An RRG analysis of Halkomelem ditransitive constructions:
Integrating head-marking and dependent-marking properties

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Outline

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   - Motivation
   - Data and Methods

2. Background
   - An RRG analysis for head-marking languages
   - Halkomelem ditransitive constructions

3. Our analysis

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RRG claims to be oriented towards typology

Second, the theory is greatly concerned with typological issues. In particular, it seeks to uncover those aspects of clause structure which are found in all human languages; hence the conception of clause structure it posits must be equally applicable to languages such as Dyirbal and Malayalam, to head-marking languages like Lakhota and Tzotzil, and to fixed-order, configurational, dependent-marking languages like English and Icelandic. (Van Valin 2005, pp. 3–4)
Research question

- Analyses of prototypical dependent-marking languages are suggested by Van Valin 2005.
- Some other language types are illustrated by Van Valin 2005, pp. 16–19.
- A detailed analysis of a prototypical head-marking language (Lakhota) is suggested by Van Valin 2013...
Analyses of prototypical dependent-marking languages are suggested by Van Valin 2005.

Some other language types are illustrated by Van Valin 2005, pp. 16–19.

A detailed analysis of a prototypical head-marking language (Lakhota) is suggested by Van Valin 2013...

Research question
What about a non-prototypical language, which combines both head-marking and dependent-marking properties?
Halkomelem ditransitive constructions challenge the existing algorithms of syntactic analysis and linking

- Halkomelem scores -2 according to Nichols 1986
- Halkomelem has a number of valence-modifying suffixes (Gerdts 2010)
- Ditransitive constructions demonstrate a complex pattern of marking (see further)

Figure 1: The Halkomelem territory

Image source: www.sfu.ca/halk-ethnobiology/html/northamerica.htm
Method

The RRG formalization (Osswald and Kallmeyer 2018)

- Syntactic and operator projections are combined and organized as labeled trees, where the labels can have additional features.
- Features can be propagated from lower-level constituents to some upper-level ones.
- Additional constraints may be applied to features, e.g. “values of feature $F$ for constituents $C_1$ and $C_2$ must unify”.
Background
The layered structure of the word is postulated

The verb affixes are considered to be the true core arguments

Figure 2: A tree for ‘He/she clubbed me.’ (Gerdts 2010, p. 15, ex. 55)
The independent RPs are core external, but clause internal – “extra-core slots” (ECSs)

Figure 3: A tree for ‘The man clubbed me.’ (Gerdts 2010, p. 14, ex. 53)
First and second person subject pronouns appear as second position clitics, while object pronouns appear as verb suffixes (nominative/accusative pattern).

(1) nem cən sam–əs–t ḥə səleni? ʔə thə–nə snəwxʷəł go 1s.SBJ sell-DAT-TR DET woman OBL DET-1s.POSS canoe ‘I’m going to sell my car to the woman.’ (Gerdts 2010, p. 4, ex. 12)

Third-person is unmarked when it is the subject of an intransitive clause or the object of a transitive clause, but marked with the agreement suffix when it is the subject of a transitive clause (ergative/absolutive pattern).

(3) niʔ cən qʷaqʷ-ət-∅
   aux 1s.sbj club-tr-3obj
   ‘I clubbed him/her/it.’ (Gerdts 2010, p. 15, ex. 56)

(4) niʔ qʷaqʷ-əθamš-əs
   aux club-tr.1s.obj-3erg
   ‘He/she clubbed me.’ (Gerdts 2010, p. 15, ex. 55)
In ditransitive constructions, the Agent and the Recipient are preceded by a determiner. The Theme is marked by an oblique preposition (secundative alignment).

\[(5) \text{ nem cən sam-əs-t ɬə ʃənəi? ʔə ʔə-nə snəxʷəɬ go 1S.SBJ sell-DAT-TR DET woman OBL DET-1S.POSS canoe} \]

‘I’m going to sell my car to the woman.’ (Gerds 2010, p. 4, ex. 12)
Our analysis
Construction in question

A ditransitive construction requires a predicate and three arguments

ni? ?am–əs–θamš–əs ɬə sleniʔ ʔə kʷθə pukʷ
AUX give-DAT-TR.1S.OBJ-3ERG DET woman OBL DET book
‘The woman gave me the book.’

