Introduction: Phonological encoding strength, also called activation or activity, has been used to model lexically specific phonological alternations (Smolensky et al. 2014; Inkelas 2015; Rosen 2016; Moore-Cantwell 2017). Here I present original data from Guébie (Kru) [Côte d'Ivoire], arguing that two seemingly unrelated phonological alternations that apply across a subset of the Guébie lexicon are best modeled with a single phonological representation: weak encoding. In this way, a single unified analysis accounts for two distinct phonological alternations.

The phenomena: There are two phonological alternations in Guébie that both affect the initial vowel in a subset of CVCV words: 1) Vowel deletion, or syncope, and 2) Morphologically conditioned vowel replacement. Vowel deletion is optional and tends to occur in rapid, casual speech.

(1) **Vowel deletion**

	CVCV	**CCV**	**Gloss**
a.	jili$^{2.2}$	jli^{2}	'be fat'
b.	gɔlɔ$^{3.3}$	glɔ^{3}	'pain'
c.	kpolo$^{3.1}$	kplo^{31}	'be clean'
d.	jɪla$^{2.3}$	jla^{23}	'ask'

The same set of roots that alternate between CVCV and CCV, (1), also undergo vowel replacement, (2). Vowel replacement is obligatory in particular morphosyntactic contexts, namely, when a noun is plural, and when there is an object enclitic present on a verbal stem.

(2) **Vowel replacement**

	Verb	**Verb+Obj**	**Gloss**
a.	bala$^{3.3}$, bla^{3}	bɔl^{3}+ɔ^{2}, bl+ɔ^{32}	'hit'
b.	jɪla$^{3.3}$, jla^{3}	jɔl^{3}+ɔ^{2}, jl+ɔ^{32}	'ask'
c.	pɛja$^{3.1}$, pja^{31}	pɔj^{3}+ɔ^{12}, pj+ɔ^{312}	'buy'
d.	tulu$^{4.4}$, tlu^{4}	tɔl^{4}+ɔ^{2}, tl+ɔ^{42}	'chase'

Not all CVCV words can undergo vowel deletion and vowel replacement (i.e. *ɟʊla*$^{3.2}$, **ɟla*^{32} 'take, borrow'; *ɟʊl+ɔ*$^{3.2}$, **ɟɔl+ɔ*$^{3.2}$, 'take him, borrow him'). The same subset of 33% of roots (based on a corpus of 1839 CVCV roots, where 616 alternate) is affected by both processes, deletion and replacement. Alternating roots tend to, but do not always, share certain phonotactic traits. If the two vowels in a CVCV roots are identical, the tone on both syllables is the same, and the second consonant is /l/, that root is likely to alternate. However, there are minimal pairs of alternating and non-alternating roots such as *jili*$^{2.2}$, *jli*^{2}, 'be fat' and *jili*$^{2.2}$, **jli*^{2}, 'fish', thus no purely phonological property distinguishes alternating from non-alternating roots.

The analysis: I propose a binary representational distinction between weak and strong segments where weakly encoded vowels are subject to alternation, while strongly encoded ones are not. The proposed analysis builds encoding strength into the grammar with a set of encoding-strength-sensitive faithfulness constraints like IdentStrong, where strongly encoded segments are less likely to alternate than weakly encoded ones (cf. Inkelas's 2015 Faith-Special constraints). The interaction of IdentStrong with Agreement-by-Projection (Hansson 2014; Lionnet 2016; Walker 2016) and markedness constraints results in vowel deletion and vowel replacement only in weakly encoded (alternating) roots. The morphological conditioning of vowel replacement is modeled with cophonologies (Orgun 1996; Inkelas et al. 1997; Anttila 2002; Inkelas & Zoll 2005, 2007).

The proposed model fares better than alternatives such as indexed markedness constraints, where it would be coincidental that constraints triggering vowel deletion and vowel replacement are both indexed for the same subset of roots.