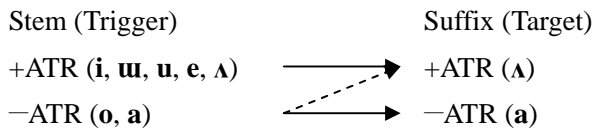


An Exception in Two Ways : Korean Vowel Harmony in Irregular Stems

Sometimes diachronic changes of language reveal what synchronic grammar is like, in a more dynamic way. Vowel harmony (VH) in Korean verbal conjugation is such a case. Some verbal suffixes have two allomorphs, *a*-initial for [-ATR] stems and Λ -initial for [+ATR] stems (e.g., *-a/\Lambda* ‘Declarative, Imperative’; *-as\Lambda/s\Lambda* ‘as, because’ etc.). Modern Korean is losing the *a*-initial forms, which means the leveling of suffix forms is in progress. However, it is not the case that all [-ATR] stems are selecting the Λ -initial forms at the same rate. Some [-ATR] stems accept non-harmonic Λ -initial suffix forms without hesitation, while the others still reject the non-harmonic forms. This preference for harmonic and non-harmonic forms is not determined by a single factor. In this paper, I focus on so-called *p*-irregular stems, which seem the most radical in accepting non-harmonic suffixes. To account for this ‘exceptional’ case, I will adopt Cophonology (Anttila 1997, 2002, Itô and Mester 1997, Inkelas 1998, and Inkelas and Zoll 2005), which is shown to provide a better account of the data than other recently proposed approaches, such as Lexically-Indexed Constraints (Smith 1997, Pater to appear).

(1) The direction of diachronic change



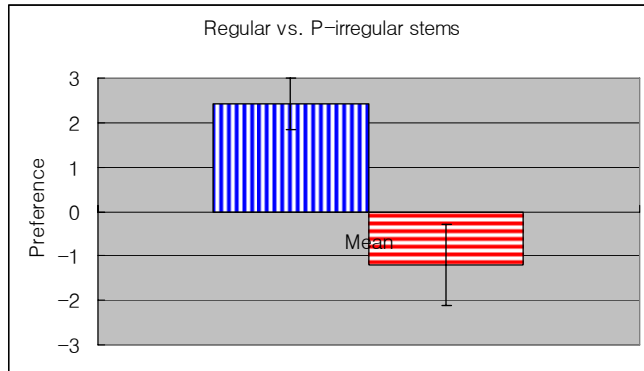
The two solid arrows in (1) illustrate the basic pattern of VH in Korean verbal conjugation. The dotted arrow is a new trend in Modern Korean. With a few exceptions, [-ATR] stems can take both [+ATR] and [-ATR] suffixes, though they still prefer harmonic [-ATR] suffixes to non-harmonic [+ATR] ones. *P*-irregular stems (2c and 2d) are different from other stems (2a and 2b) not only in that stem-final /p/ becomes [w] intervocalically, but in that they prefer non-harmonic [+ATR] suffixes.

(2) Regular vs. *p*-irregular stems : declaratives

- | | | | | |
|----|-----------------------------|---------------------------------------|----------------|-----------------------------|
| a. | tɕap-a/\Lambda | [tɕap a /\Lambda] | ‘catch | [- a] is preferred. |
| b. | puj\Lambda tɕap-a/\Lambda | [puj\Lambda tɕap a /\Lambda] | ‘take hold of’ | [- a] is preferred. |
| c. | komap-a/\Lambda | [komaw a /\Lambda] | ‘thank’ | [-\Lambda] is preferred. |
| d. | tɕ\Lambda\eta tap-a/\Lambda | [tɕ\Lambda\eta taw a /\Lambda] | ‘affectionate’ | [-\Lambda] is preferred |

This difference is confirmed by an experiment, where 10 native speakers of Korean participated. For given 96 stems, they were requested to choose one among -3(only non-harmonic form is possible), -2(non-harmonic form is much preferred), -1(non-harmonic form is a little bit preferred), ... , 3(only harmonic form is possible). The chart in (3) shows that they prefer harmonic forms for regular stems (vertical) but non-harmonic forms for *p*-irregular stems (horizontal).

(3) Preference values for regular vs. *p*-irregular stems



(4) Two approaches to *p*-irregularity in Korean (including VH)

a. Cophonology

Regular stem : ID [stop] \gg *VpV ... \gg AGREE [ATR] \geq ID [ATR]

P-irregular stem : *VpV \gg ID [stop] ... \gg ID [ATR] \geq AGREE [ATR]

b. Lexically-Indexed Constraints

*VpV_{*p*-irre} \gg ID [stop] \gg *VpV ... AGREE [ATR] \geq ID [ATR] \geq AGREE_{*p*-irre} [ATR]

In Optimality Theory, this exceptional case could be accounted for by Cophonology or Lexically-Indexed Constraints as in (4). I argue that Cophonology provides a better account for the following three reasons; First, it can account for the ‘historical’ change in a more natural way. In (4a), AGREE [ATR] is demoted in *p*-irregular stem cophonology, while it is still ranked higher than ID [ATR] in regular stem cophonology. However, in (4b), it does not seem easy to account for the emergence of AGREE_{*p*-irre} [ATR] at some point in Modern Korean. Second, as Song (1988) points out, different phonological procedures are found in declension and conjugation (e.g, hiatus avoidance, tensification after nasal, and consonant cluster simplification) which requires separate cophonologies for noun and verb classes. Third, as Inkelas and Zoll (2000: 75) argues, cophonology is more appropriate for the cases where subconstituents of a word are the domains of different phonologies. For example, [[[tcapi]_{N-rop}]_{Adj-Stem-a}]_{Word} \rightarrow [tcapirowa] ‘mercy-adjectivizer-Dec; merciful’ is problematic for Lexically-Indexed Constraints, but different cophonologies could apply to the two subconstituents (noun and adjective stem).

To conclude, when an exception shows more than one different behavior from the others, Cophonology gives a more natural account. In addition, it can account for historical divergence of subparts of lexicon in phonology, like Korean VH in *p*-irregular stems.