Phonology-Morphology Interface
Jadertina Summer School
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Handout 2

1 Phonologically-conditioned suppletive allomorphy (part 2)
1.1 Syllable-counting allomorphy
1.1.1 Estonian: The output-optimization approach

(1)   Syllable-counting suppletive allomorphy in Estonian [Kager 1996]:

   a. Genitive plural: *-te* occurs with even-syllable stems; *-tte* occurs with odd-syllable stems:

[ˈvisa-<u>te</u>]	(no gloss)	[ˈparaˈja-<u>tte</u>]	(no gloss)
[ˈatmiˈrali-<u>te</u>]	'admiral'	[ˈraamaˈtu-<u>tte</u>]	'book'

   b. Partitive plural: *-sit* occurs with even-syllable stems; *-it* occurs with odd-syllable stems:

[ˈvisa-<u>sit</u>]	(no gloss)	[ˈparaˈja-<u>it</u>]	(no gloss)
[ˈatmiˈrali-<u>sit</u>]	'admiral'	[ˈraamaˈtu-<u>it</u>]	'book'

   c. Partitive singular: *-t* or *-Ø* occurs with even-syllable stems; *-tt* occurs with odd-syllable stems:

[ˈema-<u>Ø</u>]	'mother'	[ˈraamaˈtu-<u>tt</u>]	'book'
[ˈteleˈfoni-<u>Ø</u>]	'telephone'	[ˈnumisˈmaatikˈku-<u>tt</u>]	'numismatics'

(2)   OT constraints in Kager's (1996) analysis:

   a. FT-BIN: Feet are binary under syllabic or moraic analysis

   b. PARSE-2: One of two adjacent stress units (σ, μ) must be parsed by a foot

   c. ALIGN-HD-L: Align (PrWd, L, Head (PrWd), L)   (Effect: initial main stress)

   d. ONSET: Syllables have onsets

   e. ALIGN-ST-R: Align (Stem, R, Foot, R): Each right stem edge coincides with a
                          right foot edge

   f. PK-PROM: Peak(x) > Peak(y) if |x| > |y|

(3) Genitive plural (even stem):

/visa,{-te/-tte}/	FT-BIN	PARSE-2	ALIGN-HD-L	ONSET	ALIGN-ST-R	PK-PROM
a. ☞[(ví.sa)-te]						L
b. [(vísa-t)-te]					*!	L
c. [vi(sá-t.te)]			*!		*	H
d. [(ví).(sà-t.te)]	*!				*	L, H

(4) Genitive plural (odd stem):

/paraja, {-te/-tte}/	FT-BIN	PARSE-2	ALIGN-HD-L	ONSET	ALIGN-ST-R	PK-PROM
a. ☞[(pá.ra)(jà-t.te)]					*	L, H
b. [(pá.ra)(jà-te)]					*	L, L!
c. [pa.(rá.ja)-te]			*!			L
d. [(pá.ra).ja-te]		*!			*	L
e. [(pá.ra)(jà)-te]	*!					L, L
f. [(pá.ra.ja)-te]	*!					L

(5) Partitive plural (even stem):

/visa,{-sit/-it}/	FT-BIN	PARSE-2	ALIGN-HD-L	ONSET	ALIGN-ST-R	PK-PROM
a. ☞[(ví.sa)-sit]						L
b. [(ví.sa-i)-t]					*!	L
c. [(ví.sa)-it]				*!		L
d. [vi(sá-i)t]			*!		*	H
e. [(ví)(sà-i)t]	*!				*	L, H

(6) Partitive plural (odd stem):

/paraja -{-sit/-it}/	FT-BIN	PARSE-2	ALIGN-HD-L	ONSET	ALIGN-ST-R	PK-PROM
a. ☞[(pá.ra).(jà-i)t]					*	L, H
b. [(pá.ra).(jà-si)t]					*	L, L!
c. [(pá.ra).(jà-.i)t]				*!	*	L, L
d. [pa.(rá.ja)-sit]			*!			L
e. [(pá.ra).ja-sit]		*!			*	L
f. [(pá.ra).ja-it]		*!			*	L
g. [(pá).(r à.ja)-sit]	*!					L, L
h. [(pá.ra).(jà)-sit]	*!					L, L

