

# The prosodic word in polysynthetic languages:

## Evidence from stress

This paper is an exploration of areas of proposed overlap between morphological and prosodic typology. In particular, it looks at the interaction of polysynthesis and word accent (specifically, stress), asking whether there are specific restrictions on lexical prominence in languages where words tend to be longer, more morphologically complex and, ultimately, more sentence-like. While metrical theory predicts that larger lexical domains will provide more opportunities for rhythmic behaviour, our preliminary results suggest this is rarely the case for polysynthetic languages. Indeed, canonical languages of this type, which were previously described as word-level, grid-like stress systems, such as (1), turn out, upon closer, grammatically-informed inspection, to evidence strong morphological boundedness, as in (2).

(1) Mapudungun (‘Araucanian’) stress as a perfect grid (Kager 2007: 11)

- |    |   |  |                            |
|----|---|--|----------------------------|
| a. | ( $\sigma'$ )                               | wu. <sup>1</sup> le  | ‘tomorrow’                 |
| b. | ( $\sigma'$ ) $\sigma$                      | ti. <sup>1</sup> pan.to                                      | ‘year’                     |
| c. | ( $\sigma'$ ) ( $\sigma_1$ )                | e. <sup>1</sup> lu.mu.ju                                     | ‘give us’                  |
| d. | ( $\sigma'$ ) ( $\sigma_1$ ) $\sigma$       | e. <sup>1</sup> lu.a. <sub>1</sub> e.new                     | ‘he will give me’          |
| e. | ( $\sigma'$ ) ( $\sigma_1$ ) ( $\sigma_1$ ) | ki. <sup>1</sup> mu.fa. <sub>1</sub> lu.wu. <sub>1</sub> laj | ‘he pretended not to know’ |

(2) Stem ( $s$ ) and word ( $\omega$ ) stress in Mapudungun (Molineaux 2023)

- |    |   |    |  |
|----|---|----|--|
| a. | [[i. <sup>1</sup> [sif.] <sub>s</sub> -tu.-pu.-ke.- <sup>1</sup> la-j-m-i] <sub><math>\omega</math></sub> | b. | [[e.lu-n. <sup>1</sup> ma] <sub>s</sub> -fi-j.-m-i] <sub><math>\omega</math></sub> |
|    | throw-REST-TRLOC-HAB-NEG-IND-2-S  |    | give-APPL-DIR.3-IND-2-S  |
|    | ‘You don’t usually throw x back here’   |    | ‘You give him/her/it x’  |

In the literature on morphosyntax there is a long tradition exploring the challenges that languages on the polysynthetic spectrum present to the intuitive notion of wordhood (see Dixon and Aikhenvald 2002 and Bickel and Zúñiga 2017 for an overview). However, far less attention has traditionally been paid to how prosodic structure interfaces with these more expansive word types. Only more recently have phonologists begun to explicitly engage with these issues (see, for instance, the chapters in Bogomolets and van der Hulst 2023), with relevant questions including: How strong are traditional cues to prosodic words in polysynthetic languages? How common are hierarchical word-level stress patterns in such languages? Or even more broadly: Is there an implicational link between polysynthesis and particular types of word-prominence?

In part, many of these questions are definitional: What is a word? What counts as a polysynthetic language? What counts as lexical stress? This paper will, therefore, survey the central literature on these topics and assess how it matches up with data from ‘core’ polysynthetic languages (Fortescue et al. 2017). Particular focus is placed on Mapudungun (ARN), a presumed isolate spoken in Chile and Argentina, which ticks all the canonical boxes for polysynthesis and which has long been described as having a clear, iterative, hierarchical stress system, as in (1), above. We provide new evidence that debunks the metrical stress pattern of Mapudungun, showing it to be more morphologically than lexically or metrically governed, as in (2), above. We go on to show that stress in Mapudungun — and further afield in polysynthetic languages — is rarely hierarchical in the sense of many less synthetic languages. We show that, what we

call stress in these languages, may lack elements typically considered definitional (e.g. culminativity) and so may be construed as a different phenomenon, or at least a sub-category of stress languages (cf. van Coetsem 1996). We conduct a brief survey of the prosodic systems of well-documented polysynthetic languages (cf. Table 1), concluding that Mapudungun is not alone in marking stress mostly in relation to root or stem edges, rather than to grammatical word edges. We conclude by exploring, structural, functional and diachronic reasons why this pattern may be prevalent.

Table 1: A survey of ‘core’ polysynthetic languages’ word-prominence systems (R = root, S = stem, W = word, QS = quantity sensitive, PA = pitch accent)

Language	Family	Agglut?	Primary	Secondary	Sources
Yup'ik	Eskimo-Aleut	yes	S/W-initial	Iterative	Jacobson 1984
Purépecha	isolate	yes	R-final	Iterative?	van der Hulst et al. 2010
Sliammon	Salishan	yes	R/W-initial	Sfxs:underlying	Watanabe 2017
Tariana	Maipurean (Arawak)	yes	R/Sfx-final-QS(PA)	‘heavy’ morph	Aikhenvald 2003
Lakonde	Nambikwaran	yes	R-final-QS	Sfxs:underlying	Wetzels & Telles 2017
Yimas	Lower-Sepik	yes	R/W-initial	Sfxs:inflect.	Foley 1991
Adyghe	NW Caucasian	yes	S/W-penult	Ø/W-initial	van der Hulst 2010
Nuuchahnulth	Wakashan	yes?	R/W-initial-QS	Ø	Stonham 2004, 2008
Mapudungun	isolate	yes	W-final-QS	S/R-final	Molineaux 2023
Koryak	Chukotko-Kamchatkan	yes	W-peninitial	Iterative	Kurebito 2004
Nivkh	isolate	yes	W-initial	Ø	Mattissen 2003
Nahuatl	Uto-Aztecan	yes	W-penult	Ø	Canger 2010
Ainu	isolate	yes	S-initial(PA)	Ø	Shiraishi 2003
Dalabon	Gunwinyguan	yes	R/W-initial?	Ø	Goedemans 2010
Sora	Austroasiatic	yes	R/W-initial	Ø	Donegan 1993
Innu	Cree (Algonquian)	yes	W-penult	Iterative	Woolridge 2015
W. Apache	Athapaskan (Na-Dené)	no	Tone	Tone	de Reuse & Goode 2006
Caddo	Caddoan	no	Tone	Tone	Melnar 1998
Ket	Yeniseian	yes?	Tone	Tone	Georg 2007, Vajda 2017

## References

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