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The Foot in Truncation Birgit Alber

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1. Evidence for feet and their internal structure

- typological evidence: rhythmical grouping properties found across languages

e.g. Prince (1990), Hayes (1995): asymmetrical foot inventory:

Syllabic trochees: ($\sigma\sigma$)
Moraic trochee: (H), (LL)
Iamb: (LH), (LL)

- templatic morphology as in reduplication, truncation etc.: assumed to correspond to metrical feet

The moraic trochee in Japanese Rustic Girl's Names: (H) or (LL)

(1)	Japanese Rustic Girls' Names (Mester 1990)		
	truncated name	template	Source name
	o-Yuu	(H)	Yuuko
	o-Ran	(H)	Ranko
	o-Yuki	(LL)	Yukiko
	o-Kae	(LL)	Kaede
	o-Kinu	(LL)	Kinue
	o-Mido	(LL)	Midori

(other evidence for feet and their internal structure: foot-related phonological processes, cf. Alber 2005b for an overview; psycholinguistic evidence for feet, e.g. Domahs, Wiese, Bornkessel-Schlesewsky & Schlesewsky 2008, Knaus & Domahs, in press)

2. Truncation morphemes

Foot-like size, but high degree of variability

2.1 The maximal foot (σH): not a well-formed trochee in many foot-typologies (Hayes 1995)

(2)	Spanish hypocoristics: (σH)-type (Piñeros 1998, 2000)	
	Truncated name	Source name
	Fér.nan	Fer.nán.do
	Bér.nar	Ber.nár.do
	Xé.sus	Xe.sús

2.2 The minimal word (H): not a prosodic category

(3)	Central Alaskan Yupik proximal vocative (Woodbury 1985)	German hypocoristics (Wiese 2001)
	Pattern A: (H)	Source name Truncation Source Name
	Aŋ	Aŋukaɤnaq And-i An.dre.as
	Nup	Nupiɣaq Gab-i Ga.bri.e.le
	Kaɭ	Kalixtuq Will-i Wil.helm
	Is	Izailyaq Gert-i Ger.trud
	Kauk	Kaukaɣ Hans-i Hans

2.3 The degenerate foot (L): assumed to be extremely marked in most foot-typologies (Hayes 1995)

(4)	Italian CV-hypocoristics (Alber 2007)
	truncated name Source name
	Fra Fran.ces.ca
	Cri Cris.ti.na
	Lu Lu.i.sa
	Ste Ste.fa.ni.a

2.4 The wellformed foot

2.4.1 The moraic trochee in Japanese Rustic Girl's Names: (H) or (LL)

2.4.2 The quantity sensitive iamb in Central Alaskan Yupik, Pattern B: (LH)

(5) Central Alaskan Yupik proximal vocative, Pattern B (Woodbury 1985, Weeda 1992)

a. source name truncated down to initial LH sequence

Aŋuk	Aŋukaɤnaq
Nupix, Nupik	Nupiɣaq
Kalik	Kalixtuq
Cakat	Caɣataaɤq
Akiuk	Akiɣaɣɤia

b. When first syllable of source name is H → schwa-epenthesis to obtain LH template

Qa.kəf	Qakfaɣaɣia	*Qakfaɣ
A.ɤən	Aɣnaɣaɣaq	*Aɣnaɣ
Nə.ŋəq	Nəŋqəɣaɣia	*Nəŋqəɣ
L H		H H

2.5 TRUNC morpheme variable in size

(6)	Southern Italian vocatives: from first syllable to stressed vowel (Alber 2007)
	Truncated name Source name
	Bá Bár.ba.ra
	Car.mé Car.mé.la
	An.to.né An.to.né.la

(13) Two families of *size restrictor constraints* (SRCs) (Spaelti 1997)
= M-constraints in TETU-ranking generating a template

- SRC $\sigma\sigma$: cover term for constraints generating disyllabic templates: FT-BIN, PARSE- σ , ALLFTLEFT
- SRC σ : cover term for constraints generating monosyllabic templates:

Various proposals in the literature:

ALIGN(σ , PrWd): \forall syllable \exists prosodic word such that the left edge of the prosodic word and the left edge of the foot coincide

(McCarthy&Prince 1993, Spaelti 1997)

*STRUC- σ : no syllables

(Urbanczyk 1999, 2006, Walker 2000, 2002, Riggle 2006)

COINCIDE- σ_1 : every segment of the output is in the first syllable of some morpheme

(Alber 2001, Lappe, 2003, 2005, 2007)

OO-DEP: for CV-template in reduplication: every segment in the reduplicated form have a correspondent in the base

(Gouskova 2003)

TROCH and IAMB: 'Feet must be head-initial' and 'Feet must be head-final' = feet must be monosyllabic (A. Prince, p.c.)