1.1.2 Problematic examples

(7)　In Tzeltal (Mayan, Mexico; Walsh Dickey 1999) the perfective is marked by –*oh* [o] with monosyllabic stems and with –*εh* [ε] elsewhere:

[s-ku'tʃ-<u>oh</u>]	'she has carried it'	[s-kutʃ-la'j-<u>εh</u>]	'she was carrying it repeatedly'
[s-ma'h-<u>oh</u>]	'he has hit something'	[s-makli'j-<u>εh</u>]	'he has listened to something'
[j-i'l-<u>oh</u>]	'he has seen something'	[s-makli'n-<u>εh</u>]	'he has fed someone'
[s-jo'm-<u>oh</u>]	'he has gathered it'	[s-majli'j-<u>εh</u>]	'he has waited for someone'

(8)　In Kaititj (Pama-Nyungan, Australia; Koch 1980) the ergative/instrumental/ locative suffix occurs as [ŋ] with disyllabic stems and as [l] with larger stems:

[a'ki-ŋ]	'head'	[a'liki-l]	'dog'
[il'tʲi-ŋ]	'hand'	[a'ʈuyi-l]	'man'
[aN'mi-ŋ]	'red ochre'	[a'ɣirki-l]	'sun'
[ayn'pi-ŋ]	'pouch'	['ʎuNpiri-l]	'forehead'

(9)　In Nakanai (Austronesian, New Britain; Johnston 1980) the nominalizing affix surfaces as [-il-] when it can be in the first syllable and adjacent to main stress and [-la] occurs elsewhere:

[au]	'steer'	[vi-gile-muli]	'tell a story'
[il-au]	'steering'	[vi-gile-muli-muli-la]	'story'
[peho]	'die'	[vi-kue]	'fight (verb)'
[p-il-eho]	'death'	[vi-kue-la]	'fight (noun)'
[oso]	'dive'	[go-ilo]	'go in'
[il-oso]	'diving'	[go-ilo-la]	'entrance'

(10)　Paster (2005) uncovers a number of examples like the ones in (5-7). She proposes that such suppletive allomorphs require subcategorizations, e.g.:

a. Subcategorizations for Tzeltal

$[[\#\sigma\#]_{\text{VERB STEM}}\ oh_{\text{PERF. SUFFIX}}]_{\text{PERF VERB}}$

$[[\quad]_{\text{VERB STEM}}\ \varepsilon h_{\text{PERF. SUFFIX}}]_{\text{PERF VERB}}$

b. Subcategorizations for Nakanai

$[il_{\text{NOMINALIZING PREFIX}}\ [V, '\sigma]_{\text{VERB STEM}}\quad]_{\text{NOUN}}$

$[\ [\quad]_{\text{VERB STEM}}\ la_{\text{NOMINALIZING SUFFIX}}\ ]_{\text{NOUN}}$

(11) A reanalysis of Estonian genitive plural allomorphs with subcategorizations:

[[Ft#]~VERB STEM~ *te*~GEN PLURAL. SUFFIX~]~GEN PLURAL WORD~

[[   ]~VERB STEM~ *tte*~GEN PLURAL. SUFFIX~]~GEN PLURAL WORD~

(12) Possible conclusions:

a. Certain cases of syllable-counting allomorphy require OT-style output optimization, while others do not (see Booij 1998, who espouses a similar view).

b. Subcategorization accounts for all cases of syllable-counting allomorphy (Paster 2005)

1.2 A case study from German: The distribution of *-keit* and *-heit*

(13) There are two nominalising suffixes in German with a similar function [see Fleicher & Barz 1995]:

adjective		*adjective+keit*	
ewig	'eternal'	Ewig-keit	'eternity'
frei	'free'	Frei-heit	'freedom'

<u>Notes</u>:
● The suffix *-heit* also occurs after noun stems (e.g. *Kindheit* 'childhood' *Menschheit* 'humanity'), but these examples are rare. Both *-heit* and *-keit* are highly productive after adjective stems.

