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Diminutive Verbal Suffixes In Finnish

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1.   Introduction

The Finnish suffixes *-ahta*/*-aise* are traditionally labeled as aspectual. They are said to provide the verbal predicate with an interpretation of a *momentary action* as (1b,c) illustrate (Hakulinen 1941:46; Karlsson 1983:276; ISK 2005).

(1)   a.   *vinku-u*   'whines'
      b.   *ving-ahta-a* 'gives a brief whine or squeak'
      c.   *vink-aise-e* 'gives a brief whine or squeak'

    Given the descriptive labels *aspectual* and *momentary*, we should expect that either of the two suffixes can attach to **all** predicates within the same aspectual class. This is not the case.

(2)   a.   *Lapsi   nukku -i.* [1]
          child   sleep   -PAST.3SG
          'The child was sleeping.'

      b.   *Lapsi   nuk   -aht   -i.*
          child   sleep **-ahta** -PAST.3SG
          'The child fell asleep.'

      c. * *Lapsi   el   -äht   -i.*
          child   live **-ahta** -PAST.3SG

    (2) shows that only some stative predicates can occur with *-ahta*. This limited application of the two suffixes holds across all aspectual classes, although all examples are not included due to lack of space. Furthermore, the contribution of the suffixes to the interpretation of the predicate varies. In (1b) the acquired meaning is that of a brief action. In (2b) the acquired meaning is that of change of state. The lack of consistency in distribution and interpretation makes the traditional aspectual classification of the suffixes questionable.

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1 In Finnish, the morpho-phonological process of consonant gradation reduces geminate voiceless stops to single voiceless stops, and single voiceless stops t, p, k to d, v and Ø (cf. e.g. Kiparsky 2003: 117, among others). The process of vowel harmony alternates the front vowels y, ä, ö and back vowels u, a, o in suffixes (cf. e.g. Kiparsky 2003:114).

We argue that *-ahta/-aise* are [+quantized] diminutive modifiers of events, and that their aspectual effects are only epiphenomenal. Thus, the range of interpretations that *-ahta/-aise* contribute is a result of the interaction between the verbal predicate and the [+quantized] diminutive content of the modifier.

The reminder of the paper is organized as follows. §2 provides evidence for the modifier status of *-ahta*/*-aise*. §3 addresses the aspectual contribution of the suffixes. §3.1 accounts for their [+quantized] diminutive content and its interaction with aspectual classes. §3.2 presents further evidence against an aspectual classification of *-ahta*/*-aise*. In §4 we address further questions. §5 concludes the discussion.

2.   Evidence for the Modifier Status of the Suffixes

In this section we present evidence to support our claim that *-ahta*/*-aise* are modifiers. Due to lack of space, we give examples of either *-ahta* or *-aise* throughout the paper, as long as the differentiation between the two is not relevant for the argument at hand.

First, we discuss the optionality of the two suffixes. Under general assumptions, modifiers are considered optional, while heads are obligatory. While the lack of a modifier such as *-ahta* results in a difference of lexical meaning, the omission does not produce ungrammaticality, as felicitous examples (3a) versus (3b) illustrate.

(3)   a.   *Lapsi nukku -i.*
              child   sleep -PAST.3SG
              'The child was sleeping.'

       b.   *Lapsi nuk -aht -i.*
              child sleep -**ahta** -PAST.3SG
              'The child fell asleep.'

In contrast, the lack of a head such as Tense results in ungrammaticality, as in (4a) versus (4b).

(4)   a.   *Lapsi nukku -i.*
              child sleep -PAST.3SG
              'The child was sleeping.'

       b.   * *Lapsi nukku.*
               child sleep

Second, we note that heads are said to form binary pairs. Such opposing values may be marked overtly. In English tense marking the third person present and past inflections differ. This is shown in (5a) versus (5b).

(5) a.   *The boy play<u>s</u> the guitar.*
     b.   *The boy play<u>ed</u> the guitar.*

Alternatively, in binary opposition the presence or absence of a head induces opposing meanings. In English the first person present lacks overt temporal inflection while it carries past inflection, as in (6a) versus (6b).