3.1 The maximal foot = maximal disyllabic template

(14) Spanish hypocoristics: type (σ H)
MAX-IO >> SRC $\sigma\sigma$ >> MAX-BT

/Fernando/	MAX-IO	SRC $\sigma\sigma$	MAX-BT
a. (Fer)		*!	nando
b. (Fer.na)			ndo!
☞ c. (Fér.nan)			do
d. (Fér.nan)do		*!	

N.B.: *Fér.nand* is out because of additional Coda-restrictions (cf. Piñeros 1998, 2000)

The maximal foot is precisely what we expect under the GTT analysis: a disyllabic template pushed to its maximum by MAX-BT

3.2 The submaximal foot = disyllabic template plus NOCODA restriction

(15) Italian disyllabic hypocoristics: (σ L)

Vále	Valentína, Valentíno
Fránce	Francésca
Féde	Federíca
Símo	Simóna
Mánu	Manuéla
Mádda	Maddaléna

(16) NoCODA_w >> MAX-IO >> SRCσσ >> MAX-BT

NoCODA_w:¹ word-final syllables do not have codas.

/Valentino/	NoCODA _w	MAX-IO	SRCσσ	MAX-BT
☞ b. (Vá.le)				ntino
f. (Vá.len)	*!			tino

3.3 The minimal word (H) = maximal monosyllabic template

(17) Central Alaskan Yupik proximal vocative, Pattern A:
MAX-IO >> SRCσ >> MAX-BT

/Aŋukaʌnaq/	MAX-IO	SRCσ	MAX-BT
☞ a. Aŋ (‘H)			*
b. Aŋúk (L‘H)		*!	

here, too: the maximal monosyllable is precisely what we expect under the GTT analysis: a monosyllabic template pushed to its maximum by MAX-BT

3.4 The degenerate foot (L) = monosyllabic template plus NOCODA restriction

(18) Italian CV-hypocoristics:
NoCODA_w >> MAX-IO >> SRCσ, >> MAX-BT

/Francesca/	NoCODA _w	MAX-IO	SRCσ	MAX-BT
☞ a. Fra				*
b. Fran	*!			

i.e.: the degenerate foot (L) is the result of a monosyllabic template plus the force of the markedness constraint NOCODA.

Note that Italian allows for degenerate feet also elsewhere:

(19) Minimal CV word: *gru, fá, blu, o*, 'crane, does, blue, or'
Stress pattern requiring degenerate feet: *(nò.vi)(tá)*, 'news'

Preliminary conclusions:

GTT – everything else being equal – predicts templates to be maximal in size (maximal disyllabic feet, maximal monosyllabic feet)

However, markedness constraints like NOCODA can lead to the generation of a subminimal template.

Therefore: when the template is not maximal, there must be another constraint shaping the foot and this is exactly where we can learn something about the internal structure of feet.

¹ NoCODA_w can be seen as a cover term for the ranking of the constraint NOCODA (militating against codas in general) under a contiguity constraint banning deletion of codas word-internally. Italian (native) words in general, not only name truncations, must not end in a consonant, therefore NoCODA_w >> MAX-IO.

3.5 The well-formed foot

- (20) The well formed foot template in Central Alaskan Yupik, Pattern B
 MAX-IO >> SRCσσ, WSP >> MAX-BT >> DEP
- (21) Markedness constraint shaping the foot:

WSP: heavy syllables are prominent
 (Prince 1990; Prince & Smolensky 1993/2004)

/Qakfaɤalria/	MAX-IO	SRCσσ	WSP	MAX-BT	DEP
☞ a. Qa.kəf (L 'H)				ɤalria	*
b. Qakfɤɤ (H 'H)			*!	alria	
c. Qak (H)				faɤalria!	
d. Qakfɤ (H 'L)			*!	ɤalria	

Similarly in Japanese Rustic Girl's Names: wellformed trochees

Observed patterns: (H) or (LL) even trochees (typologically the unmarked trochee)
 Not observed patterns: (HH) or (LH) excluded by WSP
 (HL) excluded by constraint banning uneven trochees
 (e.g. a ban on foot-internal mora lapses, Kager 1993 or GRPHARM,
 Gouskova 2003, cf. also discussion in Alber 2005a)

