

I: Reconsidering the Characteristic Variable Principle

II: Variable Types in Lushootseed Grammar

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First, an update on the Lushootseed Grammar

- ▶ CLIMB-like meta grammar now set up
- ▶ Valence changing morphology:
 - ▶ 3 types of causatives
 - ▶ 2 types of applicatives
 - ▶ passives
- ▶ possessive affixes
- ▶ reduplication, other morphology
- ▶ Now parsing real text!
 - ▶ 50% of testsuite from *Lushootseed Reader Vol 1*. (part a)
 - ▶ At least some sentences from all four of the stories published in LR1 (25% of sentences from Bear and Fishhawk)
- ▶ TODO: “lexical suffixes”
- ▶ Coming very soon: proper NP analysis

Part I: Reconsidering the Characteristic Variable Principle

From Singapore discussion on MRS well-formedness:

*“Maybe we oughta send Joshua off into
Parsons-land for a while and see if he goes
away and just doesn’t come back.”*

—Dan Flickinger

All transitives are derived

From Beck (2009)

Lushootseed transitives are derived from monovalent unaccusatives.

- (1) a. *ʔuʔiç* *čəd*.
ʔu-ʔiç čəd
PFV-be.cut 1SG.SUB
'I got cut with a knife.'
- b. *ʔuʔiçid* *čəd* *tə* *sq^wiq^wali*
ʔu-ʔiçi-t čəd tə sq^wiq^wali
PFV-be.cut-ICS 1SG.SUB INDEF hay
'I started to cut hay (with a blade)'

- ▶ *ʔiç* 'be cut (with a knife)' takes a single arg, a subj expressing the PATIENT of the event
- ▶ to express an AGENT, valency-increasing suffix must be applied

Analyzing Lushootseed transitives

One option: lexical entries

```
łičʔ: intransitive-lex-item &  
  [ STEM < "łičʔ">,  
    SYNSEM.LKEYS.KEYREL.PRED "_łičʔ_v_be.cut_rel" ].
```

```
łičid =: transitive-lex-item &  
  [ STEM < "łičid">,  
    SYNSEM.LKEYS.KEYREL.PRED "_łičid_v_be.cut_rel" ].
```

- ▶ This misses an important linguistic generalization
- ▶ Linguistically, `_łičʔ_v_rel` and `_łičid_v_rel` refer to the same event-type, just with different argument structures; we've packed a syntactic dependency into a semantic predicate name!
- ▶ A more satisfying option is to treat these as the productive morphological processes they are

Analyzing Lushootseed transitives

Option 2: Causatives à la ERG

- ▶ Treat transitivizers similarly to the ERG's treatment of periphrastic causatives
- ▶ Transitivity lex-rules add a predicate (eg: `_cause_x_rel`)
- ▶ Obeying CVP, the new pred has its own distinguished variable
- ▶ Under this sort of analysis, a verb like `ḥičid` would have semantics:

RELS:

```
[ ḥič'_v_be.cut_rel,  
  ARG0 e0, ARG1 x0 ],  
[ _cause_x_rel,  
  ARG0 e1, ARG1 e0, ARG2 x1 ]
```

We want this to mean something like `x1 cut x0 with a knife`.

Aside: Causatives vs “Causatives”

- (2) a. The tree fell yesterday
b. Kim felled the tree with a single blow.

- (3) a. The door opened.
b. Kim opened the door.

- (4) a. I cut the grass.
b. Kim made Sandy cut the grass.

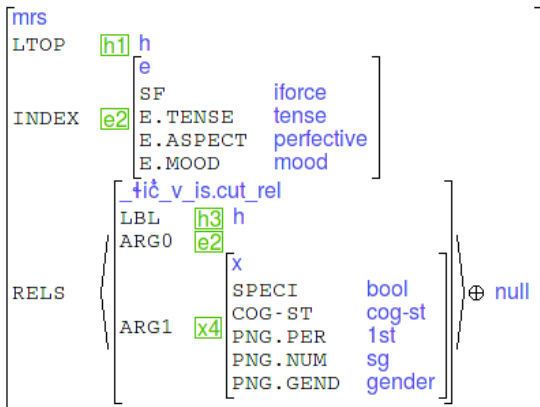
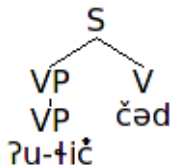
- ▶ From Dowty’s (1991, p.572) list of ‘Contributing properties for the Agent Proto-Role’: ‘causing an event or change of state in another participant’
- ▶ Minimalism’s ‘little v’
- ▶ Periphrastic causatives are more clearly “causatives”. But where’s the dividing line?

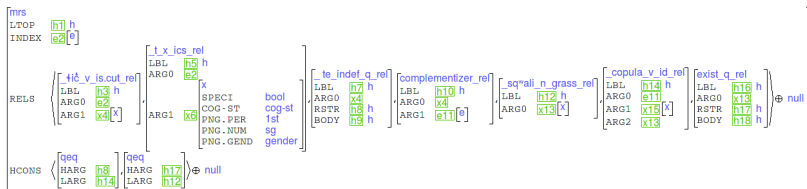
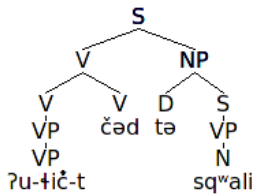
Analyzing Lushootseed transitives

Option 3: Predicate composition

- ▶ Assuming that Lushootseed transitives are not “causatives”
- ▶ Morphological transitivizers will add a predication and further argument structure (SUBCAT)

```
causative-lex-rule := lex-rule &
  [ C-CONT.RELS <! [ ARG0 event & #e,
                    ARG1 #x ] !>,
    SYNSEM.LOCAL.CONT.HOOK [ INDEX #e,
                            XARG #x ],
    ARG-ST < [ OPT +,
             LOCAL [ CAT [ HEAD +np,
                          VAL [ SPR < >,
                                COMPS < > ] ],
                  CONT.HOOK.INDEX #x ] ],
             #oldsubj >,
    DTR [ SYNSEM.LOCAL [ CAT.HEAD verb,
                        CONT.HOOK [ INDEX #e,
                                    XARG #internal-subj ] ],
        ARG-ST < #oldsubj &
              [ LOCAL.CONT.HOOK.INDEX #internal-subj ] > ] ].
```



Naughty!