(6) a.   *I play_ the guitar.*
     b.   *I play<u>ed</u> the guitar.*

In contrast, modifiers do not form binary pairs, and the absence of a modifier does not induce an opposite meaning. *-ahta/-aise* behave like modifiers. For instance, while *-aise* in (7a) induces the reading that the book was read hastily, the unmarked (7b) does not specify whether the reading was done hastily or not, i.e. it can mean either if provided with an appropriate context.

(7) a.   *Ignas   luk -ais - i   kirjan.*
          Ignas   read -**aise** -PAST.3SG   book.ACC
          'Ignas read a/the book hastily'

     b.   *Ignas luk -i   kirjan.*
          Ignas   read -PAST.3SG   book.ACC
          'Ignas read a/the book.'

A third distinguishing quality between heads and modifiers is the availability of periphrastic paraphrasing. A modifier allows for a synonymous paraphrase, while a head does not have such a synonymous option available. Again, *-ahta/-aise* act like modifiers: e.g. (7a) can be paraphrased as (8), where the use of *-aise* is substituted for by an adverbial modifier.

(8) *Ignas luk -i   kirjan   kymmenessä minuutissa.*
     Ignas   read -PAST.3SG book.ACC   ten.INESSIVE   minute. INESSIVE
     'Ignas read a/the book in ten minutes'

Interpretation: 'Ignas read a/the book, but since reading normally takes a long time and here the reading activity only lasted 10 minutes, he cannot have paid much attention to what he was reading'

In this section we have provided evidence for the modifier status of *-aise/ -ahta*. We have shown that the suffixes are optional, do not form binary pairs and allow for periphrastic paraphrasing, none of which are qualities of heads.

3.   The Aspectual Contribution of *-ahta/-aise*

This section addresses the aspectual contributions of the suffixes. §3.1 establishes the [+quantized] diminutive content and its interaction with aspectual classes. §3.2 provides additional evidence against an aspectual classification of the suffixes.

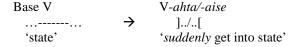### 3.1.   *-ahta/-aise* are [+q] Diminutive Modifiers of Events

We argue that *-aise/-ahta* are [+quantized] diminutive modifiers of events (cf. Armoskaite and Sherkina 2008, Progovac 2005, Wiltschko 2006) and that their aspectual effects are epiphenomenal. The diminutive content of the suffixes is sensitive to lexical aspect, here assumed to be temporal structure internal to an event (Guéron and Lecarme 2004, Rothstein 2004).

Relying mainly on Rothstein (2004:12), we assume four aspectual classes. States are events without either stages or endpoints (e.g. *sleep, love*). Activities are events with stages, but lack endpoints (e.g. *jump, run*). Accomplishments have both stages and endpoints (e.g. *read a book, build a house*). Finally, achievements have only endpoints (e.g. *arrive, win*).

In what follows, we show that the Finnish suffixes interact differently with the four aspectual classes, and that it is this interaction that gives rise to a restricted range of interpretations. Recall that the lack of consistency in distribution and motivation for interpretation make the traditional aspectual classification of the suffixes problematic, as discussed in §1. The advantage of our approach is that it allows us to *predict* both the distribution and the range of interpretations. What the suffixes do is cut out a bounded portion of an event and, thus, make it quantized, in the sense of Krifka (1998). However, the way the quantization plays out in each aspectual class is subtly distinct.

When the diminutive [+q] applies to a stative predicate, the quantized event is interpreted as a change of state, necessarily sudden, as (9) shows schematically. The example in (10) illustrates the schematic model.

(9)   **Schematic model I**

Base V   V-*ahta/-aise*
 …-------…   →   ]../..[
  'state'   '*suddenly* get into state'

(10) a. *Lapsi nukku -i.*
child sleep -PAST.3SG
'The child was sleeping'

b. *Lapsi nuk -aht -i.*
child sleep -**ahta** -PAST.3SG
'The child fell asleep'

When the diminutive [+q] applies to an activity verb with discrete stages, the quantized event is interpreted as one point event of the activity, necessarily sudden and brief. The example in (12) illustrates the second schematic model.

