# A Noun Incorporation Library for the LinGO Grammar Matrix

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#### Noun Incorporation

Noun Incorporation (NI) is the phenomenon in which a nominal that would otherwise bear a grammatical relation to the verb (such as direct object) is expressed not as an independent noun phrase, but rather as a morphological root that is integrated into the inflected verb to form a kind of composite form. (Baker 2005)

## 3 Types of Noun Incorporation

## Reduction NI (compounding NI)

- (1) Ni chao kintu-le-y ta.chi pu waka.
  my father seek-PROG-IND.3sS the COLL cow
  'My father is looking for the cows.'
  [arn] (Mapudungun, Salas 1992:195)
- (2) Ñi chao kintu-waka-le-y.
  my father seek-**cow**-PROG-IND.3sS
  'My father is looking for the cows.' (My father is cow-seeking) (Salas 1992:195)

## Promotion NI (valence changing NI)

(3) Subih tob tih ta-ma.
Subih house 1SG THEME-make 'I am making Subih's house'

[mbj] (Nadëb, Weir 1990:323)

(4) Subih tɨh tɔb-ta-ma.
Subih 1SG house-THEME-make
'I am making Subih's house' (I am house-making Subih)

(Weir 1990:323)

#### Classificatory NI

#### General/Specific

(5) ne-hra-taskw-ahkw-ha? ha? tsi:r.
du-M-animal-pick.up-SERIAL EMPH dog
'He picks up domestic animals.' (He is a dog catcher) [tus] (Tuscarora, Williams 1976:60)

#### Doubling

```
(6) kaţa?-∅ par-kaţa?-ta-ŋiŋ.

paperbark-NOM

3SG.OBJ.3PL.TRANS.S-paperbark-stand-(CAUS)-PAST.CONT

'They would spread paperbark on the ground.' [rmb] (Rembarnga, McKay 1975:296)
```

#### Classificatory NI

#### Stranding

- Modifiers
- (7) Kanekwarúnyu wa'-k-akya'tawi'tsher-ú:ni it.**dotted**.DIST PAST-I-**dress**-make 'I dress-made a polka-dotted one.'

[moh] (Mohawk, Annette Jacobs pc to Mithun 1984:870)

- Demonstratives
- (8) ná: kan-núh-'a' that water-run.out-will 'That will run out.'

[cad] (Caddo, Chafe 1977)

## Target semantics and the rules that get me there

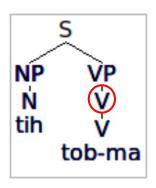
#### Target MRS (Reduction NI)

*Tih tob-ma.* 1SG **house**-make 'I am house-making.'

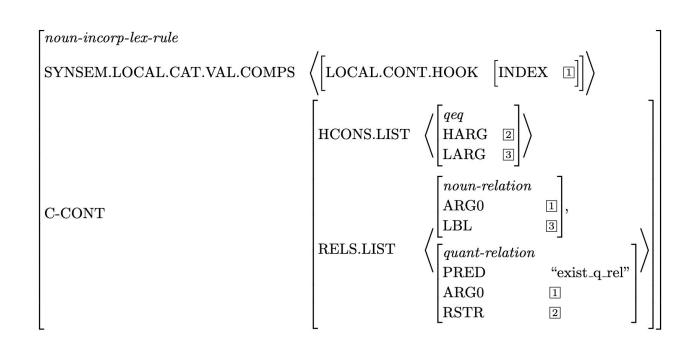
```
mrs
LTOP
       e2 e
INDEX
              exist q rel
                                          make v rel
                                                                      exist q rel
                                         LBL
              LBL
                                                        house n rel
                                                                      LBL
                                         ARG0
                            LBL
                                                                                    }⊕ null
              ARG0
                                                       LBL
                                                                      ARG0
RELS
        cons
                                         ARG1
                           ARG0
                                                       ARG0
                                                                      RSTR
              RSTR
                                         ARG2
                                                                      BODY
              BODY
              qeq
                         qeq
                        , HARG
HCONS
              HARG
```

(Based on Nadëb)

#### Rules that get me there (all types)

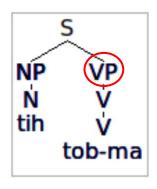


- First lexical rule that all verbs which encounter
   NI will go through
- Adds the Incorporated
  Noun (IN) to the
  semantics
- For now, keeps the IN on the verb's COMPS list



