COMMENTS ON SINI KOIVALO-AYDIN'S ARTICLE

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Abstract. Sini Koivalo-Aydin questions the autosegmental method of marking the whole root for harmony, because in Finnish, this would produce incorrect forms in derivational suffixes after neutral vowel stems. She presents an alternative solution, where only one root vowel is marked for harmony. If all derivational suffixes, both productive and unproductive, are taken into account, it is not clear to me how this solution would handle front and back variation in a non-ad-hoc way. Furthermore, if only productive suffixes are considered, it remains to be seen to what extent her solution is needed.

Sini Koivalo-Aydin's paper (this volume) is thought-provoking, for it challenges an assumption commonly made by autosegmental theorists (e.g. Goldsmith, 1985). According to this assumption, the autosegmental feature F (=front), when it is present, is associated with the whole lexical entry rather than with individual vowels. A lexical rule then spreads this feature over all vowel positions of the stem. This means that once a stem is marked with F, this feature should spread to all the suffix vowels as well, both derivational and inflectional. But disyllabic stems that contain only so-called neutral vowels i,e (e.g. mene- 'go'), can pose a problem for the treatment of harmony in derivational suffixes. This is because some suffixes that follow such stems have back harmony (e.g. men+o 'going', noun), while others have front harmony (e.g. men+nyt 'gone', 'past').

Similar problems also arise after disyllabic stems where
the first vowel is neutral, the second vowel is ä, and
the stem-final ä is deleted before a derivational suffix
(e.g. siirtä+ä 'to move', siirt+o 'a move', siirt+y+ä 'to
be moved').

In her analysis, Koivalo-Aydin associates the
harmonic feature F with the second vowel of disyllabic
neutral vowel stems, and not with the whole lexical
entry. Moreover, only the marked vowel can spread the
feature F to other vowels. If the marked vowel is deleted
before the spreading of F takes place, the suffix vowel
obtains the default value B (=back). But if F is spread
before the deletion of the marked vowel, the suffix vowel
gets the feature F. - Koivalo-Aydin first deals with
derivational suffixes attached to neutral vowel stems
(3.), and then notes (4.) that the analysis also applies
to "mixed stems" like seinä 'wall', which get a back
derivational suffix vowel if the F-marked stem-final ä is
deleted, as in sein+us 'area by the wall'.

There was one crucial point in Koivalo-Aydin's
analysis that was unclear to me: what determines which
rule applies first -- the feature spreading rule, or the
vowel deletion rule? She mentions the possibility of a
syllable boundary between the stem and the suffix in the
underlying form me=ne+koon, where e-deletion is the
second rule. However, the suffix in me=ne+o, where e is
deleted first, must also be separated by a syllable
boundary, since eo is not a possible diphtong in Finnish.
This lack of clarity makes it difficult to see what
predictions the analysis makes about suffix vowels after
(originally disyllabic) stems where the final vowels have
been deleted. In Kiparsky (1973) -- a starting point for
Koivalo-Aydin -- the frontness vs. backness of the suffix
vowel after (surface) monosyllabic, neutral vowel stems
was determined by the first segment of the suffix: vowel-

initial suffixes were predicted to be back, and consonant-initial suffixes to be front. However, as Ringen (1980) has shown, this prediction is not correct. For example, the productive suffix -(U)Us is front if the deleted stem-final vowel is ä (e.g., selvä 'clear', and selv+yys 'clarity').

Koivalo-Aydin, as well as Kiparsky, make no distinction between synchronically productive and unproductive derivational processes. If all derivational suffixes are grouped together, a great deal of variation after (surface monosyllabic) neutral vowel stems must then be accounted for. This is illustrated in (1):

(1)
  a) heittä+ä 'to throw'   heitt+y+ä 'be thrown'
                             heitt+o   'a throw'
                             heitt+iö   'rascal'

  b) vetä+ä   'to pull'   vet+äis+tä 'pull quickly'
                             vet+o   'a pull'
                             vet+uri   'locomotive'