(11) **Schematic model II**

Base V   V-*ahta/-aise*
...--/--/--/--/--...   →   ]../..[
'discrete stages activity'   '*one brief & sudden* instance of an activity'

(12) a. *Lapsi hyppäs -i.*
child jump -PAST.3SG
'The child jumped'
Note: either once or many times

b. *Lapsi hyp -äht -i.*
child jump -**ahta** -PAST.3SG
'The child jumped'
Note: only once

When the diminutive [+q] applies to an accomplishment verb without discrete stages, the quantized event is interpreted as necessarily brief (and insignificant). The example in (14) illustrates the third schematic model.

(13) **Schematic model III**

Base verb   V-*ahta/-aise*
…------->…   →   ]../..[
'non-discrete stages activity' 'a brief, non-chalant instance of the activity'

(14) a. *Ignas luk -i   kirjan.*
Ignas read -PAST.3SG book.ACC
'Ignas read a/the book'

b. *Ignas luk -ais -i kirjan*.
Ignas read -**aise** -PAST.3SG book.ACC
'Ignas read a/the book hastily, without paying much attention'

The diminutive [+q] does not apply to achievements, because achievements are inherently quantized and minimal events.[2] Examples in (16) illustrate the ungrammaticality of model IV.

(15) **Schematic model IV**

Base verb   Derived verb
]../..[→   n.a.
'minimal point event'

(16) a.   *huom -ais -i   b.   *saav -aht -i
          notice -**aise** -PAST.3SG   arrive -**ahta** -PAST.3SG

     c.   *taju -ais -i   d.   *tunt -ais -i
          realize -**ais**e -PAST.3SG   recognize -**aise** -PAST.3SG

The table bellow summarizes the interpretations that arise based on the interaction of the [+quantized] diminutive *-ahta/-aise* and the aspectual classes.

(17)

Aspectual Class	[dim +q]	Interpretation
States	yes	sudden change of state
Activities	yes	event happened once, was brief & sudden
Accomplishments	yes	a brief event happened once suddenly & briefly[3]
Achievements	no	n.a.

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[2] Akin to how one can only have either 'some' or 'a/the' on a noun phrase, but not both.
    (i)   Mary saw some man.
    (ii)   Mary saw a man.
    (iii)   *Mary saw some a man.

[3] It also has the interpretation of being insignificant. We do not address this evaluative interpretation here, but assume that it can be derived based on coercion of discrete stages onto something that does not lend itself easily to discreteness of stages. Note that this is the only subset that gets the pejorative interpretation *without* any contextual input.

Aspectual classification is organized based on the internal structure of events. Once we take into account the internal structure of a given event, we can predict the effect of the [+quantized] diminutive modifier *-ahta/-aise*. The suffixes have aspectual effects in that the affixed predicates become quantized events, but we argue that the aspectual effects are secondary and derivable form the [+q] diminutive content.

Furthermore, if we treat the suffixes as [+quantized] diminutive modifiers, their optionality and reference to seize/length of the event fall out from their lexical specification. If the suffixes are treated as aspectual morphemes, the optionality and reference to seize/length have to be stipulated, since these qualities are not inherently aspectual, i.e. do not pertain to the internal structure of an event.

3.2   Evidence Against Aspectual Label

In this section, we provide more evidence against the traditional aspectual classification of *-ahta/-aise*.

Perhaps the strongest argument against the use of the aspectual label for *-ahta*/*-aise* is the lack of consistency in the distribution of the suffixes within aspectual classes. If *-ahta/-aise* were dedicated aspectual morphemes, they should apply to any predicate within a given aspectual class (akin to how dedicated tense morphemes apply to all verbs, dedicated determiners take all nouns, etc.). As examples below indicate, this is not the case.

In (18) we see that some stative verbs are selected by either *–ahta* or *-aise*, and others are ungrammatical with either.

(18)   States

    a.   *Lapsi nuk -aht -i.*　　　　　b.   *Ystävä viiv -äht-i*
       child sleep -**ahta** -PAST.3SG　　　　friend stay -**ahta** - PAST.3SG
       'The child fell asleep'　　　　　　　'The friend stopped by'

    c.   **el   -äht   -i*　　　／ *el   *-äis -i*
       live -**ahta** -PAST.3SG　　live -**aise** -PAST.3SG

    d.   **tied -äht -i*　　　／ **tiet -äis -i*
       know -**ahta** -PAST.3SG　／ know -**aise** -PAST.3SG

(19) illustrates that each of *-ahta* or *-aise* select for some activity verbs, while others remain ungrammatical with either.