- ▶ There are at least three names for the idea that every predication should have a unique ARG0.
 - ▶ ‘distinguished’ (Oepen and Lønning (2006)e)
 - ▶ ‘characteristic’ (Copestake 2009)
 - ▶ ‘intrinsic’ (ErgSemantics in delph-in wiki)
- ▶ The representations on the previous slides violate this principle
- ▶ What are the ramifications?
- ▶ What motivates this principle?

Oepen and Lønning (2006)

Variable-free semantics

- ▶ use CVP to build an elementary dependency graph
- ▶ when the uniqueness constraint on ARG0 is violated, “there usually exist linguistically motivated disambiguation heuristics”
- ▶ `e0:is.cut_rel:cause_rel [ARG1 x1, ARG2 x2]`

ERG intrinsic variables

- ▶ Motivated by “a blend of linguistic and technical reasons” (ERGSemantics/Basics)
- ▶ Linguistic reasons listed on ERGSemantics/Design page (no arguments from me)
- ▶ Assume the technical reasons refers to EDS/DMRS conversion

```
a0: _řič'v_rel(e1)
a2: arg1_rel(a0, x3 [PNG 3sg])
a4: arg2_rel(a0, x5 [PNG 1sg])
```

- ▶ MRS variant amenable to encoding the output of shallow grammars in a way which is compatible with information from a deep grammar
- ▶ Essentially Parsons-style predicate decomposition
- ▶ New ‘bookkeeping’ variable type ‘anchor’ introduced
- ▶ Implementing RMRS in Matrix-derived grammars requires a nearly complete rewrite of matrix.tdl!!

Questions for discussion

- ▶ What is the criterion for distinguishing a “causative” from a causative?
- ▶ Why is it useful to link up sub-atomic EP fragments via “anchors” instead of using the eventualities themselves?

a0: `_tič'v_rel(e1)`

h0: `_tič'v_rel(e1)`

a2: `arg1_rel(a0, x3 [PNG 3sg])`

h2: `arg1_rel(e0, x3 [PNG 3sg])`

a4: `arg2_rel(a0, x5 [PNG 1sg])`

h4: `arg2_rel(e0, x5 [PNG 1sg])`

- ▶ What if Lushootseed transitivizers don't have an ARG0? (does that help?)

Part II: variable types and derivation in Lushootseed

From "Coyotes Son", as told by Martha Lamont:

- (5) *dił* *t(i)* *adsx^{wi}?x^{wi}?* *dbəda?* *ti* *?al* *ti?ił*
dił *ti* *ad=sx^{wi}?x^{wi}?* *d-bəda?* *ti* *?al* *ti?ił*
FOC SPEC 2SG.PO=game 1SG.PO-offspring SPEC at DIST
lək^watač *?al* *tə* *?a*
lə=k^watač *?al* *tə* *?a*
prog=climb at NSPEC be.there

That is your game, my son, over there climbing where it is.

- ▶ [*ti* [NP NP]]
- ▶ [*ti* [PP]]
- ▶ [*ti?ił* [V PP]]
- ▶ [*tə* [V]]

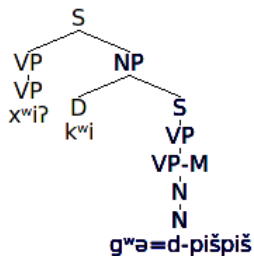
Things nouns need

- ▶ The ability to take a subject (and create a copula-like construction)
- ▶ The ability to take Tense and Mood morphology (but never aspect!)

- (6) a. pišpiš (cat)
b. d-pišpiš (my cat)
c. tu=d-pišpiš (my dead cat)
d. tu=d-pišpiš čəd (I'm a dead cat)

- (7) *x^{wi}? k^{wi} g^{wə}=d-pišpiš*
NEG REM.DET SBJ=POSS1SG-cat
'I don't have a cat'

I don't have a cat



<i>_xwi?_v_neg_rel</i> ARG0 e0 ARG1 x1	<i>_kwi_rem_q_rel</i> ARG0 x1
<i>nnlz_rel</i> ARG0 x1 ARG2 e2 [MOOD sbj]	<i>_pišpiš_cat_n_rel</i> ARG0 x3
<i>poss_rel</i> ARG0 e4 ARG1 x5 [PNG 1sg] ARG2 x3	<i>copula_id_rel</i> ARG0 e2 ARG1 x3 ARG2 x6
<i>exist_q_rel</i> ARG0 x3	

Overview/Questions

- ▶ This analysis makes all Lushootseed DPs look like headless relative clauses (and some Salishanists have said as much)
- ▶ It also means that the INDEX for the NP is always buried under a `nmlz_rel`
- ▶ How unholy is this?!
- ▶ An alternative: break the event-instance hierarchy altogether. What if all Lushootseed variables are compatible with PNG and TMA constraints?