● Some of the descriptive and theoretical literature on *-heit* and *-keit*: Fleischer & Barz (1995), Giegerich (1985), Wiese (1996), Hall (1998)

(14) The suffix *-keit* occurs after adjective stems which end in a trochaic foot:

adjective		*adjective+keit*	*adjective+heit*	
ewig	'eternal'	Ewig-keit	*Ewig-heit	'eternity'
heiser	'hoarse'	Heiser-keit	*Heiser-heit	'hoarseness'
sauber	'clean'	Sauber-keit	*Sauber-heit	'cleanliness'
übel	'nauseous'	Übel-keit	*Übel-heit	'nausea'
eitel	'vain'	Eitel-keit	*Eitel-heit	'vanity'
tapfer	'brave'	Tapfer-keit	*Tapfer-heit	'bravery'

(15) The suffix *-keit* also occurs after a morphologically-complex base. In all of these examples stress falls on the first stem syllable and the suffixes are not stressed.

adjective		adjective+keit	adjective+heit	
ehr-bar	'respectable'	Ehr-bar-keit	*Ehr-bar-heit	'respectability'
ge-lehr-sam	'erudite'	Ge-lehr-sam-keit	*Ge-lehr-sam-heit	'erudition'
freund-lich	'friendly'	Freund-lich-keit	*Freund-lich-heit	'friendliness'
lieb-lich	'lovely'	Lieb-lich-keit	*Lieb-lich-heit	'loveliness'
mächt-ig	'powerful'	Mächt-ig-keit	*Mächt-ig-heit	'power'

(16) After adjective stems ending in an iamb *-heit* occurs:

adjective		adjective+keit	adjective+heit	
privat	'private'	*Privat-keit	Privat-heit	'privatness'
gespannt	'tense'	*Gespannt-keit	Gespannt-heit	'tenseness'
markiert	'marked'	*Markiert-keit	Markiert-heit	'markedness'
exakt	'exact'	*Exakt-keit	Exakt-heit	'exactitude'
korrekt	'correct'	*Korrekt-keit	Korrekt-heit	'correctness'
grotesk	'preposterous'	*Grotesk-keit	Grotesk-heit	'preposterousness'

(17) After a monosyllabic base *-heit* occurs:

adjective		adjective+keit	adjective+heit	
neu	'new'	*Neu-keit	Neu-heit	'newness'
frei	'free'	*Frei-keit	Frei-heit	'freedom'
schön	'beautiful'	*Schön-keit	Schön-heit	'beauty'
blind	'blind'	*Blind-keit	Blind-heit	'blindness'
taub	'deaf'	*Taub-keit	Taub-heit	'deafness'
krank	'sick'	*Krank-keit	Krank-heit	'illness'

(18) The contexts in which *-heit* and *-keit* occur can be captured directly in the respective subcategorizations:

a. -keit: $[[(\prime\sigma\ \sigma)_F\#]_{\text{ADJECTIVE STEM}}\quad keit_{\text{NOMINALIZING SUFFIX}}]_{\text{NOUN}}$

b. -heit: $[\quad]_{\text{ADJECTIVE STEM}}\quad heit_{\text{NOMINALIZING SUFFIX}}]_{\text{NOUN}}$

(19)   To what extent are the following examples problematic for the subcategorizations in (18)?

	adjective		*adjective+keit*	*adjective+heit*	
selten	'seldom'	*Selten-keit	Selten-heit	'seldomness'
offen	'open'	*Offen-keit	Offen-heit	'openness'
trocken	'dry'	*Trocken-keit	Trocken-heit	'dryness'
albern	'silly'	*Albern-keit	Albern-heit	'silliness'
nüchtern	'sober'	*Nüchtern-keit	Nüchtern-heit	'sobriety'
entschlossen	'decisive'	*Entschlossen-keit	Entschlossen-heit	'decisiveness'
besoffen	'drunk'	*Besoffen-keit	Besoffen-heit	'drunkeness'

(20)   How could the subcategorizations in (18) be modified to account for the data in (19)?

a. -heit:

b. -keit:

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