(19)   Activities

    a.   Lapsi hyp *-äht*   -i.
         child   jump -**ahta** -PAST.3SG
         'The child jumped once'

    b.   Lapsi potk *-ais* -i   palloa.
         child kick -**aise** -PAST.3SG ball. ACC
         'The child gave the ball a kick'

    c.   *kiiv   *-äht* -i   / * kiip *-äis* -i
         climb -**ahta** -PAST.3SG   climb -**aise** -PAST.3SG

    d.   *työnn *–äht* -i   / *työnt *-äis* -i
         push -**ahta** -PAST.3sg   push -**aise** - PAST.3sg

The data in (18) and (19) is unexpected and difficult to explain if the morphemes are considered aspectual. Under our analysis, treating the suffixes as [+ q] diminutive modifiers, this problem does not arise. Since modification is an optional operation, application of the modifiers may be sensitive to particular lexical content of the entities it aims to modify.

Furthermore, lexicalizations of the diminutive uses would be unexpected of dedicated aspectual morphemes, but is allowed if *-ahta/-aise* are treated as diminutive modifiers. Below we exemplify the use of *-ahta/-aise* in derivation of new lexical entries.

(20) a.   *häipy*   *-i*   *häiv*   *-äht* *-i*
          disappear- PAST.3SG   disappear -**ahta** -PAST.3SG
          'disappeared'   'appeared fleetingly'

    b.   *puhu* *-i*   *puh*   *-aht* *-i*
          speak -PAST.3SG   speak -**ahta** -PAST.3SG
          'spoke'   'made a huffing sound'

4.   Further Questions

In sections §2 and §3 we have made the case for the re-classification of *-ahta/ -aise* into [+q] diminutive modifiers and have shown that their aspectual effects are secondary. However, pending questions still remain. In this section we discuss problems that we have resolved only partially: sensitivity for argument structure and the level of merge.

4.1 *-ahta/-aise* Sensitivity to Argument Structure

As a working hypothesis, we posit that *-ahta/-aise* may be sensitive to the argument structure of the predicates to which they attach. Largely, this appears to be true.

On one hand, *-ahta* selects for unaccusative predicates (ones underlyingly without subject), as in (21) and does not allow transitive predicates, as in (22).

(21)   a.   *kiehu -u*
            boil   -PRES.3SG
            '(it) boils'

        b.   *kieh -ahta -a*
            boil **-ahta** -PRES.3SG
            '(it) comes to a boil'

(22)   a.   *sito -o   solmun*
            tie   - PRES.3SG   knot.ACC
            '(s/he) ties a knot '

        b.   **sid -ahta -a   solmun*
            tie **-ahta** -PRES.3SG knot.ACC

-aise, on the other hand, selects for transitive predicates (those with subject and object), as in (23) and does not permit unaccusative ones, as in (24).

(23)   a.   *sito -o   solmun*
            tie -PRES.3SG knot.ACC
            '(s/he) ties a knot '

        b.   *sit -aise -e   solmun*
            tie **-aise** -PRES.3SG knot.ACC
            '(s/he) quickly ties a knot'

(24)   a.   *kiehu -u*
            boil   -PRES.3SG
            '(it) boils'

        b.   **kieh -aise -e*
            boil **-aise** -PRES.3SG

However, both *-ahta* and *-aise* select for subsets of unergative predicates

(ones underlyingly without subject), as shown in (25).

(25) a. *naura -a*
     laugh -PRES.3SG
     '(s/he) laughs'

    b. *naur -ahta -a*
     laugh **-ahta** -PRES.3SG
     '(s/he) gives a brief laugh'

    c. **naur -aise -e*
     laugh **-aise** - PRES.3SG

    d. *pese -e*
     wash -PRES.3SG
     '(s/he) washes'

    e. *pes -aise -e*
     wash **-aise** - PRES.3SG
     '(s/he) washes quickly'

    f. **pes -ahta -a*
     wash **-ahta** -PRES.3SG

We have yet to establish what factors influence the selection of certain unergatives by *-ahta*, and what factors the selection of certain unergatives by *-aise*. Our findings so far are summarized in the table below.

