

A foot-based ludling and its implications for English footing

Trevor Driscoll¹, Zach Metzler², and Chris Golston²

MIT¹; California State University Fresno²

Ludlings: language games

What can ludlings tell us about

the phonology of a language and speakers' access to it?

Data a from spontaneous telephone calls from within a jail,
recorded legally by police,
decoded by Metzler;
defendant found guilty of murder

Ludika: (Ft) + ikə
word again → (ári)kə (gén)kə
because → (bí:ri)kə (kári)kə
phrase fuck you → (fá:ri)kə (jú:ri)kə
árikə sédkə ftikə dónikə mágikə wátkə dérikə télikə júrikə
I said it don't matter what they tell you

Objective

See what Ludika tells us about English phonology and vice versa

phonotactics *fákikə fárikə 'fuck'
lexical footing *ágénikə árikə génikə 'again'
phrasal footing *áséditikə árikə sédkə ftikə 'I said it'

Ludika as Prosodic Restructuring

ALIGN-R(ω, ikə): Every ω ends in [ikə]

Ft → PrWd
(φ píðu)(φ bér)fn → (ω píðurí)kə (ω bérí)kə 'probation'

One [ikə] per φ

(éni)(bádi) → (éni)kə (bádi)kə 'anybody'

* One [ikə] per σ

(é)(ni)(bá)(di) → (éka)(níkə)(bákə)(díkə)

* One [ikə] per ω

(énibádi) → (énibádi)kə

NO CODA

(difñnt) → (difñ)kə 'different'
→ (difñmt)kə
(přa)(ték)trv → (pá:rt)kə (tért)kə 'protective'
→ (pá:rt)kə (tékt)kə

NO HIATUS

(ma) → (mári)kə 'my'
→ (mái)kə
(nou) → (nourí)kə 'no'
→ (noui)kə

NO LAPSE
(difñnt) → (difñ)kə
→ (difñ)nikə

FAITHFULNESS to stem-final C varies
(tóm) → (tó:mi)kə
→ (tó:ni)kə
(áp) → (á:pi)kə
→ (ár:ti)kə
(júz) → (jú:zi)kə
→ (jú:ri)kə
we don't have a good analysis for this yet
somehow, variable ranking of Faithfulness and Markedness

* rhotic 'codas' are vowels [ɔ], not consonants [ɹ]
(hí:ð) → (hí:ðri)kə *(hí:ni)kə 'here'
(ká:ð) → (ká:ðri)kə *(ká:ni)kə 'car'

Word-Level

ALIGNR(ω, ikə): Every word ends with [ikə].



amplitude suggest two os frequency suggest two os

Mean amp ó₁ Mean amp ó₂ p-value N
72.5 dB 73.1 dB 0.502 29

Mean freq ó₁ Mean freq ó₂ p-value N
189.7 Hz 189.5 Hz 0.994 29

FAITH FOOT: Input and output feet must correspond.
ALL FEET LEFT: Every foot is word-initial.

	ALIGNR	FAITHFT	ALLFTL
(á:ti)(tí:nd)	*		*
(á:ti)(tí:nd)	*!		*
(á:ti)kə(tú:nd)kə			*!
(á:ti)kə(tú:nd)kə			
(á:ti)kə		*!	
(á:ti)kə(tí:ri)kə(tú:nd)kə			*!

-íkə can be used as a diagnostic for feet at the lexical level

* Stressless #o is a foot (Kiparsky 79, Iverson & Salmons 95)
(ó)(báut) → (ári)kə (báuti)kə 'about'
(bi)(káz) → (bí:ri)kə (kári)kə 'because'
(přa)(ték)trv → (pá:rt)kə (tért)kə 'protective'

* Stressless #σ is a stray (Itô & Mester 2009)
ó(báut) → *ó(báuti)kə

* Stressless #σ is an adjunct in a recursive foot (Jensen 2000)
(ó(báut)) → *(ó(báuti)kə)ríkə

Phrase-Level

* stressless function words are feet (Agbayani & Golston 2016, Latin)

árikə sédkə ftikə dónikə mágikə wátkə dérikə télikə júrikə
I said it don't matter what they tell you

árikə sédkə óérikə árikə nóríkə wátkə gónikə ánikə wítikə háríkə
I said that I know what was going on with her

dáonikə óárikə mídkə
down the middle



* high-frequency contractions stored as such (cf. Monaghan et al. 2017)

ítukə dóunikə mágikə
it don't matter*

dáérikə ólíkə árikə kánikə dúrikə
that's all I can do

Conclusions

* stressless #o behave like feet

* stressless function words behave like feet

Agbayani & Golston 2016. Phonological constituents and their movement in Latin. *Phonology* 33, 1–42.

Itô & Mester 2009. The extended prosodic word. *Phonological Domains*. 135–194.

Iverson & Salmons 1995. Aspiration and laryngeal representation in Germanic. *Phonology* 12, 369–396.

Jensen 2000. Against ambisyllabicity. *Phonology* 17, 187–235.

Kiparsky 1979. Metrical structure assignment is cyclic. *L1* 10, 421–441.

Monaghan, Chang, Welbourne & Brysbaert. 2017. Exploring the relations between word frequency, language exposure, and bilingualism. *Journal Memory & Language* 93, 1–21.

Selkirk. 1996. The prosodic structure of function words. In *Signal to syntax: Bootstrapping from speech to grammar in early acquisition*, 187–213.

Contact: trevdr@mit.edu, zmetzler@mail.fresnostate.edu, chrisg@csufresno.edu