Further predictions of indexation to stems and words:
The case of Slavic vowel alternations

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Jurgec and Bjorkman (2018) propose a modification of lexical indexation, such that indeces refer to pairs of constituents. For instance, the constraint IDENT$_{\text{Root,Word}}$ can only be violated by (unfaithful) words consisting entirely of roots; IDENT$_{\text{Root,Word}}$ cannot be violated (and does not apply to) affixed words. This faithfulness constraint predicts a pattern in which bare roots will allow more structures than affixed words, which is often found in loanwords.

In this talk, I explore further predictions of modified lexical indexation, focusing on indexed markedness. When a markedness constraint is indexed parallel to the above example, a pattern in which bare roots are more (rather than less) restricted is predicted. Jurgec and Bjorkman (2018) report a few such examples, but they all have to do with stress, phonotactics, and word minimality. Here I show that segmental features can also exhibit restrictions in bare roots.

Consider Polish o-raising (Bethin 1978; Gussmann 1980; Sanders 2003, among many others) in which [o] appearing in affixed words alternates with [u] in bare roots (1). This alternation typically applies before underlyingly voiced oral consonants (a), but not underlyingly voiceless obstruents or nasals (b). As noted in the literature, however, there is a great deal of exceptionality. This includes non-alternating vowels before voiced oral consonants (c), alternating vowels before voiceless obstruents (d), and variable forms (e). (Bare and affixed forms correspond to different cases, which can differ depending on the paradigm.)

(1)   Polish o-raising (Buckley 2001)

	BARE	AFFIXED			BARE	AFFIXED	
a.	mul	mola	'moth'	c.	tor	tora	'rail'
	pur	pora	'time'		snob	snoba	'snob'
	bub	boba	'bean'	d.	stup	stopa	'foot'
b.	kot	kota	'cat'		sobut	sobota	'Saturday'
	stron	strona	'side'	e.	os $\sim$ us	osa	'wasp'

These data can be analyzed using lexical indexation. All alternating roots are indexed as *Raising*; the alternation can attributed to a lexically indexed markedness constraint *o$_{\text{Raising},\omega}$, which prefers raising of bare roots (2-a), but not in affixed words (2-b). The ranking IDENT $\gg$ *o makes sure that the non-indexed roots remain faithful. ('d.n.a.' stands for *does not apply*.)

(2)   a.

/por$_{\text{Raising}}$/	*o$_{\text{Raising},\omega}$	IDENT	*o
i. por$_{\text{Raising}}$	*!		*
ii. ☞ pur$_{\text{Raising}}$		*	

b.

/por$_{\text{Raising}}$-a/	*o$_{\text{Raising},\omega}$	IDENT	*o
i. ☞ por$_{\text{Raising}}$-a	d.n.a.		*
ii. pur$_{\text{Raising}}$-a	d.n.a.	*!	

In short, while all vowels in affixed words are faithful to their underlying representations, some bare roots show restrictions on vowel quality. The opposite is the case for two other Slavic languages, Slovenian and Upper Sorbian. They instead require indexed faithfulness rather than indexed markedness. All in all, the three languages demonstrate that indexation to stems and words can be extended to lexical exceptionality that does not involve loanwords or prosody.