Null morphemes as overwritten elements: Some Issues

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- Every clause in Nuuchahnulth is headed by a second position auxiliary enclitic
- They encode subject agreement, tense, mood, evidentiality, and some adverbial meanings

```
(1) yayačapaḥ
yayačap=(m)a·ḥ
be.sore=REAL.1SG
`I hurt.'
```

(2) qii?axitaḥ yayacႆap (?uusaḥi čičiči)

```
qii=!a\lambdã=(m)it=(m)a'ḥ yayačap (ʔuusaḥi čičiči)
long.time=NEXT=PST=REAL.1SG be.sore (because tooth)
`I was sore for a long time on account of my tooth.'
```

- The subject-mood portmanteau is the only required element in the enclitic so I model it as the root to which other enclitics attach as prefixes and suffixes.
- The third-person neutral morpheme, however, is null.

Table 1: Template for clausal enclitics

morph	=?aaqñ	=!ap	=!aእ <u>ֿ</u>	=!at	=uk =?ak	=(m)it	=?i·š =ma· =ḥa· =Ø 	=λ̃a•	=?aała	=?ał	
meaning	FUT	CAUS	NOW	PASS	POSS	PST	subject-mood portmanteaus	also	HABIT	PL	

Modeling

Cases of null morpheme attachment.

- Null morpheme only and no other enclitics
 - Null morpheme on a verbal predicate
 - Null morpheme on a preceding adverb
- Null subject morpheme and enclitics to the left and/or right.
 - Enclitics only to the left (prefix attachment)
 - Enclitics only to the right (suffix attachment)
 - Enclitics to both left and right

Modeling

- (3) ?uusumči?a\(\chi\)?u?uiḥwitas ?iiḥtuup
 ?u-L.sumč-i\(\chi\)=!a\(\chi\)(=\(\theta\)) ?u-R.?iiḥ-witas ?iiḥtuup
 x-train-PF=NOW(=NEUT.3) x-hunt-going.to whale
 `They trained to go after whales.'
- (4) ?aanaḥaʔ?aał waaSit
 ?aanaḥi=!að(=0)=?aał waaSit
 only-NOW(=NEUT.3)=HAB frog
 'Only a frog.'

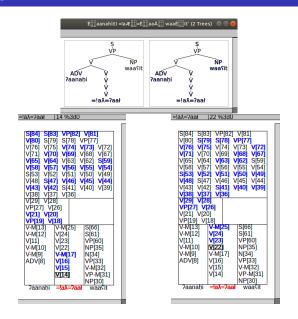
Code

```
\%3D0 := neutral-mood-3-verb-lex \&
 STEM < "=0" >
  SYNSEM.LKEYS.KEYREL.PRED " neutralmood_v_rel" ].
clitic-now-prefix :=
\%prefix (* =\!a\lambda) (=0 =\!a\lambda)
clitic-now-lex-rule.
habitual-suffix2 :=
% \text{suffix } (* = ?aa!) (= 0 = ?aa!)
habitual-lex-rule.
```

LKB Parsing

- Everything runs fine, except when there is both prefix and suffix attachment.
- The LKB parser inserts two =0 into the parse chart.

LKB Parsing



Questions

- Is this use of an overwritten null morpheme "supported"?
- Is there a way to enforce single-entry of overwritten morphemes into the parser?