3.6 Atemplatic truncation

Truncation morphemes copy almost exclusively starting from a prominent position: either from the first or from the stressed syllable of the base

- (22) Anchoring to the first syllable: ANCHOR-σ₁: Italian disyllabic hypocoristics, Pattern A
 Vále – Valentína
 Fránce – Francésca
 Féde – Federíca
- (23) Anchoring to the stressed syllable: ANCHOR-V_{stress}: Italian disyllabic hypocoristics, Pattern B
 Césca – Francésca
 Béрто - Robérto
 Nóra – Eleonóra

When TRUNC anchors to both the first and the stressed syllable (Alber&Lappe, in prep.)

- (24) Southern Italian vocatives: from first syllable to stressed vowel (Alber 2007)
- | | |
|----------------|-------------|
| Truncated name | Source name |
| Bá | Bár.ba.ra |
| Car.mé | Car.mé.la |
| An.to.né | An.to.né.la |

(25) Anchoring dominates the SRCs

/Bárbara/	MAX-IO	ANCHOR- σ_1	ANCHOR- V_{stress}	SRC σ^2	MAX-BT
☞ a. Bá					rbara
b. Bár.ba				*!	ra
/Carméla/					
a. Ca			*!		rmela
☞ b. Car.mé				*	la
c. Car.mé.la				**!	
/Antonélla/					
a. An			*!		tonella
b. An.to			*!	*	nella
☞ c. An.to.né				**	lla
d. An.ton.nél.la				***!	

Prediction: whenever TRUNC morphemes are variable in size, the variability depends on the dominant position of ANCHOR constraints.

4. Conclusions

TRUNC templates are feet:

- the disyllabic template can be analysed as a single foot emerging from the pressure of metrical constraints.
- the monosyllabic template – since TRUNCs are free-standing words - has to correspond to a foot as well (assuming that a PrWd consists of a least one foot).

However

- default maximal feet: because of the pressure of MAX-BT, the feet observed in truncation tend to be maximal, hence do not necessarily correspond to *wellformed* feet
- submaximal feet: arise under the pressure of additional markedness constraints
- wellformed feet: among these markedness constraints, there may be constraints on *foot wellformedness*, hence the wellformed foot can be found among TRUNC templates and foot-wellformedness constraints can be identified.

And

- atemplatic truncation: whenever we find TRUNCs which are neither disyllabic nor monosyllabic we expect truncation to be atemplatic. In this case the size of TRUNC is predicted to be the result of ANCHOR constraints.

Direct conclusions w.r.t. the properties of foot-structure:

- ternary feet do not exist: no productive 3 syllable TRUNCs
- degenerate feet do exist (cf. 3.3 above)
- the asymmetric foot-inventory of Prince (1990), Hayes (1995) has been confirmed by (LH) iambs truncation pattern B in Central Alaskan Yupik and (H), (LL) trochees in Japanese Rustic Girl's names.

² Violations of SRC σ are counted here in number of syllables outside of the first syllable – but the number of violations obviously depends on the exact definition of the constraints assumed to make part of SRC σ .