#### Rules that get me there (Reduction NI)

- Now the COMPS list is empty



```
\begin{bmatrix} decrease-arg-incorp-lex-rule \\ SYNSEM.LOCAL.CAT.VAL & \begin{bmatrix} COMPS & \langle \ \rangle \\ SUBJ & \boxed{1} \end{bmatrix} \\ DTR.SYNSEM.LOCAL.CAT.VAL.SUBJ & \boxed{1} \end{bmatrix}
```

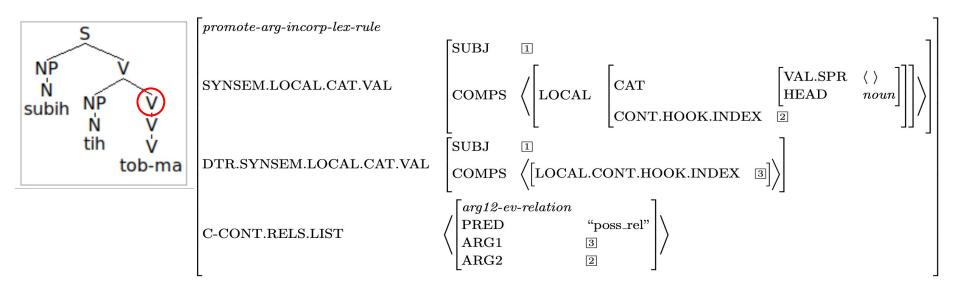
#### Target MRS (Promotion NI)

```
Subih tih tob-ma (Nadëb)
Subih 1SG house-make
'I am making a house for Subih' (I am house-making Subih)
```

```
mrs
LTOP
       e2 e
INDEX
                                                                     make_v_rel
              exist q rel
                                                                                                  exist q rel
                                                                                                                poss rel
                            subih n rel
                                                      i n rel
                                                                    LBL
                                                                                  _house_n_rel
                                                      , LBL
                                                                    ARG0
                           LBL
                                        ARG0
                                                                                   LBL
                                                                                                  ARG0
RELS
                                                                                                                ARG0
                                                                    ARG1
                           ARG0
                                                      ARG0
                                                                                   ARG0
                                                                                                  RSTR
                                                                                                                ARG1
                                                                    ARG2
                                        BODY
                        HARG
HCONS
```

#### Rules that get me there (Promotion NI)

- Puts poss rel into the semantics relating the IN and the new noun on the COMPS list



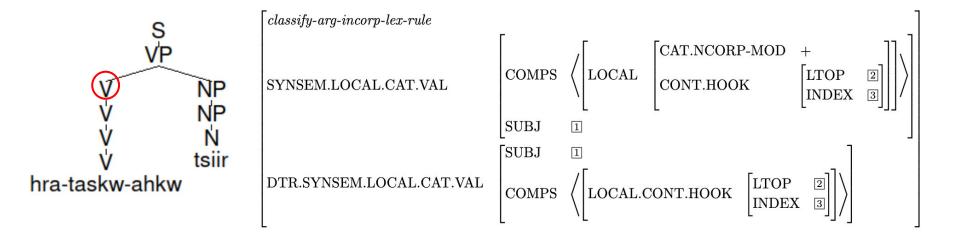
## Target MRS (Classificatory NI - General/Specific)

```
hra-taskw-ahkw tsiir (Based on Tuscarora)
M-animal-pick.up dog
'He animal-picks up dogs.'
```

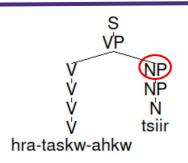
```
mrs
LTOP
INDEX
               pick.up v rel
                                            exist q rel
                                                                         exist q rel
                                                          LBL
                                                                                         _dog_n_rel
                                                                         LBL
               ARG0
                                                          ARG0
                                                                         ARG0
                              LBL
                                            ARG0
                                                                                        LBL
        cons
RELS
               ARG1
                                                                         RSTR
                             ARG0
                                                          ARG1
                                                                                        ARG0
                                                                         BODY
               ARG2
                         HARG
HCONS
                          LARG
               non-focus
ICONS
                          ⊕ null
```