All the suffixes in (1) begin with a vowel. Yet, when attached to the same stem, some of these suffixes contain a front vowel, others have a back vowel. Moreover, some roots can have both a front and a back version of a suffix, with somewhat different meanings, e.g. mies (miehe-) 'man': miehuus 'manhood'; miehyys 'masculinity'. Still others have both varieties of suffixes without any effect on the meaning, e.g. pesä 'nest': pesue or pesye 'litter'; seinä 'wall': seinus or seinys (dial.) 'area by the wall'. And finally, the suffix -kkO may appear with a back vowel even after disyllabic neutral vowel stems, e.g. villi 'wild': villikko 'madcap'; kivi 'stone': kivikko 'rocky ground'; nimi 'name': nimikko 'namesake'. If the final stem-vowel is marked with F, as in Koivalo-

Aydin's analysis, and no vowel is deleted, frontness should spread to the suffix, but it does not.

Another approach to the problem of suffix harmony after neutral vowel stems is adopted in Anderson (1980). In his extensive study, Anderson looks for general principles that govern suffix harmony. He considers vowels to have different degrees of harmonic strength. Thus, the so-called neutral vowels are weakly front harmonic: if the stem contains a back vowel, it always wins the harmonic battle with a "neutral" vowel. Even individual vowels have different harmonic strengths. Anderson hypothesizes a harmonic scale, where the high "neutral" vowel i is at the weak end, and the other "neutral" vowel e has a somewhat more harmonic power. (For a phonetic basis of a dominance scale of palatal harmony, see Harms, 1982. His scale differs somewhat from Anderson's).

Two other factors (besides the harmonic strength of root vowels) affect the choice of suffix harmony in Anderson's system. One is the quality of intervening consonants - a factor that Wiik (1975) has also pointed out. According to Anderson, grave (=back and labial) consonants (except p) favor back harmony in the suffix. This could explain, for example, why -kkO tends to have a back vowel in words like nimikko 'namesake'. The other factor affecting the suffix harmony is the type of the suffix itself. For instance, out of derivational suffixes, those that are meaning transparent have the greatest tendency towards front harmony. Anderson succeeds both in predicting the harmony of the suffix vowel quite well, and in making the variation in the suffix harmony appear motivated.

Moreover, Anderson points out that paradigms excert pressure on the harmony of suffixes. Especially verbs form "harmonic families", as shown in (2). The following

examples are from Anderson, Appendix A.

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(2) peittä+ä   'to cover'   peitt+y+ä   'to be covered'
    piirtä+ä   'do draw'    piirt+y+ä   'to be marked,
                                         outlined'
    lentä+ä    'to  fly'    lenn+ähtä+ä 'to fly   up,
                                         soar'
    levä+tä    'to  rest'   lev+ähtä+ä  'to have  a
                                         rest'
    reve+tä    'to rend'    rep+äis+tä  'to tear'
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One could also think that a restructuring of the
derived form may play a role here: the suffix -iO, which
derives nouns from verbs, takes front harmony if the root
verb has front harmony, even though the suffixes -O and
-U are back when they are attached to the same verbal
roots. This is illustrated in (3).

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(3) keittä+ä   'to cook'    keitt+iö   'kitchen'
                            keitt+o    'soup'
    elä+ä      'to live'    el+iö      'living
                                        organism'
                            el+o       'life, living'
    itä+ä      'to sprout'  it+iö      'a spore'
                            it+u       'a sprout'
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If the suffix vowel i is re-interpreted as being part of
the stem, then the front harmonic ö naturally follows.

Let us return to Koivalo-Aydin's solution. Her aim
is to give a synchronic account of vowel harmony in
suffixes. Therefore, it would be advisable to consider
only those suffixes that are synchronically productive,
and treat the results of unproductive derivation as
separate lexical items. Karlsson (11982:250-268) presents
a survey of Finnish derivational suffixes and their
productivity. We see that Koivalo-Aydin has unproductive

suffixes in her material, e.g. -O, -Us. On the other hand, the reflexive-passive suffix -U, and -(U)Us, which derives property names from adjectives and nouns, are both productive, and they both agree in harmony with the the deleted stem-final vowel. This means that the standard autosegmental method of marking the whole root with F would be sufficient, at least for these suffixes. It remains to be seen if Koivalo-Aydin's solution is needed in a synchronically productive derivation.

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