References

- Alber, B. 2001. Maximizing First Positions. In: Féry C., Green A., Van De Vijver R. (eds.) *Linguistics in Potsdam 12. Proceedings of HILP 5*, Universität Potsdam, Potsdam, 1-19.
- Alber, B. 2005a. Clash, Lapse and Directionality. *NLLT*, 23.3, 485-542.
- Alber, B. 2005b. *Foot*. In K. Brown (ed.), *Encyclopedia of Language and Linguistics*, Elsevier, Oxford, 539-546.
- Alber, B. 2007. Deutsche und italienische Kurzwörter im Vergleich. In: Claudio Di Meola, Livio Gaeta, Antonie Hornung, Lorenza Rega (eds.). *Perspektiven Zwei. Akten der 2. Tagung Deutsche Sprachwissenschaft in Italien (Rom, 9.-11.2. 2006)*. Istituto Italiano di Studi Germanici, Roma, 101-112.
- Alber, B. & S. Lappe, in prep., *Towards a Universal Typology of Truncation*, ms. University of Verona and University of Siegen.
- Benua, L. (1995). Identity Effects in Morphological Truncation. In Jill Beckman, Laura Walsh Dickey & Suzanne Urbanczyk (eds.). *University of Massachusetts Occasional Papers in Linguistics 18: Papers in Optimality Theory*. Amherst, MA: Graduate Linguistic Student Association. 77-136. ROA-74.
- Domahs, U., Wiese, R., Bornkessel-Schlesewsky, I., & M. Schlesewsky (2008). The processing of German word stress: Evidence for the prosodic hierarchy. *Phonology*, 25, 1-36.
- Gouskova, M. 2003. *Deriving Economy: Syncope in Optimality Theory*. Ph.D. thesis, University of Massachusetts, Amherst. ROA-610.
- Hayes, B. 1995. *Metrical stress theory: principles and case studies*, University of Chicago Press, Chicago.
- Kager, R. 1993. Alternatives to the iambic-trochaic law, *NLLT* 11, 381-432.
- Knaus, J. & U. Domahs (in press). Experimental evidence for optimal and minimal metrical structure of German word prosody. *Lingua*.
- Lappe, S. 2003. Monosyllabicity in Prosodic Morphology: The Case of Truncated Personal Names in English. In G. Booij et al. (eds.), *Yearbook of Morphology 2002*, Kluwer, Dordrecht. 135-186.
- Lappe, S. 2005. *English Prosodic Morphology*. Ph.D. thesis, University of Siegen, Siegen.
- Lappe, S. 2007. *English Prosodic Morphology*. Springer, Dordrecht.
- McCarthy, J. & A. Prince 1994. The Emergence of the Unmarked. *Optimality in Prosodic Morphology*. In: M. González (ed.), *NELS 24: Proceedings of NELS 24. GLSA, Amherst, MA*, 333-379. ROA-13
- McCarthy, J. & A. Prince 1999. Faithfulness and Identity in Prosodic Morphology. In: R. Kager, H. van der Hulst & W. Zonneveld (eds.), *The Prosody Morphology Interface*. Cambridge University Press, Cambridge.
- McCarthy, J. & A. Prince. 1993. Generalized alignment, in G. Booij & J. van Marle (eds.), *Yearbook of Morphology 1993*, 79-153, ROA-7.
- Mester, A. 1990. Patterns of truncation. *Linguistic Inquiry* 21, 478-485.
- Piñeros, C.E. 1998. *Prosodic Morphology in Spanish: Constraint Interaction in Word Formation*. Ph.D. dissertation, Ohio State University.
- Piñeros, C.E. 2000. Prosodic and segmental unmarkedness in Spanish truncation. *Linguistics* 38, 1, 63-98.
- Prince 1990. "Quantitative consequences of rhythmic organization." *CLS 26-II: Papers from the Parasession on the Syllable in Phonetics and Phonology*, edited by K. Deaton & M. Noske & M. Ziolkowski, 355-398. Chicago Linguistic Society, Chicago.
- Prince, A. & P. Smolensky 1993/2004. *Optimality Theory: Constraint Interaction in Generative Grammar*. Ms. Rutgers University, New Brunswick, and University of Colorado, Boulder. Published in 2004 as *Optimality Theory. Constraint Interaction in Generative Grammar*, Blackwell, Oxford.
- Riggle, J. 2006. Infixing reduplication in Pima and its theoretical consequences. *NLLT* 24/3. 857-891
- Spaelti, P. 1997. *Dimensions of Variation in Multi-Pattern Reduplication*. Ph.D. thesis, University of California, Santa Cruz. ROA-311.
- Urbanczyk, S. 1999. A-templatic reduplication in Halq'eméylem. In Kimary Shahin, Susan Blake, and Eun Sook Kim (eds.), *Proceedings of WCCFL XVII*, pp. 655-669. Stanford: CSLI Publications.
- Urbanczyk, S. 2006. Reduplication form and the root-affix asymmetry. *NLLT* 24. 179-240.
- Walker, R. 2000. Nasal reduplication in Mbe affixation. *Phonology* 17, 65-115.
- Walker, R. 2002. Yuhup prosodic morphology and a case of augmentation. *Proceedings of NELS 32*, ed. by Mako Hirotani. University of Massachusetts, Amherst. GLSA. 551-562.
- Weeda, D. 1992. *Word truncation in prosodic morphology*. PhD Diss., University of Texas, Austin.
- Wiese, R. 2001. Regular Morphology vs. Prosodic Morphology? The Case of Truncations in German, *Journal of Germanic Linguistics*, 131-17.
- Woodbury, A. C. 1985. *Formation of affectionate names by truncation*. Unpublished section of Woodbury (1987) eliminated prior to publication, University of Texas at Austin.