#### Rules that get me there (Classificatory NI - all types)

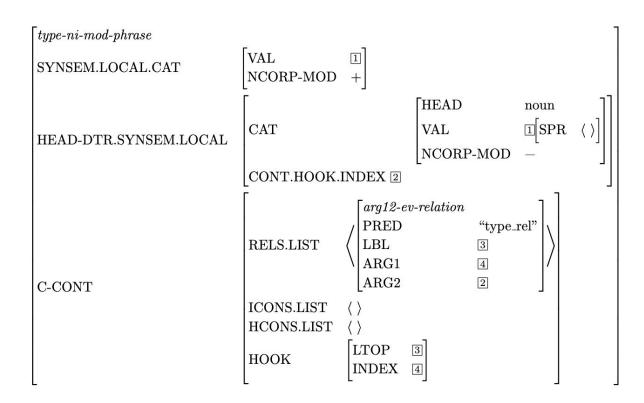
- The element on the verb's COMPS list must by NCORP-MOD +
- NCORP-MOD is a new boolean feature that positive for the unincorporated element (here the specific noun, *tsiir* "dog")



#### Rules that get me there (Classificatory NI - Gen/Spec)



- Phrase structure rule that the specific (unincorporated) noun goes through
- Introduces the type\_rel which relates the general and specific nouns
- Index of IN comes from C-CONT.HOOK in case head features such as case need to be passed up

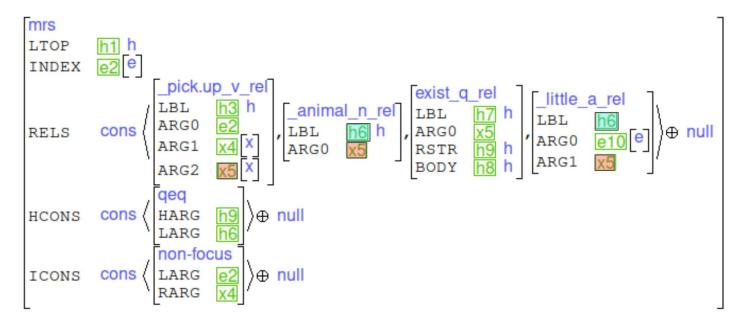


## Target MRS (Classificatory NI - Modifier stranding)

hra-taskw-ahkw ahcheeah (Based on Tuscarora)

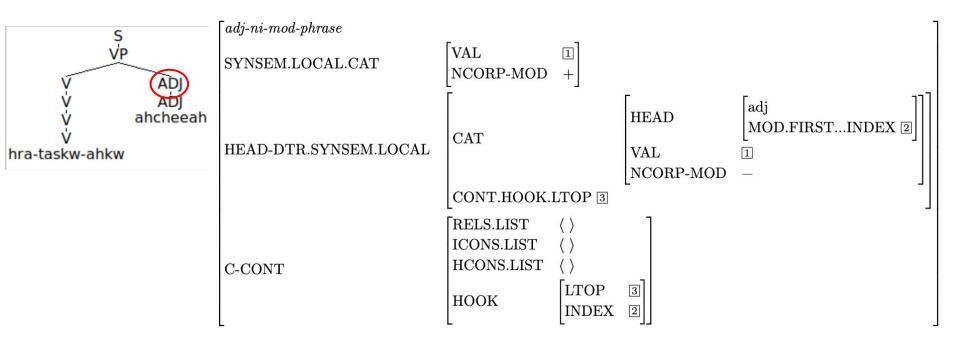
M-animal-pick.up little

'He animal-picks up little.' (He picks up little animals)



#### Rules that get me there (Classificatory NI - Mod Stranding)

- Puts the IN on the stranded adjective's MOD list via C-CONT. HOOK



#### Conclusion

- The IN is attached to the verb via a lexical rule that contributes the noun to the MRS.
- Then, the COMPS list can be set to empty, filled with a different noun which bears a relation to the IN, or look for something that is NCORP-MOD +
- NCORP-MOD is a new feature that is true for words that have gone through a phrase structure rule to allow them to modify the IN in some way
- General/specific instances generate a type rel which relates the two nouns
- Stranded modifiers go through a phrase structure rule which links the IN with the adjective's MOD value

## Discussion

#### References

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