- the verb requires a transitivity and a dative applicative marker
- the Agent is indexed on the verb and specified with a plain RP
- the Theme is realized as an RP preceded by an oblique preposition
- the Recipient is realized as a verb suffix
A ditransitive construction requires a predicate and three arguments

niʔ ñam-əs-θamš-əs ḡə sleniʔ ʔə kʷθə pukʷ ipsis
AUX give-DAT-TR.1S.OBJ-3ERG DET woman OBL DET book
‘The woman gave me the book.’

- the verb requires a transitivizer and a dative applicative marker
- the Agent is indexed on the verb and specified with a plain RP
- the Theme is realized as an RP preceded by an oblique preposition
- the Recipient is realized as a verb suffix
  is lost if the layered structure of the word is not considered
Construction in question

A ditransitive construction requires a predicate and three arguments

niʔ ꞌʔam-əs-θamš-əs ꞌə sleniʔ ꞌə kʷəθə pukʷ
AUX give-DAT-TR.1S.OBJ-3ERG DET woman OBL DET book
‘The woman gave me the book.’

- the verb requires a transitivizer and a dative applicative marker
  how should these morphemes be analyzed?
- the Agent is indexed on the verb and specified with a plain RP
  confirms to the head-marking analysis
- the Theme is realized as an RP preceded by an oblique preposition
  is lost if verb affixes alone are considered as true arguments
- the Recipient is realized as a verb suffix
Both dependent-marking and head-marking analyses fail

\begin{verbatim}
niʔ ʔam-əs-θamš-əs ɬə sleniʔ ʔə kʷθə pukʷ AUX give-DAT-TR.1S.OBJ-3ERG DET woman OBL DET book
\end{verbatim}

‘The woman gave me the book.’

- the verb requires a transitivizer and a dative applicative marker
- how should these morphemes be analyzed?
- the Agent is indexed on the verb and specified with a plain RP
- confirms to the head-marking analysis
- the Theme is realized as an RP preceded by an oblique preposition
- is lost if verb affixes alone are considered as true arguments
- the Recipient is realized as a verb suffix
- is lost if the layered structure of the word is not considered
all morphemes are labelled with constituent and/or feature tags

crossing edges are tolerated in RRG
Request-Response features
Request-Response features: some notes

- ‘request’ declares a requirement of a feature for the constituent and its ancestors, ‘response’ fills the requirement
- requests are performed by valence-increasing suffixes
- responses are filled by agreement suffixes or RPs
- feature values are propagated upwards
- all features are core internal, i.e. are filled no higher than at the core level
Dealing with Agents

grammar info is filled within the core, lexical info is filled within the clause
Conclusion
Summary of our suggestions

- Each morpheme is analyzed as a constituent and/or as a feature bearing element.
- Markers of verbal categories (transitivizers, applicatives) are request features requiring arguments.
- Request features can also come from the lexicon together with the verbal stem.
- Agreement suffixes are prioritized over RPs when both are present.
- In the absence of a suffix, the response is communicated by an RP.
Overall evaluation

General advantages of our analysis

- It adequately describes the constructions in question
- It does not contradict Van Valin 2005 and Van Valin 2013
- It uses the formalization by Osswald and Kallmeyer 2018 and thus can be implemented
- It seems to be expandable to other Halkomelem constructions and (hopefully) to other languages

Further questions

- How to treat morphological zero (e.g. unmarked case)?
- Which features can (and should) be stored in the lexicon?
- What is the status of the ECS in the grammar?
Thank you!

Your feedback is very welcome:
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References