(26)

Type of Predicate	-ahta	-aise
unaccusative +object, - subject	yes	no
transitive +object, +subject	no	yes
unergative (+object), + subject	yes	yes

4.2 *-ahta/-aise* Level of Merge

We have classified *-ahta/-aise* as [+q] diminutive modifiers, but we have not addressed their syntactic position. In this section we discuss evidence of merge level of the two prefixes.

  In Finnish, roots cannot stand on their own. As the contrast between (27) and (28) indicates, formation of a grammatical verbal stem requires a vowel (**bolded**) between the root and the inflection (Kiparsky 2003:146).

(27) *kein, *vet   …
     swing, pull

(28) a.   kein -**u**   -u
           swing -vowel -PRES.3SG
           's/he swings'

     b.   vet -**ä**   -ä
           pull -vowel -PRES.3SG
           's/he pulls'

We propose that the said vowel is an indication of a stem boundary.[4] The exact distribution of the vowel remains to be accounted for, but we tentatively use the vowel as a test for affix merge level. With the exception of *-ahta/-aise,* the vowel intervenes between all verbal suffixes and the root.

(29) heil -**u**   -n
     swing -**vowel** -PRES.1SG
     'I swing/sway/rock.'

(30) h*eil* -**u**   -ile   -n
     swing -**vowel** -FREQUENTATIVE -PRES.1SG
     'I keep swinging/swaying/rocking.'

(31) heil -**u**   -ta   -n
     swing -**vowel** -CAUSE -PRES.1SG
     'I make (something) swing/sway/rock.'

Crucially, the vowel *never* intervenes between the root and *-ahta/-aise.*

(32) a.   heil -ahda -n   b.   pes -aise -n
          swing -**ahta** -PRES.1SG   wash -**aise** -PRES.1SG
          'I swing/sway/rock once'   'I wash hastily'

     c.   kein -ahta -a   d.   vet -äise -e
          swing -**ahta** -PRES.3SG   pull -**aise** -PRES.3SG
          's/he swings once'   's/he pulls once'

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[4]Kiparsky (2003) analyses stem and word level morpho-phonology, but does not discuss root level morpho-phonology. Brattico (2005) discusses Finnish roots, but does not discuss any phonological reflection of the root boundary.

The vowel does intervene between –*ahta/-aise* and other affixes.

(33)   *heil*   *-ahd* *-**u***   *-ta*   *-n*
      swing **-ahta** -vowel -CAUSE - PRES.1SG
      'I make swing/sway/rock once'

(34)   *pes*   *-ais* *-**u***   *-ta-*   *-n*
      wash **-aise** -vowel -CAUSE -PRES.1SG
      'I make (someone) wash (something) quickly'

(35)   *heil*   *- ahd* *- **u***   *- tt*   *-ele* *-n*
      swing **-ahta** -vowel -CAUSE -FREQ -PRES.1SG
      'I keep making (something) swing/sway/rock repeatedly'

Given the position of the vowel relative to *-ahta/-aise*, we tentatively conclude that the two suffixes may be root level modifiers. In order to provide more solid evidence, we first need to account for the distribution of the stem vowel and find independent evidence for its role as a stem boundary indicator, which is beyond the scope of this paper.

5.   Conclusion

In this paper, we have looked at two Finnish suffixes, *-ahta/-aise*. We have questioned the traditional aspectual classification of these suffixes, based on the lack of consistency in distribution and interpretation. We have argued that the two suffixes are [+q] diminutive modifiers, since this allows us to: (i) account for their role in the modification of event size/length; and (ii) predict their distributive and interpretative peculiarities with regard to aspectual classes. We have further shown that once the aspectual label is dropped, other lexical uses of the suffixes are no longer surprising and fall out from the modifier status.

Although we have made progress in exploring how *-ahta/-aise* are sensitive to the argument structure of the unaccusative and transitive predicates they attach to, we have yet to provide a definitive analysis about their puzzling interaction with unergatives. We have also made headway in establishing the merge level of the suffixes and have good reason to speculate that *-ahta/-aise* are root level modifiers. However, in order to complete the argument for root level modification, we first need to gain better understanding of the structure of Finnish stem.

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